Utbygging
Teknologi og utvikling Utbygging

Februar 2022

Statens vegvesen

Vedlegg

Frønesbrua

Erfaringsrapport fra automatisert produksjon for bygging av stålbruer basert på lasersveis

Illustrasjon: Statens vegvesen

VEDLEGG

Vedlegg A: Rapport fra DNVGL på kvalifisering av sveiser

Vedlegg B: Godkjente og signerte WPQR og WPS for bruk på Frønesbrua

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VEDLEGG A: Rapport fra DNVGL på kvalifisering av sveiser

DNV·GL

DESTRUCTIVE TESTING

Material Report

Prodtex Industri

Report No.: 2020-5496, Rev. 0
Document No.: 936585
Date: 2020-10-29

Project name:	Destructive Testing	DNV GL AS Oil & Gas
Report title:	Material Report	Materials & Testing - Bergen
Customer:	Prodtex Industri, Sjøgata 30 6065 Ulsteinvik Norway	Thormøhlensgt. 49A 5006 Bergen Norway
Customer contact:	Tore Roppen	NO945748931
Date of issue:	2020-10-29	
Project No.:	10252180	
Organization unit:	Materials & Testing - Bergen	
Report No.:	2020-5496, Rev 0.	
Document No.:	936585	

Applicable contract(s) governing the provision of this Report: SFA 904309

Objective:

Present results from destructive testing.

Prepared by:	Verified by:	Approved by:
Magnus Göran Larsson Engineer	Øystein Bjaanes Principal Engineer	Mads A. Eidem Head of Section, Materials & Testing Bergen

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Keywords:

NS EN ISO 15614:14:2013, Destructive testing

Rev. No.	Date	Reason for Issue	Prepared by	Verified by	Approved by
Draft A	2020-09-21	First draft	MAGLAR	OBJA	
Draft B	2020-10-01	Updated with impact results	MAGLAR		
0	2020-10-29	First issue	MAGLAR	OBJA	MADEID

Table of contents

1 EXECUTIVE SUMMARY

Destructive testing was performed on six welded SSAB Laser 355 MC Plus plates and tested according to NS-EN ISO 15614-14:2013 [1]. This report will present the results of destructive testing.

2 BACKGROUND INFORMATION

On behalf of Prodtex industry, DNV GL Materials Bergen has performed destructive testing (DT) of six welded plates. The testing was performed according to NS-EN ISO 15614-14:2013 [1].

The welded base material was SSAB's Laser 355 MC Plus. SSAB has informed that this material belongs to steel group 1.2 in ISO/TR 15608:2013 [2] and shall be in accordance with material standard EN 10149-2 [3]. Material certificates received from the client are enclosed in appendices. Welding method used was 135 Laser hybrid. Welding was performed according to pWPS LH-001-BW and LH-002-BW witnessed by a local DNV GL surveyor. Traceability has been confirmed by the DNV GL surveyor (rolling direction unknown).

2.1 Reference documents

The following documents are referenced in this report and can be found in appendices:

- SSAB Material certificate 23-1765 / 51-9273
- Inspection certificate (Filler material) – NST Carbomig 3N
- DT report (Tensile test, Bend test and Impact test)

2.2 Scope of work

This report includes results of the following tests:

- Tensile testing
- Charpy-V Notch testing
- Hardness testing
- Macro examination

2.3 Plates and location of test specimens

The plates are named according to Table 1. The locations of the test specimens are according to NS-EN ISO 15614-14:2013 [1] and shown in Figure 1 below. Each test specimen is named with a unique DNV GL object ID + Specimen ID.

Table 1 - Name and dimension of plates.

Prodtex plate ID	DNV GL plate + Specimen ID	Dimensions [mm]
LH-001-BW1	V1 + Specimen ID	8 x 400 x 800
LH-001-BW2	V2 + Specimen ID	8 x 400 x 800
LH-001-BW3	V3 + Specimen ID	8 x 400 x 800
LH-002-BW1	V4 + Specimen ID	10 x 400 x 800
LH-002-BW2	V5 + Specimen ID	10 x 400 x 800
LH-002-BW3	V6 + Specimen ID	10 x 400 x 800

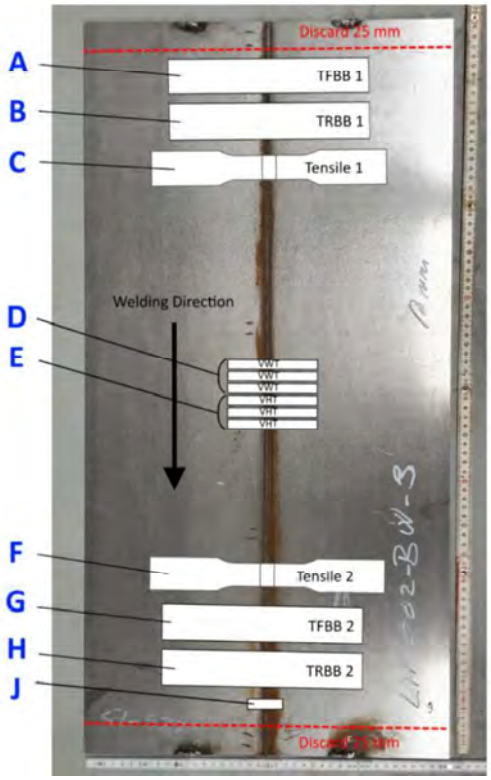


Figure 1 - Shows location of test specimens and specimen ID. A=Transverse Face Bend Specimen (TFBB), B=Transverse Root Bend Specimen (TRBB), C=Transverse Tensile Specimen, D=Charpy specimen (V - Charpy V, W – Notch in weld, T – Notch through thickness), E=Charpy specimen (V - Charpy V, H – Notch in HAZ, T – Notch through thickness), F=Transverse Tensile Specimen, G=Transverse Face Bend Specimen (TFBB), H=Transverse Root Bend Specimen (TRBB) and J=Macro and hardness test specimen

3 TEST RESULTS

3.1 Cross Weld Tensile Tests

The testing was performed in accordance with standard ISO 4136:2012 [3] and NS-EN ISO 6892-1:2019 [4] method A.4. Acceptance standard NS-EN ISO 15614-14:2013 [1].

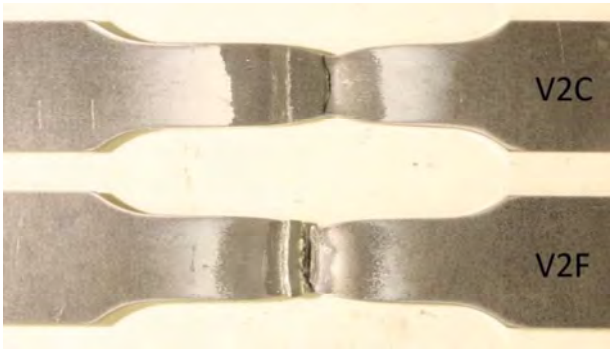
The results are presented in Table 2 and fracture location is shown in Figure 2. Graphs from test are shown in appendices.

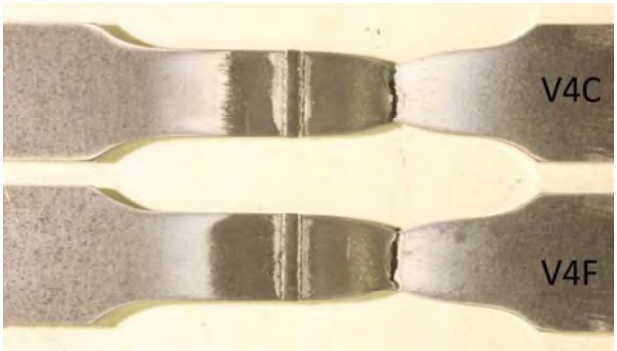
Table 2 - Results from cross weld tensile test.

Test ID / Location	Dimension			Maximum force [kN]	Tensile strength R_m [MPa]	Fracture location/ appearance
	Thickness [mm]	Width. [mm]	Area. [mm^2]			
V1C	7.97	25.06	199.73	103.83	520	BM
V1F	7.93	25.02	198.41	105.03	529	BM
V2C	8.02	25.03	200.74	107.29	534	BM
V2F	8.00	25.04	200.32	107.51	537	HAZ
V3C	7.90	25.04	197.82	106.02	536	BM
V3F	7.90	25.04	197.82	107.66	544	BM
V4C	10.03	25.04	251.15	131.06	522	BM
V4F	10.04	25.00	251.00	131.80	525	BM
V5C	10.00	24.99	249.90	131.45	526	HAZ
V5F	10.00	24.97	249.70	131.73	528	BM
V6C	10.04	25.04	251.40	131.73	524	HAZ
V6F	10.05	25.03	251.55	131.98	525	HAZ

View from above

View from side





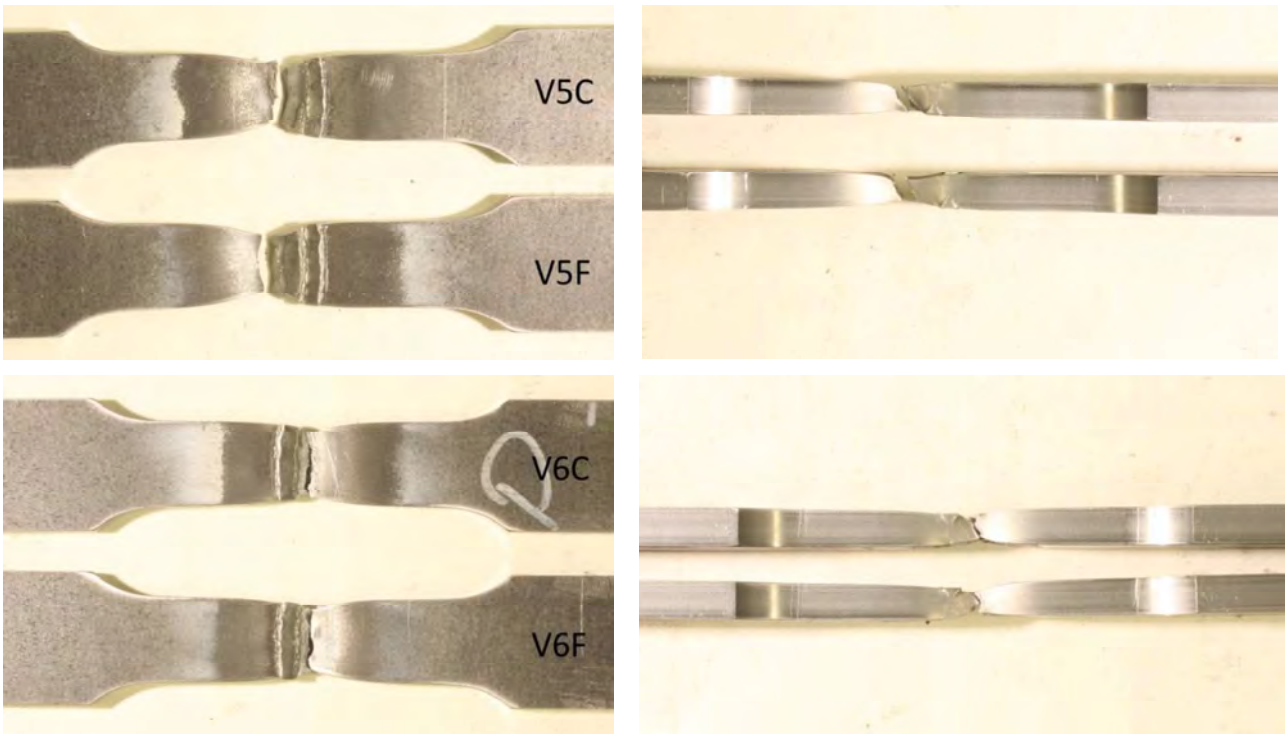


Figure 2 – Fracture location from tensile test.

3.2 Charpy V-Notch Impact Tests, KV2

Testing was performed in accordance with NS-EN ISO 15614-14:2013 [1], NS-EN ISO 148-1:2016 [5] and NS-EN ISO 9016:2012 [6]. Specimen type used was VWT & VHT and sampled maximum 2 mm below surface, and with the notch perpendicular to the surface. Notch was placed according to Figure 3 a. Before preparing the notch, specimens were etched to find weld and HAZ. Etching was done with 5% nital. Testing was performed at two different test temperatures, - 40 °C and at - 50 °C.

a) Shows how the notch has been placed

b) Notch on specimen V6D, according to ISO 148-1:2016 [5]

Figure 3 - Illustration showing where the notch was placed.

Results from testing are presented in Table 3 .

Table 3 - Result from impact test

Test ID / Location	Dimension [mm]	Notch Orientation	Temp. [°C]	Impact energy, KV 300 J / Absorbed energy [Joule]			Absorbed energy, Avarage [Joule]
				1	2	3	
V1D (VWT)	5 x 10 x 55	T	-50	31	28	20	26 (2)
V1E (VHT)	5 x 10 x 55	T	-50	59	55	35	50 (2)
V2D (VWT)	5 x 10 x 55	T	-50	30	39	13	27 (2)
V2E (VHT)	5 x 10 x 55	T	-50	79	89	96	88 (2)
V3D (VWT)	5 x 10 x 55	T	-40	19	19	23	20 (1)
V3E (VHT)	5 x 10 x 55	T	-40	35	58	53	49 (1)
V4D (VWT)	7.5 x 10 x 55	T	-50	43	23	34	33 (2)
V4E (VHT)	7.5 x 10 x 55	T	-50	19	40	40	33 (2)
V5D (VWT)	7.5 x 10 x 55	T	-50	95	25	33	51 (2)
V5E (VHT)	7.5 x 10 x 55	T	-50	34	180	30	81 (2)
V6D (VWT)	7.5 x 10 x 55	T	-40	48	27	23	33 (1)
V6E (VHT)	7.5 x 10 x 55	T	-40	28	51	36	38 (1)

(1) Test Temp - 40 deg C: Test temperature according to ISO 15614-14:2013. Acceptance criteria found in parent material standard NS-EN 10149-1:2013.

(2) Test temp -50 deg C: At the customer's request, a sub size Charpy V-notch impact test was carried out in accordance with NS-EN 1993-2:2006 [11] at -50 deg C.

Note Heat affacted zone resulting from welding is small. The reason for the variation in values when testing HAZ may be that the notch has been placed closer to the base material. Material certificate for base material shows values up to 261 at test temperature - 60 deg C.

3.3 Bend Tests

The testing was performed in accordance with the test standard NS-EN ISO 15614-14:2013 [1] and ISO 5173:2010 [3].

Acceptance criteria found in NS-EN ISO 15614-14:2013 [1]. The results are presented in Table 4 and shown in Figure 4 below.

Table 4 - Results from bend testing.

Test ID / Location	Dimension			Former dia. [mm]	Distance between rollers [mm]	Bend angle [°]	Results
	Thickness [mm]	Width [mm]	Direction				
V1A	8 mm	40.5	TFBB	4T	52	180	Flaw larger than 3 mm
V1B	8 mm	40.0	TRBB	4T	52	180	Ok
V1G	8 mm	39.7	TFBB	4T	52	180	Flaw larger than 3 mm
V1H	8 mm	40.0	TRBB	4T	52	180	Ok
V2A	8 mm	40.0	TFBB	4T	52	180	Flaw larger than 3 mm
V2B	8 mm	39.5	TRBB	4T	52	180	Ok
V2G	8 mm	40.2	TFBB	4T	52	180	Flaw larger than 3 mm
V2H	8 mm	39.5	TRBB	4T	52	180	Flaw larger than 3 mm
V3A	8 mm	40.0	TFBB	4T	52	180	Flaw larger than 3 mm
V3B	8 mm	40.5	TRBB	4T	52	180	Flaw larger than 3 mm
V3G	8 mm	40.3	TFBB	4T	52	180	Flaw larger than 3 mm
V3H	8 mm	40.1	TRBB	4T	52	180	Ok
V4A	10 mm	40.1	TFBB	4T	67	180	Flaw larger than 3 mm
V4B	10 mm	40.0	TRBB	4T	67	180	Ok
V4G	10 mm	40.1	TFBB	4T	68.5	180	Flaw larger than 3 mm
V4H	10 mm	40.1	TRBB	4T	68.5	180	Ok
V5A	10 mm	40.1	TFBB	4T	68.5	180	Flaw larger than 3 mm
V5B	10 mm	40.1	TRBB	4T	68.5	180	Ok
V5G	10 mm	40.0	TFBB	4T	68.5	180	Flaw larger than 3 mm
V5H	10 mm	40.0	TRBB	4T	68.5	180	Ok
V6A	10 mm	42.5	TFBB	4T	68.5	180	Flaw larger than 3 mm
V6B	10 mm	40.2	TRBB	4T	68.5	180	Flaw larger than 3 mm
V6G	10 mm	40.1	TFBB	4T	68.5	180	Flaw larger than 3 mm
V6H	10 mm	40.1	TRBB	4T	68.5	180	Ok

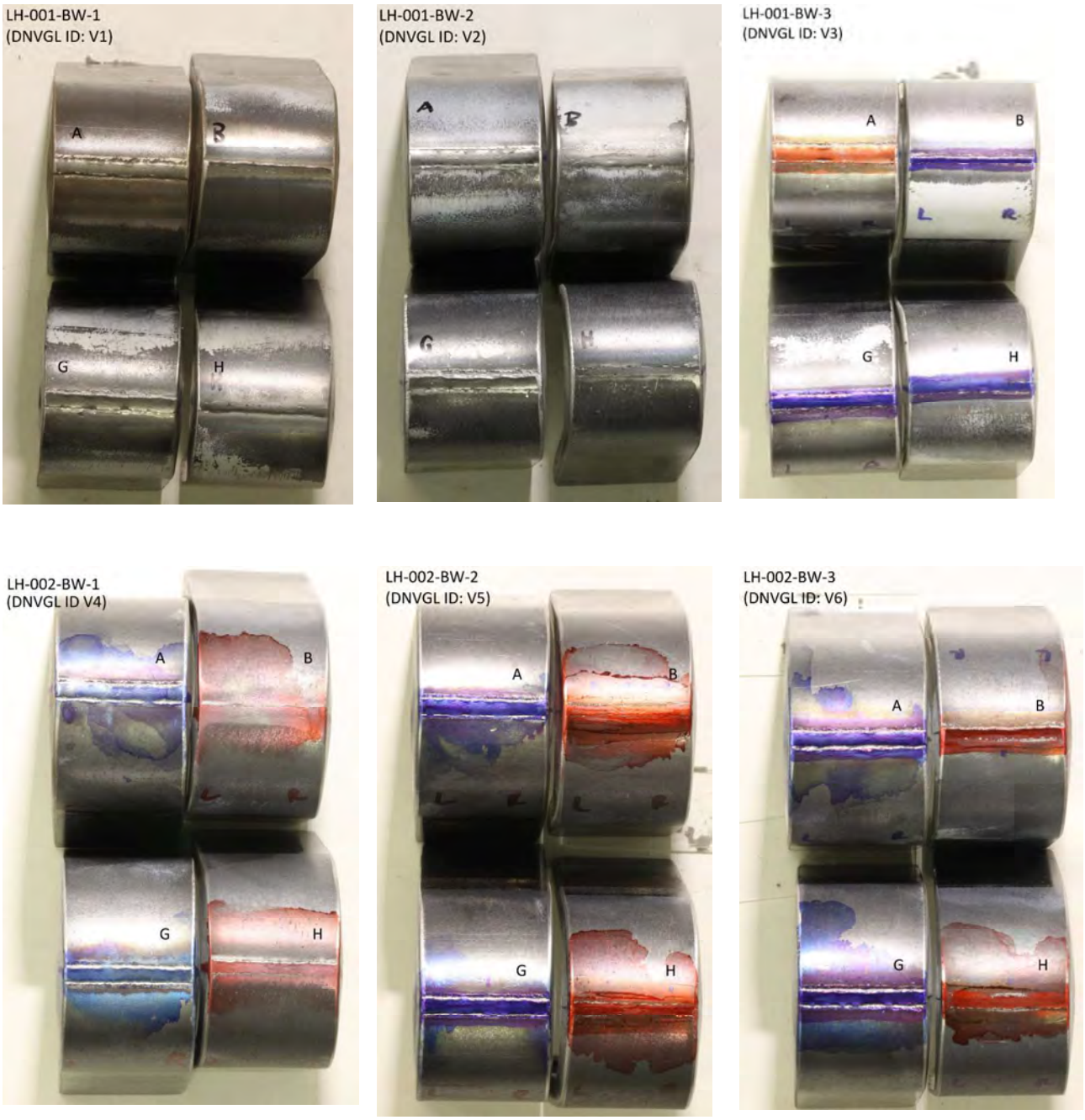


Figure 4 - Bend specimens after test.

3.4 Macro Examination

The examination was performed in accordance with NS-EN ISO 17639:2013 [7] and etchant was 5% nital. Imperfections were checked against NS EN ISO 12932:2013 [8] and all specimen were examined with a magnification of 8X.

Table 5 - Macro examination, magnification 8x.

Specimen ID	Comment
V1J	(5011) The undercut is within depth requirements in NS-EN ISO 12932:2013 [8] but lacks a smooth transition.
V2J	(5011) The undercut is within depth requirements in NS-EN ISO 12932:2013 [8] but lacks a smooth transition.
V3J	(5011) The undercut is within depth requirements in NS-EN ISO 12932:2013 [8] but lacks a smooth transition.
V4J	(5011) The undercut is within depth requirements in NS-EN ISO 12932:2013 [8] but lacks a smooth transition.
V5J	No imperfections found.
V6J	(511) Sagging.

Macrographs is presented in figures below.

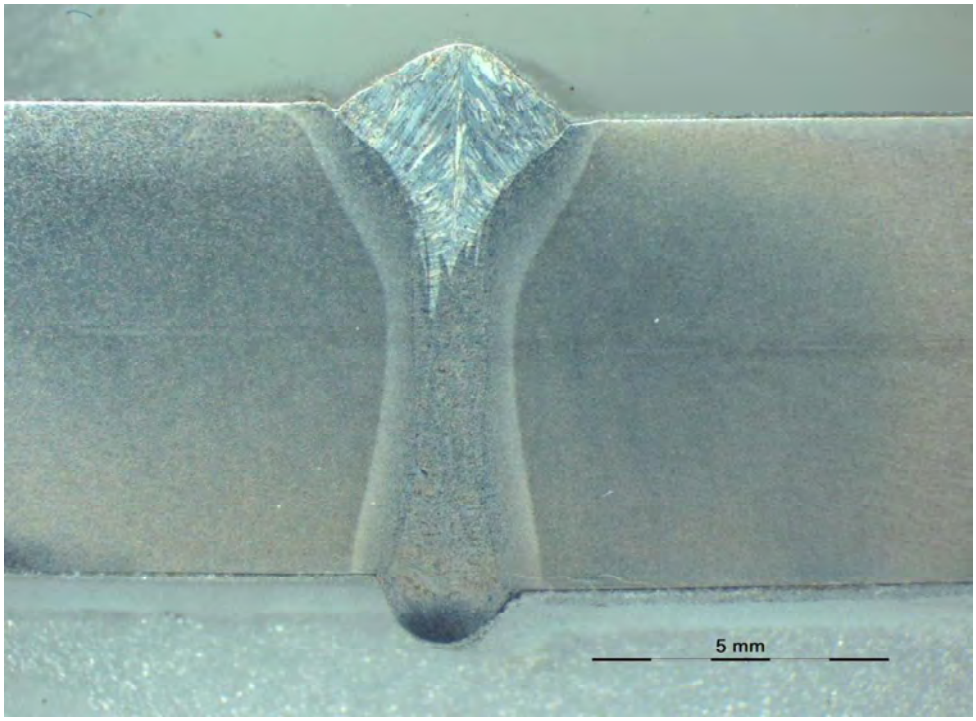


Figure 5 - Macrograph of specimen V1J.

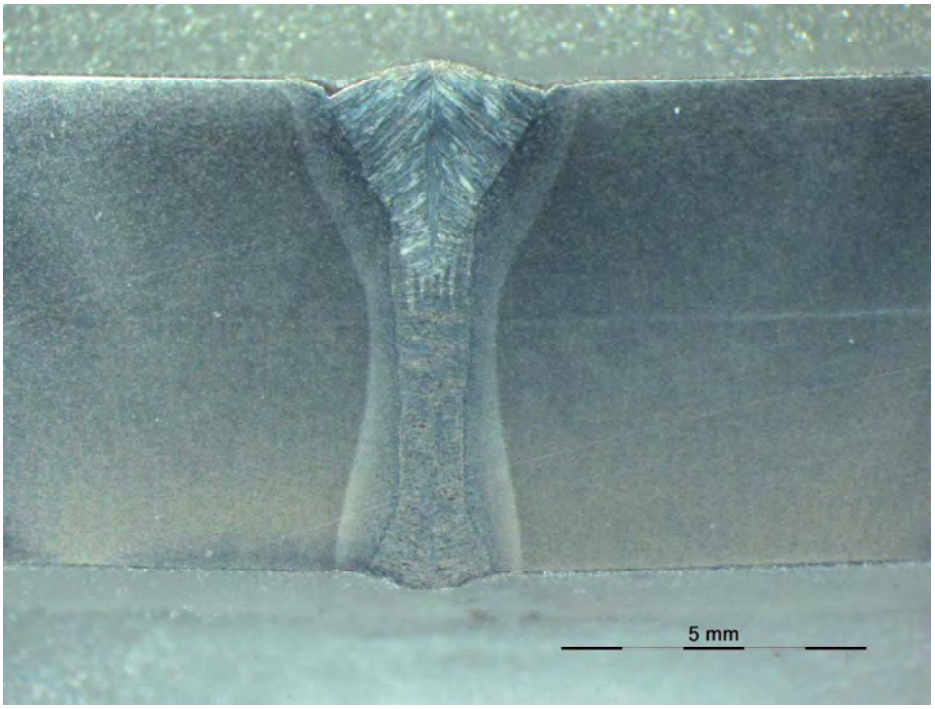


Figure 6 - Macrograph of specimen V2J.

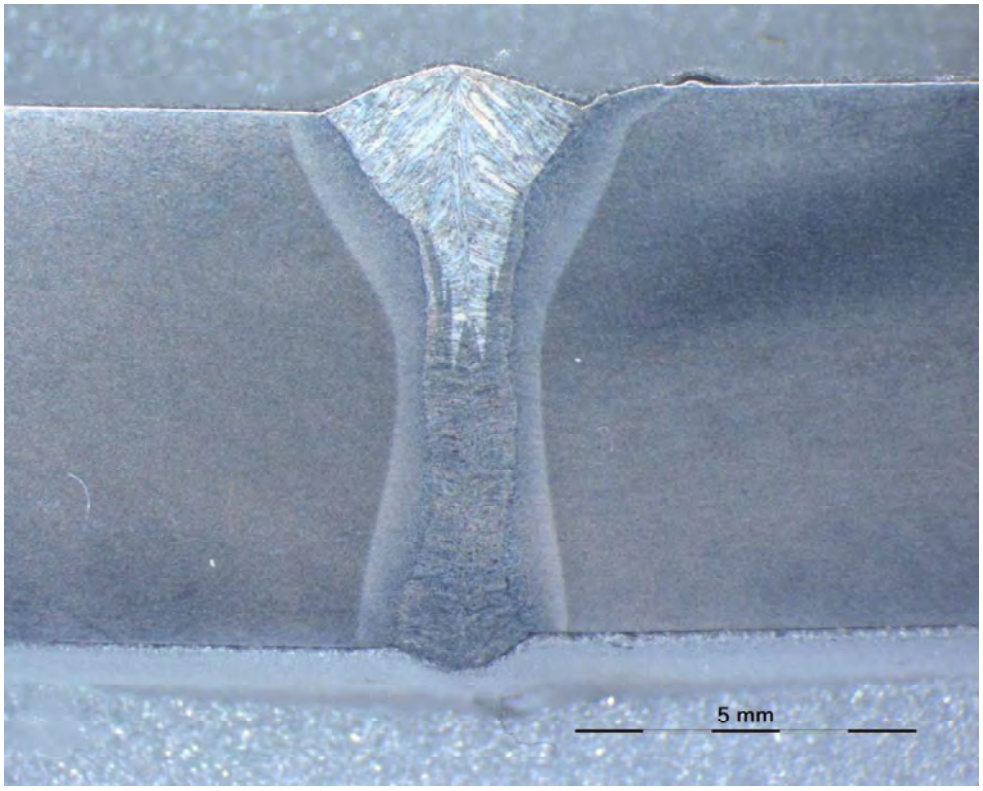


Figure 7 - Macrograph of specimen V3J.

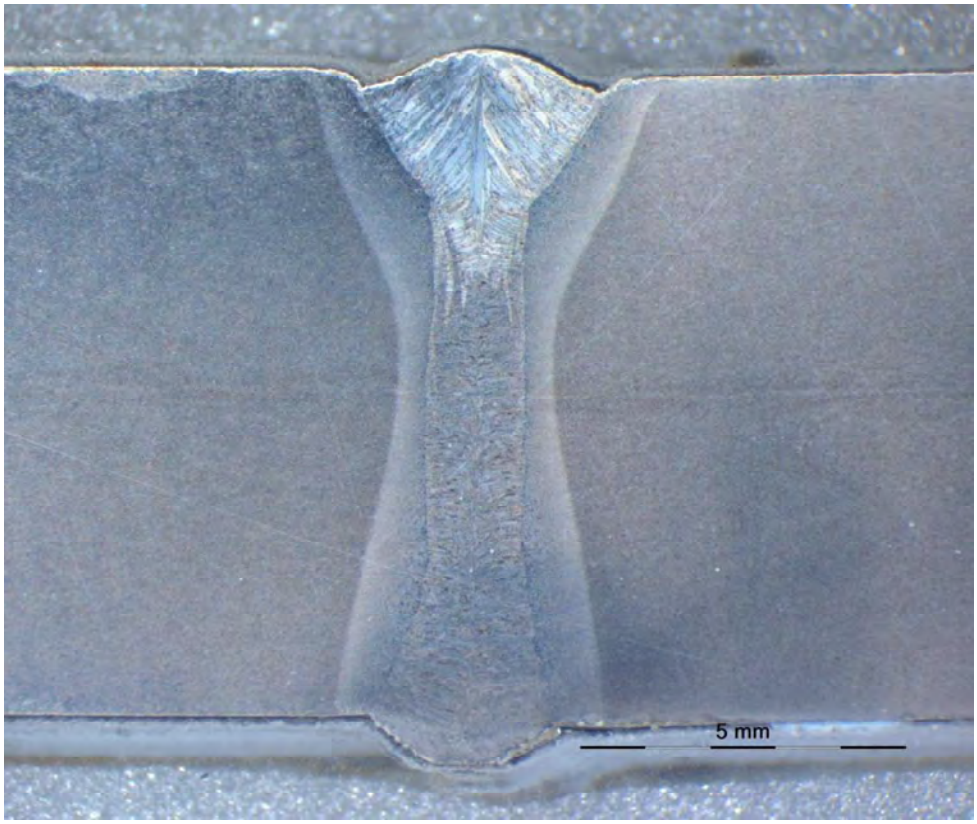


Figure 8 - Macrograph of specimen V4J.

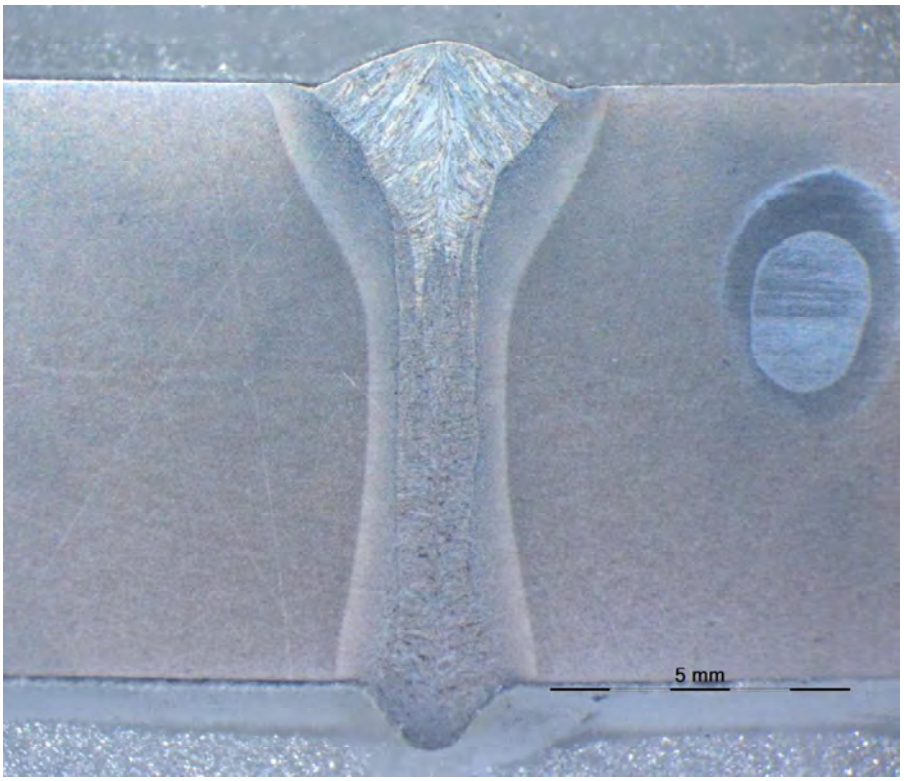


Figure 9 - Macrograph of specimen V5J. Ignore the circular spot on the right.

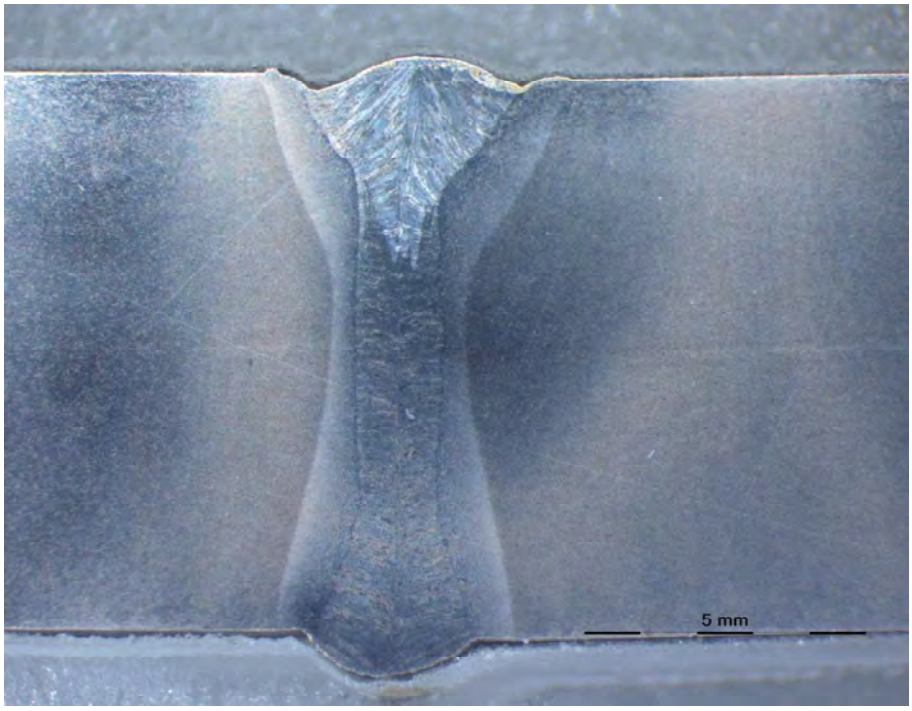


Figure 10 - Macrograph of specimen V6J.

3.5 Vickers Hardness Measurements, HV5

Testing was performed in accordance with the standards: ISO 15614-14:2013 [1] and NS-EN ISO 9015-1 [9] NS-EN ISO 6507-1:2018 [10]. The first indentation in the HAZ was located as close as possible to the fusion line. The following indentations were placed with a spacing of 0.7 mm. According to standard NS-EN ISO 15614-14:2013 [1] shall testing be performed with a load matched to the weld geometry. Due to a small heat affected zone, it was chosen to perform hardness tests with HV5. Two rows of indentations were performed. Minimum of three individual indentations in the areas (Weld Metal, HAZ and Parent Material) were performed at a depth of less than 2 mm below the upper and lower surface.

Six different plates were tested, and the results are presented in figures below. Acceptance standard NS-EN ISO 15614-14:2013 [1].

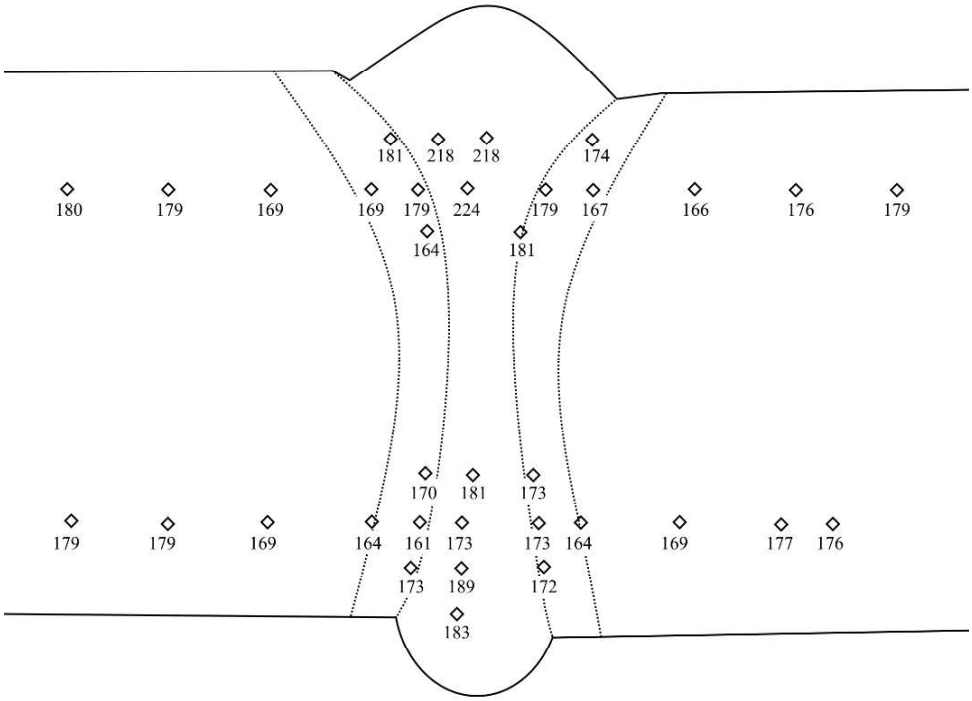


Figure 11 - Hardness test result from plate LH-001-BW-1 (DNVGL ID is V1J).

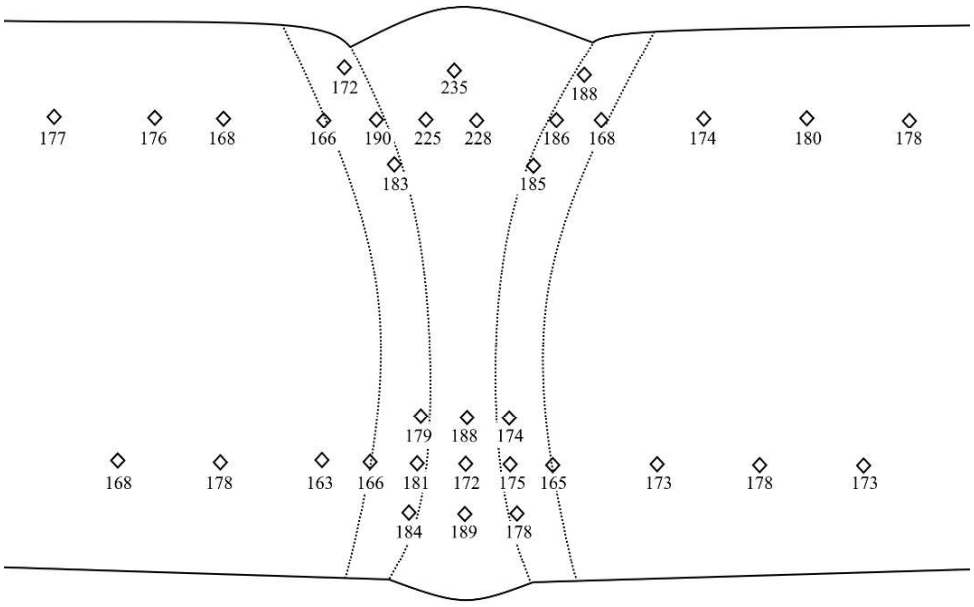


Figure 12 - Hardness test result from plate LH-001-BW-2 (DNVGL ID is V2J).

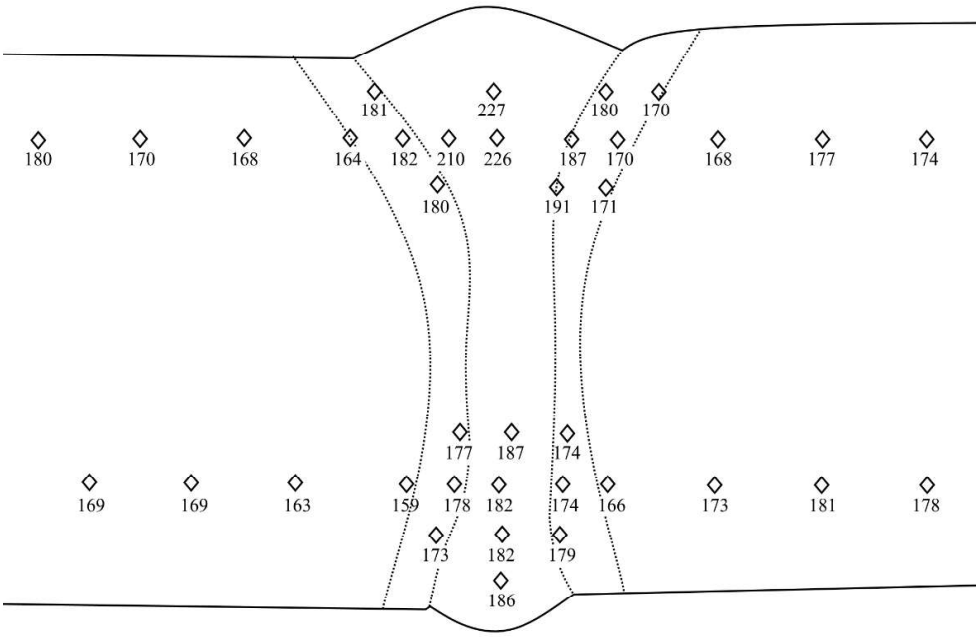


Figure 13 - Hardness test result from plate LH-001-BW-3 (DNVGL ID is V3J).

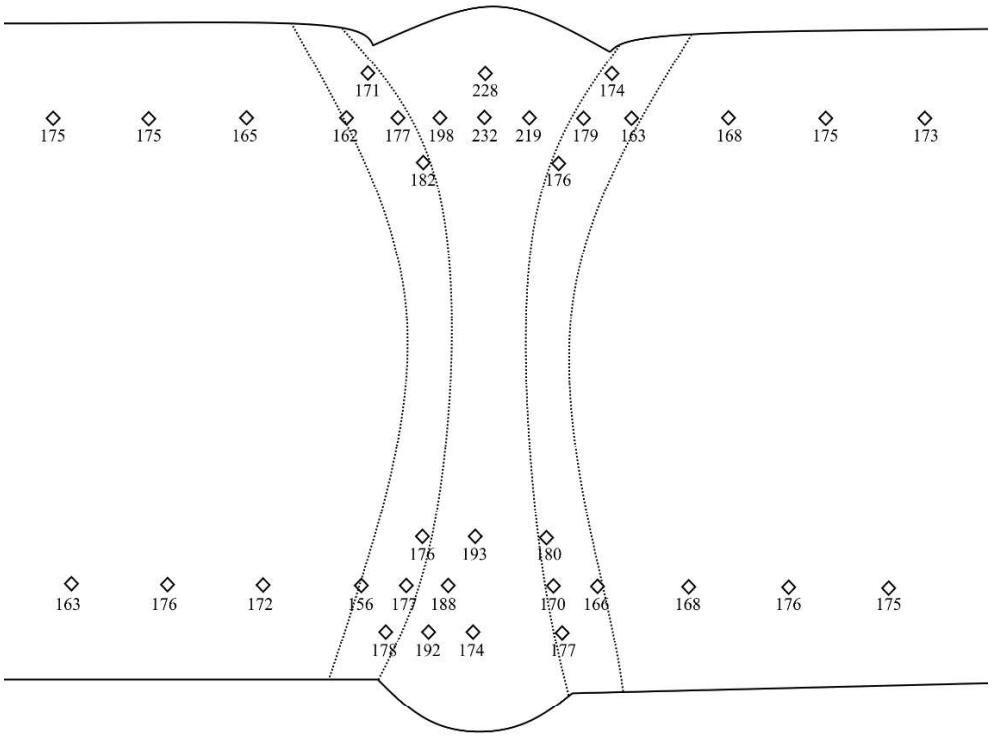


Figure 14 - Hardness test result from plate LH-002-BW-1 (DNVGL ID is V4J).

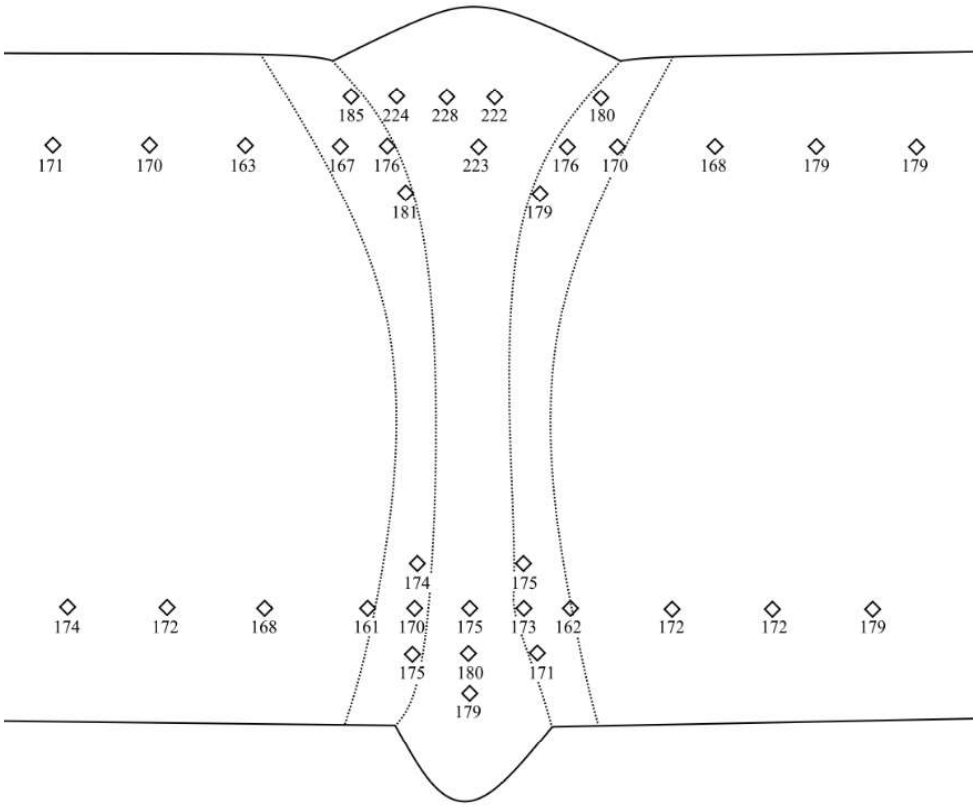


Figure 15 - Hardness test result from plate LH-002-BW-2 (DNVGL ID is V5J).

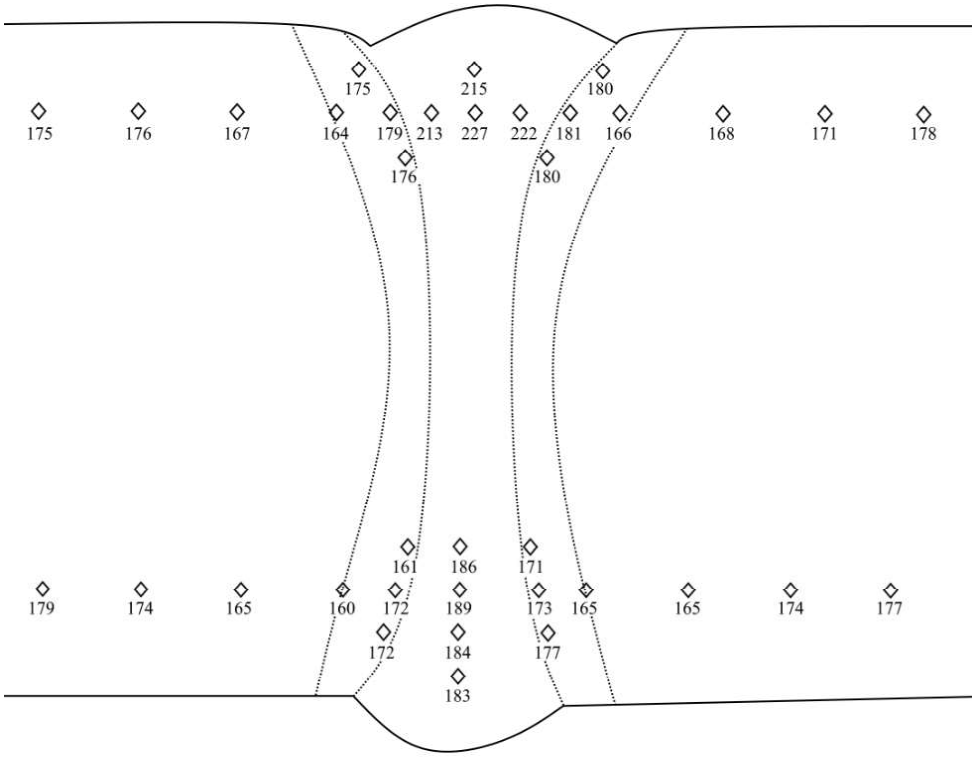


Figure 16 - Hardness test result from plate LH-002-BW-3 (DNVGL ID is V6J).

1 REFERENCES

[1] NS EN ISO 15614-14:2013 - Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 14: Laser-arc hybrid welding of steels, nickel and nickel alloys, Standard norge.

[2] NS-EN ISO 12932:2013 - Welding - Laser-arc hybrid welding of steels, nickel and nickel alloys - Quality levels for imperfections, Norsk Standard.

[3] ISO/TR 15608:2017 - Welding — Guidelines for a metallic materials grouping system, ISO .

[4] NS-EN ISO 5173:2010 Destructive tests on welds in metallic materials - Bend tests, Standard Norge.

[5] NS-EN ISO 6892-1:2019 - Metallic materials — Tensile testing — Part 1: Method of test at room temperature, Norsk standard.

[6] NS-EN 10149-2:2013 - Hot rolled flat products made of high yield strength steels for cold forming - Part 2: Technical delivery conditions for thermomechanically rolled steels, Standard Norge.

[7] NS-EN ISO 148-1:2016 - Metallic materials - Charpy pendulum impact test - Part 1: Test method, Standard Norge.

[8] NS-EN ISO 9016:2012 - Destructive tests on welds in metallic materials - Impact tests - Test specimen location, notch orientation and examination, Standard Norge.

[9] NS-EN 10149-1:2013 - Hot rolled flat products made of high yield strength steels for cold forming - Part 1: General technical delivery conditions, Standard Norge.

[10] NS-EN 10149-2:2013 - Hot rolled flat products made of high yield strength steels for cold forming - Part 2: Technical delivery conditions for thermomechanically rolled steels, Standard Norge.

[11] NS-EN ISO 17639:2013 - Destructive tests on welds in metallic materials - Macroscopic and microscopic examination of welds, Norsk Standard.

[12] ISO 9015-1:2001 - Destructive tests on welds in metallic materials - Hardness testing - Part 1: Hardness test on arc welded joints, Standard Norge.

[13] NS-EN ISO 6507-1:2018 - Metallic materials - Vickers hardness test - Part 1: Test method, Standard Norge.

[14] NS-EN ISO 5817:2014 - Welding - Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) - Quality levels for imperfections, Norsk standard.

[15] NS-EN 1993-2:2006+NA:2009 - Eurocode 3: Design of steel structures - Part 2: Steel Bridges, Standard Norge.

APPENDIX A
Base & Filler Material Certificate

SSAB

SSAB EMEA AB, SE-781 84 BORLÄNGE, Sweden A01

Inspection certificate A02	Issuing department A05	Purchaser order no A07	Our order no A08	Invoice no A19	Certificate no and date A03
EN 10 204 - 3.1	Quality inspection	0046270112	224868-1	3123086	18508310 2020-01-07

Purchaser A11	Product B01	Marking B06	Customer marks B15
81002 TIBNOR AS RM OSLO PROF. BIRKELANDSVEI 21 NO-1081 OSLO NORGE	Hot rolled sheets	Manufacturer, MATERIAL ID	

Quantity B08	Dimensions [mm] B09-B11	Weight [kg] B12	Deliv. Cond. B04	Internal code B16
92	T 8 W 1500 L 3000	25960		

Consignee A86	Standardrules B02
TIBNOR AS RM OSLO PROF. BIRKELANDSVEI 21 NO-1081 OSLO NORGE	SSAB **Steel grade** SSAB Laser 355MC Plus

MATERIAL ID B07

23-1765-433810-01 , 23-1765-433810-02 , 23-1765-433810-03 , 23-1765-433810-04 , 23-1765-433810-05 , 23-1765-433810-06 , 23-1765-433810-07 , 23-1765-433810-08 , 23-1765-433810-09 , 23-1765-433810-10 , 23-1765-433810-11 , 23-1765-433810-12 , 23-1765-433810-13 , 23-1765-433810-14 , 23-1765-433810-15 , 23-1765-433810-16

Chemical composition C71-C92

Heat no	C	Si	Mn	P	S	Cr	Ni	Mo	V	Ti	Cu	Al	Nb	B	N	Cekv
23-1765	.059	.01	.59	.009	.003	.04	.04	.01	.00	.00	.01	.033	.013	.0009	.002	.17

Carbon equivalent etc C93-C99

Cekv = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

Testtype C04	Milloode C00	Specimen position C01	Direc-tion C02	Treat-ment B05	Specimen type C10	Temp [degr C] C03	Test results			
Tensile test	FKG420	Top end	Longitudinal	Delivery condition	Rectangular 380x40		C11 Reh [MPa] 425	C12 Rm [MPa] 514	C13 A5 [%] 31.0	
Impact test	FKG421	Top end	Longitudinal	Delivery condition	Charpy-V 10x7.5	-60	C42 E [J] 261	C42 E [J] 256	C42 E [J] 269	C43 Ave [J] 261
Bend test	FKG425	Top end	Transvers	Delivery condition			C50 The_test_is satisfactory -			

Production time: 2020-01-07

Customer article no: 329973

	This certificate is produced with EDP and valid without signature Z02 Material Testing/ H Leu / M Eriksson / V Esbelani		It is hereby certified that the material described above complies with the requirements of the order. Z01	A22	A04

SSAB

SSAB EMEA AB, SE-781 84 BORLÄNGE, Sweden A01

Inspection certificate A02	Issuing department A05	Purchaser order no A07	Our order no A08	Invoice no A19	Certificate no and date A03
EN 10 204 - 3.1	Quality inspection	0046283450	233452-6	3149641	18787943 2020-04-23

Purchaser A11
81002
TIBNOR AS RM OSLO
PROF. BIRKELANDSVEI 21
NO-1081 OSLO
NORGE

Product B01: Hot rolled sheets

Marking B06: Manufacturer, MATERIAL ID

Customer marks B15:

Quantity B08	Dimensions [mm] B09-B11	Weight [kg] B12	Deliv. Cond. B04	Internal code B16
30	T 10 W 1500 L 3000	10680		

Consignee A06
TIBNOR AS RM OSLO PROF. BIRKELANDSVEI 21 NO-1081 OSLO
NORGE

Standard/rules B02
SSAB
Steel grade SSAB Laser 355MC Plus*)

MATERIAL ID B07
51-9273-462929-01 , 51-9273-462929-02 , 51-9273-462929-03 , 51-9273-462929-04 , 51-9273-462929-05 , 51-9273-462929-06

Chemical composition C71-C92

Heat no	C	Si	Mn	P	S	Cr	Ni	Mo	V	Ti	Cu	Al	Nb	B	N	Cekv
51-9273	.056	.01	.58	.009	.003	.03	.05	.01	.00	.00	.02	.045	.014	.0000	.002	.17

Carbon equivalent etc C93-C99
Cekv = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

Testtype C04	Millcode C00	Specimen position C01	Direction C02	Treatment B05	Specimen type C10	Temp [degr C] C03	Test results			
Tensile test	FRE389	Top end	Longitudinal	Delivery condition	Rectangular 380x40		C11 ReH [MPa] 427	C12 Rm [MPa] 496	C13 A5 [%] 25.0	
Impact test	FRE390	Top end	Longitudinal	Delivery condition	Charpy-V 10x7.5	-60	C42 E [J] 243	C42 E [J] 235	C42 E [J] 250	C43 Ave [J] 242
Bend test	FRE394	Top end	Transverse	Delivery condition			C50 The_test_is satisfactory -			

*) S355MC EN 10149-2

Production time: 2020-04-23

Customer article no: 329977

	This certificate is produced with EDP and valid without signature Z02 Material Testing/ H Leu / M Modig Eriksson / V Esbelani / M Stolpe		It is hereby certified that the material described above complies with the requirements of the order. Z01	A22	A04

INSPECTION CERTIFICATE (3.1) - Chemical analysis
TEST REPORT (2.2) - Mechanical properties

Cert no: 1001217184
Date: 27-05-2020

Manufacturing Date: 25-05-2020

PURCHASE ORDER : 10928 / 12.05.2020

PRODUCT NAME: NST Carbomig 3N
TYPE OF PRODUCT: Solid MAG Wire
STANDARD CLASSIFICATION:

EN ISO 14341-A	G46 3 M21 G4Si1
	G42 2 C1 4Si1
AWS/SFA. 5.18 / SFA5.18	ER70S-6

DIAMETER / WEIGHT: 1.00 mm DRUM 250 KG. (Kg.2.000) - 1.20 mm P.L.W. D-300 (Kg.1.080)

HEAT N°: 756750

CHEMICAL COMPOSITION
acc to EN 10204 - 3.1

C	Mn	S	P	Si	Cu	Al	Mo	Ni	N	Cr	Ti	V	As
0.063	1.627	0.014	0.006	0.974	0.047	0.003	0.011	0.023	0.005	0.047	0.003	0.003	0.002

MECHANICAL PROPERTIES OF ALL WELD METAL
(Shielding gas 80% Argon + 20% CO_2, and 100% CO_2)
Typical data / acc to EN 10204 - 2.2

PROTECTIVE GAS	YIELD STRENGHT $R_{p0.2}$	TENSILE STRENGH R_m	ELOGANTION A_5	Charpy Impact V-Notch	
				Temperature (°C)	Absorbed Energy (J)
M21	470 Mpa	570 Mpa	26%	-30°	> 47
CO_2	440 Mpa	540 Mpa	26%	-20°	> 47

POR/BY/DE
DPT. QUALITY

CE
0035 15
0035 – CPR – C906
DoP NSTAS - 48
EN 13479

Perfect Welding by NST

COMMENT:
We hereby confirm that the material herein described has been manufactured, sampled, tested and inspected in accordance with refered standars. Product supplied under a QA Programme fulfilling the EN ISO 9001 standard. This certificate is produced electronically and is valid without signature.

Norsk Sveisteknikk AS
Headquarter
P.O.Box 109, 3301 Hokksund, Norway.

Telephone: + 47 99 27 80 00
Telefax: + 47 94 74 02 27

E-mail: nst@nst.no
www.nst.no

APPENDIX B
DT report (Tensile Test, Bend test, Impact test) - DNVGL

TEST REPORT (TENSILE TESTING)

DNV·GL

Client: Prodtex **Date of testing:** 2020.09.17

WPQR no.: **Ref. doc. no.:**

Project no.-act: 10252180

Base metal: *SSAB Laser 355 MC Plus*

Filler material: *NST Carbomig 3N*

NS EN ISO 4136:2012 / ISO 6892-1:2019 (Method A4) / NS-EN ISO 15614-14:2013 / NS-EN 10149-2:2013

Test ID / Location	Dimension			Maximum force [kN]	Tensile strength R_m [MPa]	Fracture location/ appearance
	Thickness [mm]	Width [mm]	Area. [mm^2]			
V1C	7.97	25.06	199.73	103.83	520	BM
V1F	7.93	25.02	198.41	105.03	529	BM
V2C	8.02	25.03	200.74	107.29	534	BM
V2F	8.00	25.04	200.32	107.51	537	HAZ
V3C	7.90	25.04	197.82	106.02	536	BM
V3F	7.90	25.04	197.82	107.66	544	BM
V4C	10.03	25.04	251.15	131.06	522	BM
V4F	10.04	25.00	251.00	131.80	525	BM
V5C	10.00	24.99	249.90	131.45	526	HAZ
V5F	10.00	24.97	249.70	131.73	528	BM
V6C	10.04	25.04	251.40	131.73	524	HAZ
V6F	10.05	25.03	251.55	131.98	525	HAZ

Req.: Acceptance criteria according to NS-EN ISO 15614-14:2013 is that the tensile strength of the test specimen shall not be less than the corresponding specified minimum value for the parent metal used. Minimum longitudinal tensile strength according to NS-EN 10149-2:2013 is 430 MPa.

Work performed by: Larsson, Magnus Göran Digitally signed by Larsson, Magnus Göran Date: 2020.09.24 14:27:01 +02'00'

Verified by: Nesbø, Håkon Digitally signed by Nesbø, Håkon Date: 2020.09.24 22:47:15 +02'00'

Date of this revision: 2020.09.17 Rev. No.: 0

Cause for this revision:

Zwick / Roell

17.09.20

Test report

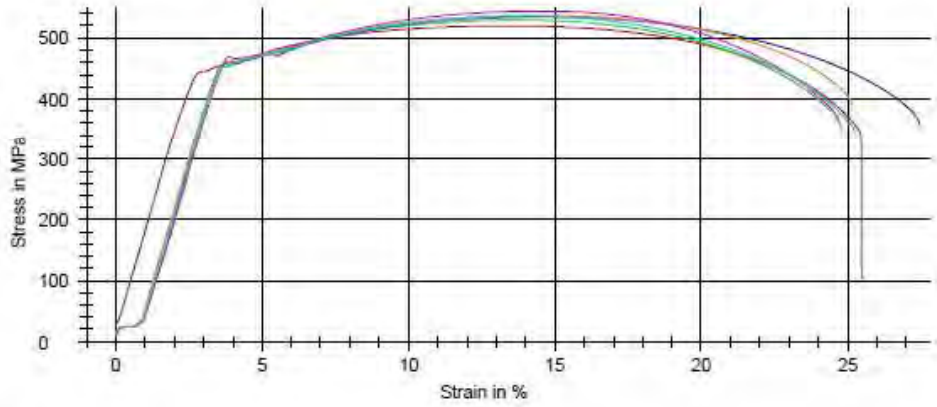
Job no.	:	Pre-treatment	:
Type and designation of	:	Tester	: Magnus Larsson / Håkon Nesbø
Material	:	Note	:
Specimen type	:	Machine data	: Zwick / Roell Z250 (Dato Kalibrert 11/02/2020)

Pre-load : 10 MPa
Test speed : 0,0067 1/s

Test results:

Nr	Specimen ID	a_0 mm	b_0 mm	L_c mm	σ_M kN	R_m MPa	Fracture location
1	V1C	7,97	25,06	70,3	103,83	520	BM
2	V1F	7,93	25,02	70,3	105,03	529	BM
3	V2C	8,02	25,03	68,5	107,29	534	BM
4	V2F	8	25,04	70	107,51	537	HAZ
5	V3F	7,9	25,04	67,9	107,66	544	BM
6	V3C	7,9	25,04	69	106,02	536	BM

Series graph:



Statistics:

Series n = 6	a_0 mm	b_0 mm	L_c mm	σ_M kN	R_m MPa
x̄	7,953	25,04	69,33	106,22	533
s	0,05125	0,01329	1,017	1,55	8,19
V	0,64	0,05	1,47	1,46	1,54

10252180 tensile cwt 8mm Prodtex.zs2

Page 1/1

Zwick / Roell

17.09.20

Test report

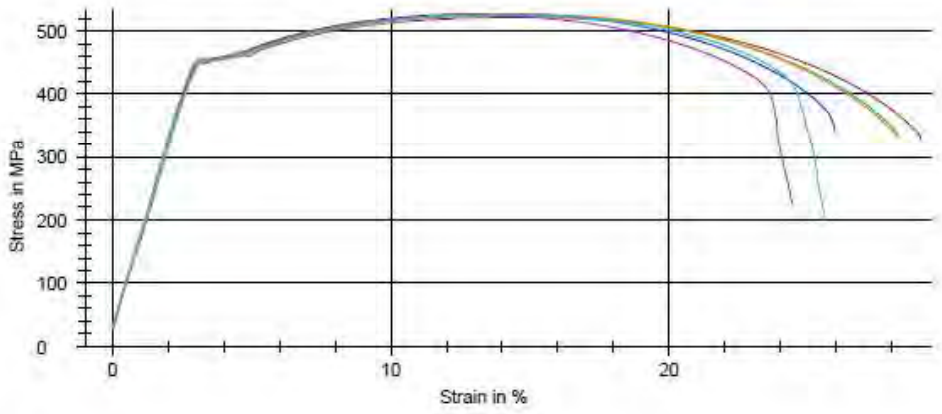
Job no.	:	Pre-treatment	:
Type and designation of	:	Tester	: Magnus Larsson / Håkon Nesbø
Material	:	Note	:
Specimen type	:	Machine data	: Zwick / Roell Z250 (Dato Kalibrert 11/02/2020)

Pre-load : 30 MPa
Test speed : 0,0067 1/s

Test results:

Nr	Specimen ID	a_0 mm	b_0 mm	L_c mm	σ_M kN	R_m MPa	Fracture location
1	V4C	10,03	25,04	67,5	131,06	522	BM
2	V4F	10,04	25	70,9	131,80	525	BM
3	V5C	10	24,99	68,2	131,85	528	HAZ
4	V5F	10	24,97	67,7	131,45	526	BM
5	V6C	10,04	25,04	68,8	131,73	524	HAZ / BM
6	V6F	10,05	25,03	67,9	131,98	525	HAZ

Series graph:



Statistics:

Series n = 6	a_0 mm	b_0 mm	L_c mm	σ_M kN	R_m MPa
$\bar{x}$	10,03	25,01	68,5	131,64	525
s	0,0216	0,02927	1,26	0,34	2,00
V	0,22	0,12	1,84	0,26	0,38

10252180 tensile cwt 10mm Prodtex.zs2

Page 1/1

TEST REPORT (BEND TESTING)

DNV·GL

Client: Prodtex

WPQR no.:

Date of testing: 2020.09.9/10/11

Project no.-act: 10252180

Ref. doc. no.:

Bend Testing (ISO 15614-14:2013 / ISO 5173:2010)

Test ID / Location	Dimension			Former dia. [mm]	Distance between rollers [mm]	Bend angle [°]	Results
	Thickness [mm]	Width [mm]	Direction				
V1A	8 mm	40.5	TFBB	4T	52	180	Flaw over 3 mm
V1B	8 mm	40.0	TRBB	4T	52	180	ok
V1G	8 mm	39.7	TFBB	4T	52	180	Flaw over 3 mm
V1H	8 mm	40.0	TRBB	4T	52	180	ok
V2A	8 mm	40.0	TFBB	4T	52	180	Flaw over 3 mm
V2B	8 mm	39.5	TRBB	4T	52	180	ok
V2G	8 mm	40.2	TFBB	4T	52	180	Flaw over 3 mm
V2H	8 mm	39.5	TRBB	4T	52	180	Flaw over 3 mm
V3A	8 mm	40.0	TFBB	4T	52	180	Flaw over 3 mm
V3B	8 mm	40.5	TRBB	4T	52	180	Flaw over 3 mm
V3G	8 mm	40.3	TFBB	4T	52	180	Flaw over 3 mm
V3H	8 mm	40.1	TRBB	4T	52	180	ok
V4A	10 mm	40.1	TFBB	4T	67	180	Flaw over 3 mm
V4B	10 mm	40.0	TRBB	4T	67	180	ok
V4G	10 mm	40.1	TFBB	4T	68.5	180	Flaw over 3 mm
V4H	10 mm	40.1	TRBB	4T	68.5	180	ok
V5A	10 mm	40.1	TFBB	4T	68.5	180	Flaw over 3 mm
V5B	10 mm	40.1	TRBB	4T	68.5	180	ok
V5G	10 mm	40.0	TFBB	4T	68.5	180	Flaw over 3 mm
V5H	10 mm	40.0	TRBB	4T	68.5	180	ok
V6A	10 mm	42.5	TFBB	4T	68.5	180	Flaw over 3 mm
V6B	10 mm	40.2	TRBB	4T	68.5	180	Flaw over 3 mm
V6G	10 mm	40.1	TFBB	4T	68.5	180	Flaw over 3 mm
V6H	10 mm	40.1	TRBB	4T	68.5	180	ok

Acceptance criteria acc. to ISO 15614-14:2013: During testing, the test specimens shall not reveal any single flaw > 3 mm in any direction. Flaws appearing in the corners of a test specimens during testing shall be ignored in the evaluation.

Work performed by:

Larsson, Magnus Göran

Digitally signed by Larsson, Magnus Göran
Date: 2020.09.24 14:28:13 +02'00'

Verified by:

Nesbø, Håkon

Digitally signed by Nesbø, Håkon
Date: 2020.09.24 22:49:52 +02'00'

Date of this revision: 2020.09.21

Rev. No.: 0

Cause for this revision:

TEST REPORT (IMPACT TESTING)

DNV·GL

Client: Prodtex **Date of testing:** 2020.09.21&22
WPQR no.: **Ref.doc. no.:**
Project no.-act: 10252180

Impact testing KV2 (ISO 15614-14:2013 / ISO 9016:2012 / ISO 148-1:2016 / NS-EN 10149-2:2013 / NS-EN 10149-1:2013)

Test ID / Location	Dimension [mm]	Notch Orientation	Temp. [°C]	Absorbed energy [Joule]			Absorbed energy, average [Joule]
				1	2	3	
V1D (VWT) (2)	5 x 10 x 55	T	-50	31	28	20	26
V1E (VHT) (2)	5 x 10 x 55	T	-50	59	55	35	50
V2D (VWT) (2)	5 x 10 x 55	T	-50	30	39	13	27
V2E (VHT) (2)	5 x 10 x 55	T	-50	79	89	96	88
V3D (VWT) (1)	5 x 10 x 55	T	-40	19	19	23	20
V3E (VHT) (1)	5 x 10 x 55	T	-40	35	58	53	49
V4D (VWT) (2)	7.5 x 10 x 55	T	-50	43	23	34	33
V4E (VHT) (2)	7.5 x 10 x 55	T	-50	19	40	40	33
V5D (VWT) (2)	7.5 x 10 x 55	T	-50	95	25	33	51
V5E (VHT) (2)	7.5 x 10 x 55	T	-50	34	180	30	81
V6D (VWT) (1)	7.5 x 10 x 55	T	-40	48	27	23	33
V6E (VHT) (1)	7.5 x 10 x 55	T	-40	28	51	36	38

(1) Test Temp - 40 deg C: Test temperature according to ISO 15614-14:2013. Acceptance criteria found in parent material standard NS-EN 10149-1:2013.

(2) Test temp -50 deg C: At the customer's request, a sub size Charpy V-notch impact test was carried out in accordance with NS-EN 1993-2:2006 [11] at -50 deg C.

Note Heat affacted zone resulting from welding is small. The reason for higher test values when testing HAZ may be that the notch has been placed closer to the base material. Material certificate for base material shows values up to 261 at test temperature - 60 deg C.

Work performed by:
Larsson, Magnus Göran
Digitally signed by Larsson, Magnus Göran
Date: 2020.10.22 15:05:30 +02'00'

Verified by:
Holt, Liviu
Digitally signed by Holt, Liviu
Date: 2020.10.22 15:07:10 +02'00'

Date of this revision: 2020.10.22 Rev. No.: 2

Cause for this revision:

About DNV GL

DNV GL is a global quality assurance and risk management company. Driven by our purpose of safeguarding life, property and the environment, we enable our customers to advance the safety and sustainability of their business. We provide classification, technical assurance, software and independent expert advisory services to the maritime, oil & gas, power and renewables industries. We also provide certification, supply chain and data management services to customers across a wide range of industries. Operating in more than 100 countries, our experts are dedicated to helping customers make the world safer, smarter and greener.

VEDLEGG B: Godkjente og signerte WPQR og WPS for bruk på Frønesbrua

Prodtex
Production / Technology / Excellence

WPQR

WELDING PROCEDURE QUALIFICATION RECORD

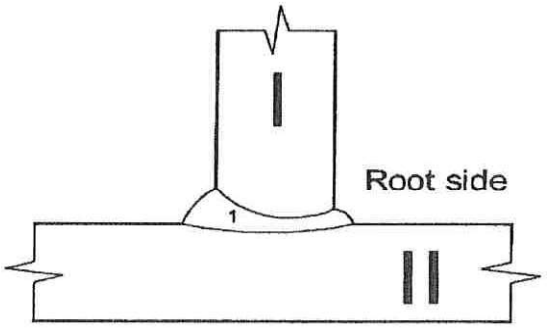
Welding method 135 Laser Hybrid

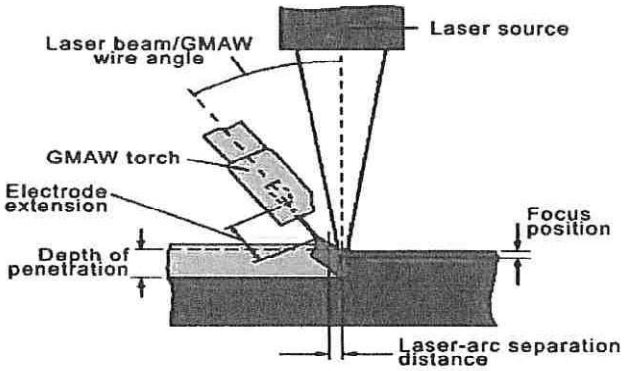
Ref standard EN ISO 15609-6

WPQR
LH-003-TW
Vertical 04.01.2021
REV.: 0

Ref standard EN ISO 15614-14

WPS Identification					
Manufacturer		Prodtex Industri AS			
WPQR Nr:		LH-003-TW Vertical			
Equipment Identification					
	Welding machine (Device)	*Fronius*			
	Fiber core diameter	*0,6 mm*			
	Beam focussing system	*Fronius*			
	Focussing optics	*Trumpf optics*			
	Welding power source	*Fronius TPSI 500i*			
	Laser power source	*Trumpf trudisk 10002 fiberlaser*			
Batchnr:		**Material specification**			
52-2383	**Material A:**	*SSAB Laser 355 MC Plus*	***Thickness***	*8mm*	
52-2383	**Material B:**	*SSAB Laser 355 MC Plus*	***Thickness***	*8mm*	
Filler or additional material					
	Consumables	*Carbomig3N*			
	Dimension	1,2mm			
Joint type		*T-joint one side welded*			
Joint Design		**Geometry**			





Jigs:			Yes		X	No
	X	Mechanically clamping				
		Tack weld process				
Preheating	**Yes**			**No**		*X*
Post Heating	**Yes**			**No**		*X*

Prodtex
Production / Technology / Excellence

WPQR

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPQR
LH-003-TW
Vertical 04.01.2021
REV.: 0

Ref standard EN ISO 15614-14

	Preparation	*T-Joint, 0 mm gap, no bevelling*			
	Procedure	*Laser cutted*			
		Unit	Tacking pass	1st pass	2nd pass
1	Welding position			*PG*	
2	Torch arrangement			*Leading wire*	
3	Beam power at work piece				
	-Continous	W		*9000*	
4	Power ramping details				
a	-slope up	mm		-	
b	-overlap	mm		-	
c	-slope down	mm		-	
d	-slope profile			-	
5	Geometrical parameters				
a	- Beam angle transverse	Grader		*8*	
b	- Beam angle longitudinal	Grader		*0,2fwd*	
c	- Distance beam-wire	mm		*0*	
d	-Focus position	Mm		*0*	
e	-Beam position	mm		*0*	
6	Welding speed	m/min		*1,2*	
7	Welding speed ramping			-	
8	Arc parameters				
a	-mode polarity			*DC+*	
b	-wire feed rate	m/min		*8,9*	
c	-current	A		*195*	
d	-voltage level	V		*25,1*	
e	-stick out wire	mm		*23*	
f	-pulse dynamic corr.			*10*	
g	-arc lenght corr.			*0*	
9	Shielding gas				
a	-Classification and type			*M12-ArC-2*	
b	-gas flow	l/min		*20*	
	Comments:				

Kun godkjent for bruk i prosjekt «FRØNESBRUA»

Prodtex Industri			Kontrollør		
Dato	**Navn**	**Signatur**	**Dato**	**Navn**	**Signatur**
18.03.21	Geir Tonny Varsken		19.04.2021	CATO DURUM	

Prodtex
Production / Technology / Excellence

WPS

WELDING PROCEDURE QUALIFICATION RECORD

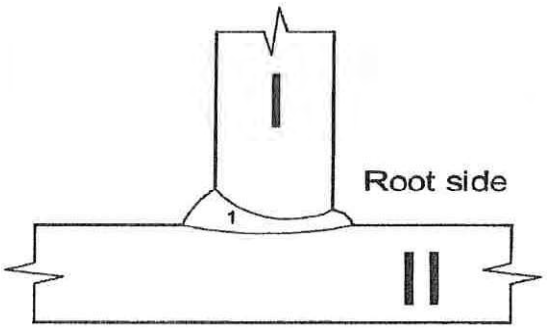
Welding method 135 Laser Hybrid

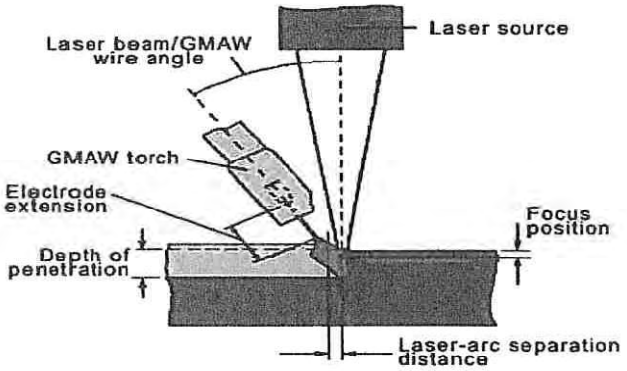
Ref standard EN ISO 15609-6

WPS
LH-003-TW
Vertical 04.01.2021
REV.: 0

Ref standard EN ISO 15614-14

WPS Identification					
Manufacturer		Prodtex Industri AS			
WPQR Nr:		LH-003-TW Vertical			
Equipment Identification					
	Welding machine (Device)	*Fronius*			
	Fiber core diameter	*0,6 mm*			
	Beam focussing system	*Fronius*			
	Focussing optics	*Trumpf optics*			
	Welding power source	*Fronius TPSI 500i*			
	Laser power source	*Trumpf trudisk 10002 fiberlaser*			
Batchnr:		**Material specification**			
52-2383	**Material A:**	*SSAB Laser 355 MC Plus*	***Thickness***	*8mm*	
52-2383	**Material B:**	*SSAB Laser 355 MC Plus*	***Thickness***	*8mm*	
Filler or additional material					
	Consumables	*OK 1264*			
	Dimension	1,2mm			
Joint type		*T-joint one side welded*			
Joint Design		**Geometry**			





Jigs:				Yes		X	No
	X	Mechanically clamping					
		Tack weld process					
Preheating	**Yes**			**No**			*X*
Post Heating	**Yes**			**No**			*X*

Prodtex
Production / Technology / Excellence

WPS

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPS
LH-003-TW
Vertical 04.01.2021
REV.: 0

Ref standard EN ISO 15614-14

	Preparation	*Butt joint, 0 mm gap, no bevelling*			
	Procedure	*Laser cutted*			
		Unit	**Tacking pass**	**1st pass**	**2nd pass**
1	Welding position			*PG*	
2	Torch arrangement			*Leading wire*	
3	Beam power at work piece				
	-Continous	W		*9000*	
4	Power ramping details				
a	-slope up	mm		-	
b	-overlap	mm		-	
c	-slope down	mm		-	
d	-slope profile			-	
5	Geometrical parameters				
a	- Beam angle transverse	Grader		*8*	
b	- Beam angle longitudinal	Grader		*0,2fwd*	
c	- Distance beam-wire	mm		*0*	
d	-Focus position	Mm		*0*	
e	-Beam position	mm		*0*	
6	Welding speed	m/min		*1,2*	
7	Welding speed ramping			-	
8	Arc parameters				
a	-mode polarity			*DC+*	
b	-wire feed rate	m/min		*8,9*	
c	-current	A		*195*	
d	-voltage level	V		*25,1*	
e	-stick out wire	mm		*23*	
f	-pulse dynamic corr.			*10*	
g	-arc lenght corr.			*0*	
9	Shielding gas				
a	-Classification and type			*M12-ArC-2*	
b	-gas flow	l/min		*20*	
	Comments:				

Kun godkjent for bruk i prosjekt «FRØNESBRUA»

Prodtex Industri			**Kontrollør**		
Dato	**Navn**	**Signatur**	**Dato**	**Navn**	**Signatur**
18.03.21	Geir Jarny Vindas		19.04.2021	CATO DÆRUM	

Prodtex
Production / Technology / Excellence

WPQR

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPQR
LH-004-BW
04.01.2021 REV.: 0

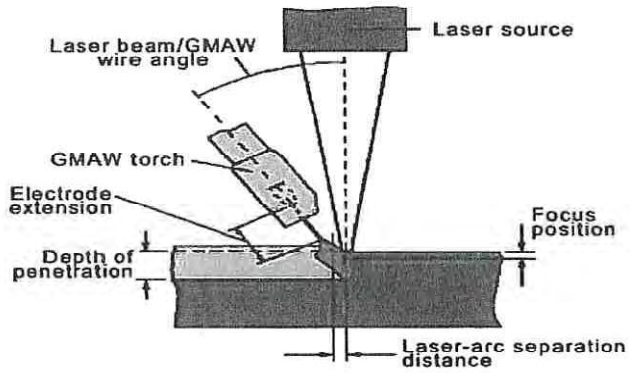
Ref standard EN ISO 15614-14

WPS Identification					
Manufacturer		Prodtex Industri AS			
WPQR Nr:		LH-004-BW			
Equipment Identification					
	Welding machine (Device)	*Fronius*			
	Fiber core diameter	*0,6 mm*			
	Beam focussing system	*Fronius*			
	Focussing optics	*Trumpf optics*			
	Welding power source	*Fronius TPSI 500i*			
	Laser power source	*Trumpf trudisk 10002 fiberlaser*			
Batchnr:		**Material specification**			
52-2383	**Material A:**	*SSAB Laser 355 MC Plus*	***Thickness***	*8mm*	
52-2383	**Material B:**	*SSAB Laser 355 MC Plus*	***Thickness***	*8mm*	
Filler or additional material					
	Consumables	*Carbomig3N*			
	Dimension	1,2mm			
Joint type		*T-joint one side welded*			
Joint Design		**Geometry**			

A	B

buttsveis

I-fuge



Jigs:				Yes		*X*	No
	X	Mechanically clamping					
	x	Tack weld process					
Preheating	**Yes**			**No**		*X*	
Post Heating	**Yes**			**No**		*X*	

Prodtex
Production / Technology / Excellence

WPQR

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPQR
LH-004-BW
04.01.2021 REV.: 0

Ref standard EN ISO 15614-14

	Preparation	*T-Joint, 0 mm gap, no bevelling*			
	Procedure	*Laser cutted*			
		Unit	**Tacking pass**	**1st pass**	**2nd pass**
1	Welding position			*PA*	
2	Torch arrangement			*Leading wire*	
3	Beam power at work piece				
	-Continous	W		*9800*	
4	Power ramping details				
a	-slope up	mm		-	
b	-overlap	mm		-	
c	-slope down	mm		-	
d	-slope profile			-	
5	Geometrical parameters				
a	- Beam angle transverse	Grader		*90*	
b	- Beam angle longitudinal	Grader		*40 fwd*	
c	- Distance beam-wire	mm		*2,5*	
d	-Focus position	Mm		*0*	
e	-Beam position	mm		*0*	
6	Welding speed	m/min		*2,1*	
7	Arc parameters				
a	-mode polarity			*DC+*	
b	-wire feed rate	m/min		*8,5*	
c	-current	A		*222*	
d	-voltage level	V		*20,5*	
e	-stick out wire	mm		*18*	
f	-pulse dynamic corr.			*3,0*	
g	-arc lenght corr.			*-3,0*	
8	Shielding gas				
a	-Classification and type			*M12-ArC-2*	
b	-gas flow	l/min		*20*	
	Comments:				

- ***Tack weld process: 3KW,10mm long 1,5 m/min.***

Kun godkjent for bruk i prosjekt «FRØNESBRUA»

Prodtex Industri			**Kontrollør**		
Dato	**Navn**	**Signatur**	**Dato**	**Navn**	**Signatur**
18.03.21	Geir Tonny Nakken		19.04.2021	CATO DØRUM	

Prodtex
Production / Technology / Excellence

WPS

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPS
LH-004-BW
04.01.2021 REV.: 0

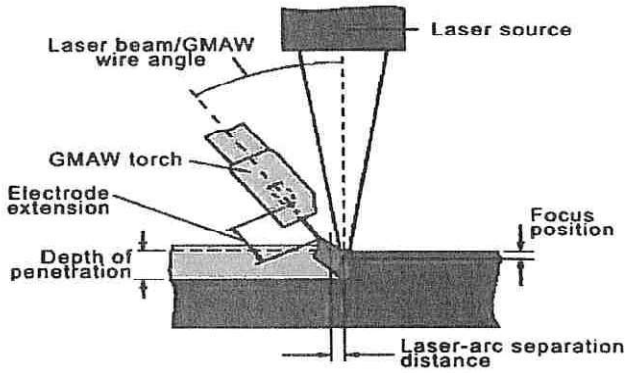
Ref standard EN ISO 15614-14

WPS Identification					
Manufacturer		Prodtex Industri AS			
WPQR Nr:		LH-004-BW			
Equipment Identification					
	Welding machine (Device)	*Fronius*			
	Fiber core diameter	*0,6 mm*			
	Beam focussing system	*Fronius*			
	Focussing optics	*Trumpf optics*			
	Welding power source	*Fronius TPSI 500i*			
	Laser power source	*Trumpf trudisk 10002 fiberlaser*			
Batchnr:		**Material specification**			
52-2383	**Material A:**	*SSAB Laser 355 MC Plus*	***Thickness***	*8mm*	
52-2383	**Material B:**	*SSAB Laser 355 MC Plus*	***Thickness***	*8mm*	
Filler or additional material					
	Consumables	*Carbomig3N*			
	Dimension	1,2mm			
Joint type		*T-joint one side welded*			
Joint Design		**Geometry**			

A	B

buttsvels

I-fuge



Jigs:				Yes		*X*	No
	X	Mechanically clamping					
	x	Tack weld process					
Preheating	**Yes**			**No**		*X*	
Post Heating	**Yes**			**No**		*X*	

Prodtex
Production / Technology / Excellence

WPS

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPS
LH-004-BW
04.01.2021 REV.: 0

Ref standard EN ISO 15614-14

	Preparation	*T-Joint, 0 mm gap, no bevelling*			
	Procedure	*Laser cutted*			
		Unit	**Tacking pass**	**1st pass**	**2nd pass**
1	Welding position			*PA*	
2	Torch arrangement			*Leading wire*	
3	Beam power at work piece				
	-Continous	W		*9800*	
4	Power ramping details				
a	-slope up	mm		-	
b	-overlap	mm		-	
c	-slope down	mm		-	
d	-slope profile			-	
5	Geometrical parameters				
a	- Beam angle transverse	Grader		*90*	
b	- Beam angle longitudinal	Grader		*40 fwd*	
c	- Distance beam-wire	mm		*2,5*	
d	-Focus position	Mm		*0*	
e	-Beam position	mm		*0*	
6	Welding speed	m/min		*2,1*	
7	Arc parameters				
a	-mode polarity			*DC+*	
b	-wire feed rate	m/min		*8,5*	
c	-current	A		*222*	
d	-voltage level	V		*20,5*	
e	-stick out wire	mm		*18*	
f	-pulse dynamic corr.			*3,0*	
g	-arc lenght corr.			*-3,0*	
8	Shielding gas				
a	-Classification and type			*M12-ArC-2*	
b	-gas flow	l/min		*20*	
	Comments:				

- ***Tack weld process: 3KW,10mm long 1,5 m/min.***

Kun godkjent for bruk i prosjekt «FRØNESBRUA»

Prodtex Industri			**Kontrollør**		
Dato	**Navn**	**Signatur**	**Dato**	**Navn**	**Signatur**
19.03.21	Geir Tonnesbakken	Geir Tonnesbakken	19.04.2021	CATO DØRUM	Cato Dørum

Prodtex
Production / Technology / Excellence

WPQR

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPQR
LH-005-BW
04.01.2021 REV.: 0

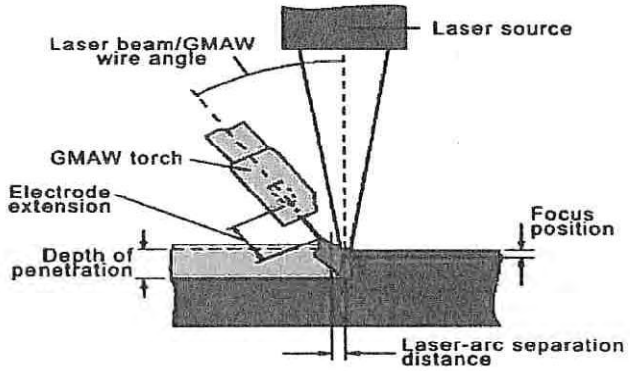
Ref standard EN ISO 15614-14

WPS Identification					
Manufacturer		Prodtex Industri AS			
WPQR Nr:		LH-005-BW			
Equipment Identification					
	Welding machine (Device)	*Fronius*			
	Fiber core diameter	*0,6 mm*			
	Beam focussing system	*Fronius*			
	Focussing optics	*Trumpf optics*			
	Welding power source	*Fronius TPSI 500i*			
	Laser power source	*Trumpf trudisk 10002 fiberlaser*			
Batchnr:		**Material specification**			
59-8283	**Material A:**	*SSAB Laser 355 MC Plus*	***Thickness***	*10mm*	
59-8283	**Material B:**	*SSAB Laser 355 MC Plus*	***Thickness***	*10mm*	
Filler or additional material					
	Consumables	*Carbomig3N*			
	Dimension	1,2mm			
Joint type		*T-joint one side welded*			
Joint Design		**Geometry**			

A	B

buttsvels

I-fuge



Jigs:				Yes		*X*	No
	X	Mechanically clamping					
	x	Tack weld process					
Preheating	**Yes**			**No**		*X*	
Post Heating	**Yes**			**No**		*X*	

Prodtex
Production / Technology / Excellence

WPQR

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPQR
LH-005-BW
04.01.2021 REV.: 0

Ref standard EN ISO 15614-14

	Preparation	T-Joint, 0 mm gap, no bevelling			
	Procedure	Laser cutted			
		Unit	Tacking pass	1st pass	2nd pass
1	Welding position			PA	
2	Torch arrangement			Leading wire	
3	Beam power at work piece				
	-Continous	W		10000	
4	Power ramping details				
a	-slope up	mm		-	
b	-overlap	mm		-	
c	-slope down	mm		-	
d	-slope profile			-	
5	Geometrical parameters				
a	- Beam angle transverse	Grader		90	
b	- Beam angle longitudinal	Grader		15,6 fwd	
c	- Distance beam-wire	mm		5,0	
d	-Focus position	Mm		254	
e	-Beam position	mm		24,3	
6	Welding speed	m/min		1,9	
7	Arc parameters				
a	-mode polarity			DC+	
b	-wire feed rate	m/min		9,0	
c	-current	A		222	
d	-voltage level	V		20,5	
e	-stick out wire	mm		15	
f	-pulse dynamic corr.			-10	
g	-arc lenght corr.			2,0	
8	Shielding gas				
a	-Classification and type			M12-ArC-2	
b	-gas flow	l/min		20	
	Comments:				

- ***Tack weld process: 3KW,10mm long 1,5 m/min.***

Kun godkjent for bruk i prosjekt «FRØNESBRUA»

Prodtex Industri			Kontrollør		
Dato	**Navn**	**Signatur**	**Dato**	**Navn**	**Signatur**
18.07.21	Geir Tommy Mikkelsen		19.04.2021	CATO DØRUM	

Prodtex
Production / Technology / Excellence

WPS

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPS
LH-005-BW
04.01.2021 REV.: 0

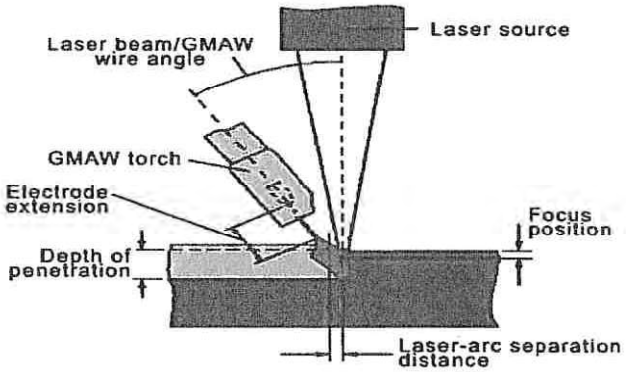
Ref standard EN ISO 15614-14

WPS Identification					
Manufacturer		Prodtex Industri AS			
WPQR Nr:		LH-005-BW			
Equipment Identification					
	Welding machine (Device)	*Fronius*			
	Fiber core diameter	*0,6 mm*			
	Beam focussing system	*Fronius*			
	Focussing optics	*Trumpf optics*			
	Welding power source	*Fronius TPSI 500i*			
	Laser power source	*Trumpf trudisk 10002 fiberlaser*			
Batchnr:		**Material specification**			
59-8283	**Material A:**	*SSAB Laser 355 MC Plus*	***Thickness***	*10mm*	
59-8283	**Material B:**	*SSAB Laser 355 MC Plus*	***Thickness***	*10mm*	
Filler or additional material					
	Consumables	*Carbomig3N*			
	Dimension	1,2mm			
Joint type		*T-joint one side welded*			
Joint Design		**Geometry**			

A	B

buttsveis

I-fuge



Jigs:				Yes		*X*	No
	X	Mechanically clamping					
	x	Tack weld process					
Preheating	**Yes**			**No**		*X*	
Post Heating	**Yes**			**No**		*X*	

Prodtex
Production / Technology / Excellence

WPS

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPS
LH-005-BW
04.01.2021 REV.: 0

Ref standard EN ISO 15614-14

	Preparation	*T-Joint, 0 mm gap, no bevelling*			
	Procedure	*Laser cutted*			
		Unit	**Tacking pass**	**1st pass**	**2nd pass**
1	Welding position			*PA*	
2	Torch arrangement			*Leading wire*	
3	Beam power at work piece				
	-Continous	W		*10000*	
4	Power ramping details				
a	-slope up	mm		-	
b	-overlap	mm		-	
c	-slope down	mm		-	
d	-slope profile			-	
5	Geometrical parameters				
a	- Beam angle transverse	Grader		*90*	
b	- Beam angle longitudinal	Grader		*15,6 fwd*	
c	- Distance beam-wire	mm		*5,0*	
d	-Focus position	Mm		*254*	
e	-Beam position	mm		*24,3*	
6	Welding speed	m/min		*1,9*	
7	Arc parameters				
a	-mode polarity			*DC+*	
b	-wire feed rate	m/min		*9,0*	
c	-current	A		*222*	
d	-voltage level	V		*20,5*	
e	-stick out wire	mm		*15*	
f	-pulse dynamic corr.			*-10*	
g	-arc lenght corr.			*2,0*	
8	Shielding gas				
a	-Classification and type			*M12-ArC-2*	
b	-gas flow	l/min		*20*	
	Comments:				

- ***Tack weld process: 3KW,10mm long 1,5 m/min.***

Kun godkjent for bruk i prosjekt «FRØNESBRUA»

Prodtex Industri			**Kontrollør**		
Dato	**Navn**	**Signatur**	**Dato**	**Navn**	**Signatur**
18.03.20	Geir Tonny Ytterdal		19.04.2021	CATU DORUM	Catu Dorum

Prodtex Production / Technology / Excellence	Welding Procedure Specification WPQR	WPQR No: MW 04 PC Date: 22.09.2020 Rev. 0

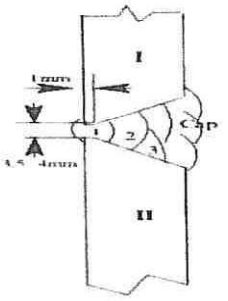
Produced by: Prodtex industri as | Client ---- | Ref. standard: EN ISO 15609-6

Project: General | Ref. spec/standard: NS-EN ISO 15614-14 | Verit body: DNV

Location: Fiskå | Ref. PWPS MW-04-PC

Welding methods:	1	138	2	136	3	
Shielding gas type:		82 % Ar + 18 % CO2		82 % Ar + 18 % CO2		

Welding position	PC
Torch arrangement	
Purging gas	N/A
Joint type	BW-Single-V-Butt
Joint preparation	Cutting
Cleaning method	Grinding/Brushing
Backing	N/A
Single/double side	Single side, full penetration
Gouging method	N/A
Wire stickout	15-20
Torch angle	70-80 Grader
Arc lenght	NA
Pulse dyn.corr.	NA
Wire-beam dictance	NA



Identification of base material	I: C max:	CE max:	PCM max:	II: C max:	CE max:	PCM max:

Part	Name/Grade	Standard	Group	Delivery cond.	Thick. range mm	Diameter range mm
A	S355G10+M	EN 10225	1.2	TM	10-10	-
B	S355G10+M	EN 10225	1.2	TM	10-10	-

Identification of filler material

Index	Brand name	Classification	Group	Filler treatment
A	NSSW SM-3A	EN ISO17632-A: T 42 2 ZMn P M21 1 H5	9606-1 FM1	Manufactures spec
B	NSSW SF-3A	EN ISO17632-A: T 46 4 ZMni P M21 1 H5	9606-1 FM1	Manufactures spec

Welding parameters

Pass no:	Side	Dia. Mm wire	Welding method	Wire feed m/min	Current A	Volt V	Polarity	W. speed mm/min	Run out length mm	Gas L/min	Heat input KJ/mm
1	1	1,2	138	2-2,2	95-110	14,5-15	DC+	60-80	500	20	1,03-1,65
Fill	1	1,2	136	6-8	210-225	22-24	DC+	270-400	500	20	0,69-1,2
Cap	1	1,2	136	6-7	205-215	22-24	DC+	250-360	500	20	0,75-1,24

PWHT min: NONE max:

Soaking: N/A min/mm

Heating rate: N/A

Cooling rate: N/A

Preheat min: 20 °C

Interpass max: 250°C

Temp. control: Digital

Non - Destructive Testing:

VE: 100% UT: RT: 100% MT:100% PT:

Other Information:

Welding unit: Kempii

Produced by:

Date:---------- Sign:

Approved by:

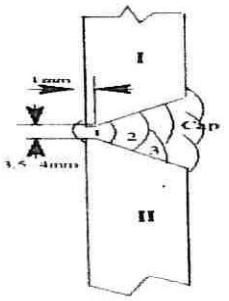
Date: 19.04.2021 ---------- Sign:

Prodtex Production / Technology / Excellence	Welding Procedure Specification **WPS**	**WPS No: MW 04 PC** **Date: 22.09.2020** **Rev. 0**

Produced by: Prodtex industri as	Client ----	Ref. standard: EN ISO 15609-6
Project: General	Ref. spec/standard: NS-EN ISO 15614-14	Verit body: **DNV**
Location: Fiskå	Ref. WPQR: MW-04-PC	

Welding methods:	1	138	2	136	3		
Shielding gas type:		82 % Ar + 18 % CO2		82 % Ar + 18 % CO2			

Welding position	PC
Torch arrangement	
Purging gas	N/A
Joint type	BW-Single-V-Butt
Joint preparation	Cutting
Cleaning method	Grinding/Brushing
Backing	N/A
Single/double side	Single side, full penetration
Gouging method	N/A
Wire stickout	15-20
Torch angle	70-80 Grader
Arc lenght	NA
Pulse dyn.corr.	NA
Wire-beam dictance	NA



Identification of base material	I: C max:	CE max:	PCM max:	II: C max:	CE max:	PCM max:

Part	Name/Grade	Standard	Group	Delivery cond.	Thick. range mm	Diameter range mm
A	S355G10+M	EN 10225	1.2	TM	10-10	-
B	S355G10+M	EN 10225	1.2	TM	10-10	-

Identification of filler material

Index	Brand name	Classification	Group	Filler treatment
A	NSSW SM-3A	EN ISO17632-A: T 42 2 ZMn P M21 1 H5	9606-1 FM1	Manufactures spec
B	NSSW SF-3A	EN ISO17632-A: T 46 4 ZMni P M21 1 H5	9606-1 FM1	Manufactures spec

Welding parameters

Pass no:	Side	Dia. Mm wire	Welding method	Wire feed m/min	Current A	Volt V	Polarity	W. speed mm/min	Run out length mm	Gas L/min	Heat input KJ/mm
1	1	1,2	138	2-2,2	95-110	14,5-15	DC+	60-80	500	20	1,03-1,65
Fill	1	1,2	136	6-8	210-225	22-24	DC+	270-400	500	20	0,69-1,2
Cap	1	1,2	136	6-7	205-215	22-24	DC+	250-360	500	20	0,75-1,24

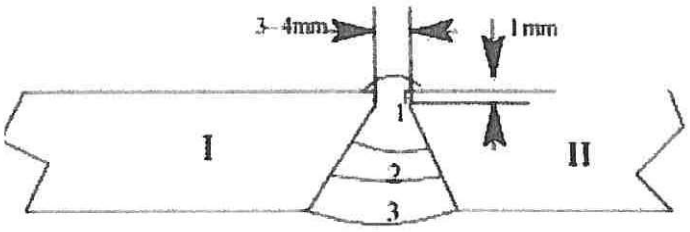
PWHT min: NONE max:	Non - Destructive Testing:	Produced by:
Soaking: N/A min/mm	VE: 100% UT: RT: 100% MT:100% PT:	Date: 18.03.21 Sign:
Heating rate: N/A	Other Information:	
Cooling rate: N/A	Welding unit: Kempii	Approved by:
Preheat min: 20 °C		
Interpass max: 250°C		Date: 19.04.2021 Sign:
Temp. control: Digital		

Prodtex Production / Technology / Excellence	Welding Procedure Specification **WPQR**	**WPQR No: MW 05 PF** **Date: 22.09.2020** **Rev. 0**

Produced by: Prodtex industri as	Client ----	Ref. standard: EN ISO 15609-6
Project: General	Ref. spec/standard: NS-EN ISO 15614-14	Verit body: **DNV**
Location: Fiskå	Ref. PWPS MW-05-PF	

Welding methods:	1	138	2	**136**	3		
Shielding gas type:		82 % Ar + 18 % CO2		82 % Ar + 18 % CO2			

Welding position	PF
Torch arrangement	NA
Purging gas	N/A
Joint type	BW-Single-V-Butt
Joint preparation	Cutting
Cleaning method	Grinding/Brushing
Backing	N/A
Single/double side	Single side, full penetration
Gouging method	N/A
Wire stickout	15-20
Torch angle	70-80 Grader
Arc lenght	NA
Pulse dyn.corr.	NA
Wire-beam dictance	NA



Identification of base material

Part	Name/Grade	Standard	Group	Delivery cond.	Thick. range mm	Diameter range mm
A	S355G10+M	EN 10225	2.1	TM	10-10	-
B	S355G10+M	EN 10225	2.1	TM	10-10	-

Identification of filler material

Index	Brand name	Classification	Group	Filler treatment
A	NSSW SM-3A	EN ISO17632-A: T 42 4 ZMn P M21 1 H5	9606-1 FM1	Manufactures spec
B	NSSW SF-3A	EN ISO17632-A: T 46 4 ZMni P M21 1 H5	9606-1 FM1	Manufactures spec

Welding parameters

Pass no:	Side	Dia. Mm wire	Welding method	Wire feed m/min	Current A	Volt V	Polarity	W. speed mm/min	Run out length mm	Gas L/min	Heat input KJ/mm
1	1	1,2	138	1.9-2.2	90-110	14,5-15	DC+	50-80	500	20	0.98-1.98
2	1	1,2	136	6-8	210-225	22-24	DC+	160-200	500	20	1.39-1.98
Cap	1	1,2	136	5-6	190-210	22-24	DC+	170-230	500	20	1.09-1.78

PWHT min: NONE max:	Non - Destructive Testing:	Produced by:
Soaking: N/A min/mm	VE: 100% UT: RT: 100% MT:100% PT:	
Heating rate: N/A	Other Information:	Date:---------- Sign:
Cooling rate: N/A	Welding unit: Kempii	
Preheat min: 20 °C		Approved by:
Interpass max: 250°C		
Temp. control: Digital		Date: 19.04.2021 Sign: Cato Dam

Prodtex
Production / Technology / Excellence

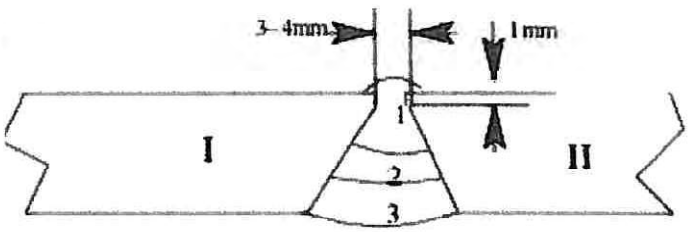
Welding Procedure Specification
WPS

WPS No: MW 05 PF
Date: 22.09.2020
Rev. 0

Produced by: Prodtex industri as | Client ---- | Ref. standard: EN ISO 15609-6
Project: General | Ref. spec/standard: NS-EN ISO 15614-14 | Verit body: **DNV**
Location: Fiskå | Ref. WPQR: MW-05-PF

Welding methods:	1	138	2	136	3	
Shielding gas type:		82 % Ar + 18 % CO2		82 % Ar + 18 % CO2		

Welding position	PF
Torch arrangement	NA
Purging gas	N/A
Joint type	BW-Single-V-Butt
Joint preparation	Cutting
Cleaning method	Grinding/Brushing
Backing	N/A
Single/double side	Single side, full penetration
Gouging method	N/A
Wire stickout	15-20
Torch angle	70-80 Grader
Arc lenght	NA
Pulse dyn.corr.	NA
Wire-beam dictance	NA



Identification of base material

Part	Name/Grade	Standard	Group	Delivery cond.	Thick. range mm	Diameter range mm
A	S355G10+M	EN 10225	2.1	TM	10-10	-
B	S355G10+M	EN 10225	2.1	TM	10-10	-

Identification of filler material

Index	Brand name	Classification	Group	Filler treatment
A	NSSW SM-3A	EN ISO17632-A: T 42 4 ZMn P M21 1 H5	9606-1 FM1	Manufactures spec
B	NSSW SF-3A	EN ISO17632-A: T 46 4 ZMni P M21 1 H5	9606-1 FM1	Manufactures spec

Welding parameters

Pass no:	Side	Dia. Mm wire	Welding method	Wire feed m/min	Current A	Volt V	Polarity	W. speed mm/min	Run out length mm	Gas L/min	Heat input KJ/mm
1	1	1,2	138	1.9-2.2	90-110	14,5-15	DC+	50-80	500	20	0.98-1.98
2	1	1,2	136	6-8	210-225	22-24	DC+	160-200	500	20	1.39-1.98
Cap	1	1,2	136	5-6	190-210	22-24	DC+	170-230	500	20	1.09-1.78

PWHT min: NONE max:
Soaking: N/A min/mm
Heating rate: N/A
Cooling rate: N/A
Preheat min: 20 °C
Interpass max: 250°C
Temp. control: Digital

Non - Destructive Testing:
VE: 100% UT: RT: 100% MT:100% PT:

Other Information:
Welding unit: Kempii

Produced by:
Date: 18.03.21 Sign:

Approved by:
Date: 19.04.2021 Sign:

Prodtex
Production / Technology / Excellence

WPQR

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPQR
Plasma 04.01.2021
REV.: 0

Ref standard EN ISO 15614-14

	Preparation	*Butt joint, 0 mm gap, no bevelling*			
	Procedure	*Laser cutted*			
		Unit	**Tacking pass**	**1st pass**	**2nd pass**
1	Welding position			*PA*	
2	Torch arrangement			*Leading wire*	
3	Beam power at work piece				
	-Continous	W		*10000*	
4	Power ramping details				
a	-slope up	mm		-	
b	-overlap	mm		-	
c	-slope down	mm		-	
d	-slope profile			-	
5	Geometrical parameters				
a	- Beam angle transverse	Grader		*90*	
b	- Beam angle longitudinal	Grader		*15,6fwd*	
c	- Distance beam-wire	mm		*5,0*	
d	-Focus position	Mm		*0*	
e	-Beam position	mm		*0*	
6	Welding speed	m/min		*1,9*	
7	Welding speed ramping			-	
8	Arc parameters				
a	-mode polarity			*DC+*	
b	-wire feed rate	m/min		*9,0*	
c	-current	A		*254*	
d	-voltage level	V		*24,3*	
e	-stick out wire	mm		*15*	
f	-pulse dynamic corr.			*-10*	
g	-arc lenght corr.			*2,0*	
9	Shielding gas				
a	-Classification and type			*M12-ArC-2*	
b	-gas flow	l/min		*20*	
	Comments:				

- ***Tackweld process: 3KW laserpower 10mm long speed 1,5m/min***
- ***Kun godkjent for bruk i prosjekt «FRØNESBRUA»***

Prodtex Industri			**Kontrollør**		
Dato	**Navn**	**Signatur**	**Dato**	**Navn**	**Signatur**
18.03.21	Geir Jarvis Nilsen		19.04.21	CATO DØRUM	

Prodtex
Production / Technology / Excellence

WPQR

WELDING PROCEDURE QUALIFICATION RECORD

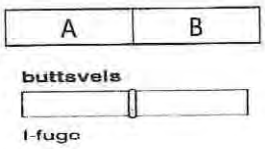
Welding method 135 Laser Hybrid

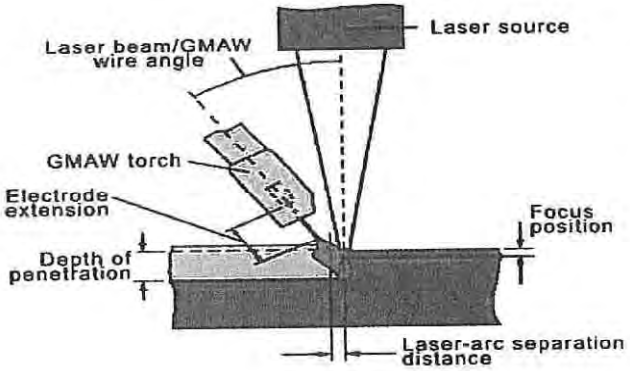
Ref standard EN ISO 15609-6

WPQR
Plasma 04.01.2021
REV.: 0

Ref standard EN ISO 15614-14

WPS Identification					
Manufacturer		Prodtex Industri AS			
WPQR Nr:		Plasma			
Equipment Identification					
	Welding machine (Device)	*Fronius*			
	Fiber core diameter	*0,6 mm*			
	Beam focussing system	*Fronius*			
	Focussing optics	*Trumpf optics*			
	Welding power source	*Fronius TPSI 500i*			
	Laser power source	*Trumpf trudisk 10002 fiberlaser*			
Batchnr:		**Material specification**			
62193	**Material A:**	*SSAB Laser 355 MC Plus*	***Thickness***	*10mm*	
62193	**Material B:**	*SSAB Laser 355 MC Plus*	***Thickness***	*10mm*	
Filler or additional material					
	Consumables	*Carbomig3N*			
	Dimension	1,2mm			
Joint type		*Butt joint one side welded*			
Joint Design		**Geometry**			





Jigs:			Yes		X	No
	X	Mechanically clamping				
		Tack weld process				
Preheating	**Yes**			**No**		X
Post Heating	**Yes**			**No**		X

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WPS

WELDING PROCEDURE QUALIFICATION RECORD

Welding method 135 Laser Hybrid

Ref standard EN ISO 15609-6

WPS
Plasma 04.01.2021
REV.: 0

Ref standard EN ISO 15614-14

	Preparation	*Butt joint, 0 mm gap, no bevelling*			
	Procedure	*Laser cutted*			
		Unit	**Tacking pass**	**1st pass**	**2nd pass**
1	Welding position			*PA*	
2	Torch arrangement			*Leading wire*	
3	Beam power at work piece				
	-Continous	W		*10000*	
4	Power ramping details				
a	-slope up	mm		-	
b	-overlap	mm		-	
c	-slope down	mm		-	
d	-slope profile			-	
5	Geometrical parameters				
a	- Beam angle transverse	Grader		*90*	
b	- Beam angle longitudinal	Grader		*15,6fwd*	
c	- Distance beam-wire	mm		*5,0*	
d	-Focus position	Mm		*0*	
e	-Beam position	mm		*0*	
6	Welding speed	m/min		*1,9*	
7	Welding speed ramping			-	
8	Arc parameters				
a	-mode polarity			*DC+*	
b	-wire feed rate	m/min		*9,0*	
c	-current	A		*254*	
d	-voltage level	V		*24,3*	
e	-stick out wire	mm		*15*	
f	-pulse dynamic corr.			*-10*	
g	-arc lenght corr.			*2,0*	
9	Shielding gas				
a	-Classification and type			*M12-ArC-2*	
b	-gas flow	l/min		*20*	
	Comments:				

- ***Tackweld process: 3KW laserpower 10mm long speed 1,5m/min***
- ***Kun godkjent for bruk i prosjekt «FRØNESBRUA»***

Prodtex Industri			**Kontrollør**		
Dato	**Navn**	**Signatur**	**Dato**	**Navn**	**Signatur**
18.03.21	Geir Jarny Nordgård		19.04.21	CATU DØRUM	

Prodtex
Production / Technology / Excellence

WPS

WELDING PROCEDURE QUALIFICATION RECORD

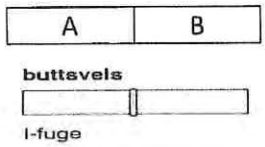
Welding method 135 Laser Hybrid

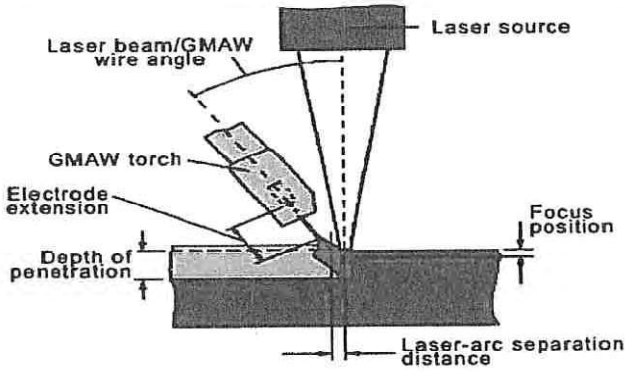
Ref standard EN ISO 15609-6

WPS
Plasma 04.01.2021
REV.: 0

Ref standard EN ISO 15614-14

WPS Identification					
Manufacturer		Prodtex Industri AS			
WPQR Nr:		Plasma			
Equipment Identification					
	Welding machine (Device)	*Fronius*			
	Fiber core diameter	*0,6 mm*			
	Beam focussing system	*Fronius*			
	Focussing optics	*Trumpf optics*			
	Welding power source	*Fronius TPSI 500i*			
	Laser power source	*Trumpf trudisk 10002 fiberlaser*			
Batchnr:		**Material specification**			
62193	**Material A:**	*SSAB Laser 355 MC Plus*	***Thickness***	*10mm*	
62193	**Material B:**	*SSAB Laser 355 MC Plus*	***Thickness***	*10mm*	
Filler or additional material					
	Consumables	*Carbomig3N*			
	Dimension	1,2mm			
Joint type		*Butt joint one side welded*			
Joint Design		**Geometry**			





Jigs:			Yes		X	No
	X	Mechanically clamping				
		Tack weld process				
Preheating	**Yes**			**No**		X
Post Heating	**Yes**			**No**		X

VEDLEGG C: NDT rapporter fra Vitec og Vertikalservice

Magnetic Particle Testing / Magnetpulver Testing (MT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **MT- 1**
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**
Section no / Seksjon nr **Seksjon 1**	Extent of Testing / Kontrollomfang **100% av oppgitte sveisenr**
Procedure / Prosedyre **SVV-R762-10.06**	Acceptance standard / Akseptstandard **NS-EN ISO 23278**

Equipment / Utstyr ☒ Tiede Yoke AC ☐ Other / Annet	Magnetic Particle Type/ Magnetpulver Type ☒ Magnavis WB-27 ☐ Bycotest 103 ☐ PFinder 251 ☐ Tiede 690.1 ☐ Other/ Annet	
Contrast Paint / Kontrastmaling ☐ Spectracolor 971 ☒ MR Chemie 72 ☐ Bycotest 104A	Technique/ Teknikk ☐ Dry Powder / Tørrpulver ☒ Wet Powder / Våtpulver ☐ Fluorecent / Fluoriserende	
Material / thickness / Materiale/ tykkelse : **10mm**	Welding process/ Sveisemetode **Laser hybrid**	Joint / Fuge ☒ BW / Buttsveis ☐ FW / Kilsveis

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temp. / Overflate temperatur = **20°C**

TEST RESULTS / TEST RESULTAT

Weld no / Sveis nr	Position / Posisjon (mm)	Length Tested / Testlengde (mm) / (%)	Defect Length / Feillengde (mm)	Defect Type / Feiltype	Defect Name / Feilnavn	Acc	Rej
						☐	☐
						☐	☐
						☐	☐

Comments / Kommentarer

Godkjente toppsveiser (tvers) :
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33.

Opplistede sveiser er godkjent i hele sin lengde (4420mm pr stk).
Til sammen 141 440mm.

Date / Dato **09/08-2021**	Operator name / Inspektør navn Jørgen H. Johansen	Certificate no / Sertifikat nr **12719-N2-M**
Place of Work / Kontrollsted **Prodtex Vanylven**	Operator signature / Inspektør signatur	Page / Side 1 of/ av 1

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-52**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **8mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, Bunnsveis 2**	Length Tested / Testlengde **5492 mm**	Defect Length / Feillengde **349 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	2014-2043	7-8	29	Bindefeil	☐	☒
2	N/A	TOFD	2440-2520	7-8	80	Spredte porer	☐	☒
3	N/A	TOFD	2460-2484	3-5	24	Bindefeil	☐	☒
4	N/A	TOFD	5000-5240	5-8	240	Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato 03/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-53**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **8mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, Bunnsveis 3**	Length Tested / Testlengde **5492 mm**	Defect Length / Feillengde **4012 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+1	0-1000	5-7	1000	Bindefeil	☐	☒
2	N/A	TOFD	1315-3040	0-8	1725	Spredte porer	☐	☒
3	N/A	TOFD	3493-3530	7-8	37	Bindefeil	☐	☒
4	N/A	TOFD	3995-5245	0-8	1250	Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato 03/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-58**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**8mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 1, bunnsveis 4	5492 **mm**	**210 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	40-250	5-7	210	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-54**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **8mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, Bunnsveis 5**	Length Tested / Testlengde **5492 mm**		Defect Length / Feillengde **1910 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1129-1310	3-7	181	Spredte porer	☐	☒
2	N/A	TOFD	1848-3320	2-8	1472	Spredte porer	☐	☒
3	N/A	TOFD	3771-4028	2-8	257	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato 03/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-55**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **8mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, Bunnsveis 6**	Length Tested / Testlengde **5492 mm**		Defect Length / Feillengde **2425 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	550-1579	3-8	1029	Spredte porer	☐	☒
2	N/A	TOFD	3370-4481	0-8	1111	Spredte porer	☐	☒
3	N/A	TOFD	4783-5068	2-5	285	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato 03/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 1207G-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-56**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **8mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, Bunnsveis 7**	Length Tested / Testlengde **5492 mm**		Defect Length / Feillengde **518 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	4457-4975	2-8	518	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato 03/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-57**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**8mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 1, Bunnsveis 8	**5492 mm**	**1743 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	130-185	2-6	55	Spredte porer	☐	☒
2	N/A	TOFD	2635-3328	2-7	693	Porer / Bindefeil	☐	☒
3	N/A	TOFD	3500-3855	2-8	355	Spredte porer	☐	☒
4	N/A	TOFD	4384-5024	0-8	640	Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
03/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-107**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **8mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, bunnsveis 10**	Length Tested / Testlengde 5492 **mm**	Defect Length / Feillengde **259 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1296-1393	6-8	97	Spredte porer	☐	☒
2	N/A	+4	4217-4379	5-8	162	Bindefeil	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-60**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **8mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, bunnsveis 11**	Length Tested / Testlengde 5492 **mm**	Defect Length / Feillengde **1707 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	785-1662	2-8	877	Spredte porer	☐	☒
2	N/A	TOFD	1950-1970	2-8	20	Bindefeil	☐	☒
3	N/A	TOFD	2790-3600	0-8	238	Spredte porer	☐	☒

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjoner.

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-59**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **8mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, Bunnsveis 9**	Length Tested / Testlengde 5492 **mm**	Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**		Report no / Rapport nr **PAUT-17**	
Client order no / Kunde ordre nr **2116000**		Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**		Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**		Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018** Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 23**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-18**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 24**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-19**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 25**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-25**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 31**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-37**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4 MHz**	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 42**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-38**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	4 MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 1, sveis 43	**4420 mm**	**0 mm**	☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
22/06-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
08.08.21 GEIR AMUND WOAHL	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-39**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 44**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-43**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 48**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-49**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 1**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **98 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	2063-2138	6-9	75	Spredte porer	☐	☒
2	N/A	0	2800-2812	4-6	12	Bindefeil	☐	☒
3	N/A	0	3404-3415	6-10	11	Bindefeil	☐	☒

Comments / Kommentarer :
Dårlig TOFD signal pga sliping i grunnmaterialet med slipeskive. Gjelder område 590-1450mm & 2950-4420mm.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-50**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 2**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **257 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	0-80	0-10	80	Spredte porer	☐	☒
2	N/A	TOFD	1531-1671	0-10	140	Bindefeil	☐	☒
3	N/A	TOFD	1883-1907	0-10	24	Bindefeil	☐	☒
4	N/A	TOFD	2437-2450	0-10	13	Bindefeil	☐	☒

Comments / Kommentarer :
Dårlig TOFD signal pga sliping i grunnmaterialet med slipeskive. Gjelder område 1450-2000mm & 2270-4420mm.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur UMO	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-51**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 3**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **79 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+5	92-108	5-10	16	Bindefeil	☐	☒
2	N/A	+12	1603-1624	0-10	21	Bindefeil	☐	☒
3	N/A	+12	1670-1689	0-10	19	Bindefeil	☐	☒
4	N/A	0	2636-2649	4-10	13	Bindefeil	☐	☒
5	N/A	+1	3622-3632	5-10	10	Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-1**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 4**	Length Tested / Testlengde **4420** mm		Defect Length / Feillengde **835** mm	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+5	1837-1859	0-10	22	Bindefeil	☐	☒
2	N/A	+5	2105-2644	5-10	539	Bindefeil	☐	☒
3	N/A	+7	3101-3115	4-8	14	Bindefeil	☐	☒
4	N/A	+7	4160-4420	6-10	260	Bindefeil	☐	☒

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of/ av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-28**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 5**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **25 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+7	810-828	5-10	18	Bindefeil	☐	☒
2	N/A	0	3997-4004	6-10	7	Bindefeil	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-2**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 2
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 6**	Length Tested / Testlengde **4420** mm	Defect Length / Feillengde **169** mm	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :
Resultat er samlet på side 2.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 2
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+9	1072-1092	4-10	20	Bindefeil	☐	☒
2	N/A	+7	1543-1587	0-10	44	Bindefeil	☐	☒
3	N/A	+8	1618-1630	0-10	12	Bindefeil	☐	☒
4	N/A	-1	1668-1674	2-8	6	Bindefeil	☐	☒
5	N/A	0	3285-3294	5-10	9	Bindefeil	☐	☒
6	N/A	+5	3642-3660	3-10	18	Bindefeil	☐	☒
7	N/A	+3	4003-4019	6-10	16	Bindefeil	☐	☒
8	N/A	-3	4314-4320	4-10	6	Bindefeil	☐	☒
9	N/A	+6	4348-4386	5-10	38	Bindefeil	☐	☒
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Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-3**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 2
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 7**	Length Tested / Testlengde **4420** mm		Defect Length / Feillengde **261 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
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							☐	☐
							☐	☐

Comments / Kommentarer :
Resultat er samlet på side 2.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 2
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+1	22-32	6-10	10	Bindefeil	☐	☒
2	N/A	0	36-44	4-8	8	Bindefeil	☐	☒
3	N/A	+4	504-525	3-10	21	Bindefeil	☐	☒
4	N/A	+7	625-655	3-10	30	Bindefeil	☐	☒
5	N/A	+6	820-840	0-10	20	Bindefeil	☐	☒
6	N/A	+4	1856-1876	0-10	20	Bindefeil	☐	☒
7	N/A	0	2117-2124	0-10	7	Bindefeil	☐	☒
8	N/A	TOFD	2564-2571	2-9	7	Bindefeil	☐	☒
9	N/A	+1	3002-3028	5-9	26	Bindefeil	☐	☒
10	N/A	-6	3053-3064	4-10	11	Bindefeil	☐	☒
11	N/A	+3	3767-3851	3-10	84	Bindefeil	☐	☒
12	N/A	+7	4367-4384	2-10	17	Bindefeil	☐	☒
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							☐	☐
							☐	☐
							☐	☐

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**		Report no / Rapport nr **PAUT-4**	
Client order no / Kunde ordre nr **2116000**		Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 2
Drawing no / Tegnings nr **N/A**		Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**		Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
		Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	4 MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 1, sveis 8	**4420** mm	**536 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
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							☐	☐
							☐	☐

Comments / Kommentarer :
Resultat er samlet på side 2.

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
19/06-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 2

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
08.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	-2	573-581	3-10	8	Bindefeil	☐	☒
2	N/A	-5	840-854	3-10	14	Bindefeil	☐	☒
3	N/A	+6	1537-1730	4-10	193	Bindefeil	☐	☒
4	N/A	+4	1788-1809	4-10	21	Bindefeil	☐	☒
5	N/A	-3	2173-2180	3-9	7	Bindefeil	☐	☒
6	N/A	+1	2976-2995	4-10	19	Bindefeil	☐	☒
7	N/A	TOFD	3542-3588	6-10	46	Spredte porer	☐	☒
8	N/A	TOFD	4102-4285	8-10	183	Spredte porer	☐	☒
9	N/A	-3	4365-4380	5-10	15	Bindefeil	☐	☒
10	N/A	-5	4390-4420	7-10	30	Bindefeil	☐	☒
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							☐	☐

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-5**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 2
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 9**	Length Tested / Testlengde **4420** mm	Defect Length / Feillengde **836 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :
Resultat er samlet på side 2.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 2
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+2	14-20	6-10	6	Bindefeil	☐	☒
2	N/A	-3	1537-1545	3-10	8	Bindefeil	☐	☒
3	N/A	-2	1610-1620	3-10	10	Bindefeil	☐	☒
4	N/A	+2	1680-1692	3-10	12	Bindefeil	☐	☒
5	N/A	0	1775-1786	3-10	11	Bindefeil	☐	☒
6	N/A	+2	2785-2799	4-7	14	Bindefeil	☐	☒
7	N/A	TOFD	2824-2841	9-10	17	Spredte porer	☐	☒
8	N/A	0	2994-3083	3-10	87	Bindefeil	☐	☒
9	N/A	TOFD	3386-3420	7-10	34	Spredte porer	☐	☒
10	N/A	TOFD	3497-3800	6-10	303	Spredte porer	☐	☒
11	N/A	TOFD	4086-4420	7-10	334	Spredte porer	☐	☒
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Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-6**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 10**	Length Tested / Testlengde **4420** mm	Defect Length / Feillengde **1663** mm	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	740-1135	4-10	395	Spredte porer	☐	☒
2	N/A	TOFD	1945-3063	0-10	1268	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :
Porer spredt i forskjellige dybder mellom angitte posisjoner

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of/ av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-7**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 11**	Length Tested / Testlengde **4420** mm		Defect Length / Feillengde **992 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+1	1371-1398	7-10	27	Bindefeil	☐	☒
2	N/A	+5	2327-2950	4-10	623	Bindefeil	☐	☒
3	N/A	+5	4078-4420	0-10	342	Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of/ av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-8**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 1, sveis 12	**4420** mm	**1767 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	838-2274	0-10	1436	Spredte porer	☐	☒
2	N/A	TOFD	2562-2698	7-10	136	Spredte porer	☐	☒
3	N/A	0	2950-3000	5-10	50	Bindefeil	☐	☒
4	N/A	TOFD	3486-3585	7-10	99	Spredte porer	☐	☒
5	N/A	+7	4374-4420	4-10	46	Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
19/06-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of/ av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
08.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-9**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 13**	Length Tested / Testlengde **4420** mm	Defect Length / Feillengde **4420 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	0-4420	0-10	4420	Bindefeil / porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :
Spredte små & store feil over hele sveiselengden.
Anbefaler å fjerne hele lengden og sveise på nytt.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-10**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 2
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 14**	Length Tested / Testlengde **4420** mm	Defect Length / Feillengde **1304 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :
Resultat er samlet på side 2.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 2

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	110-330	0-10	220	Spredte porer	☐	☒
2	N/A	-3	970-980	3-10	10	Bindefeil	☐	☒
3	N/A	TOFD	1395-2189	3-10	794	Spredte porer	☐	☒
4	N/A	+1	2907-3157	3-10	250	Bindefeil	☐	☒
5	N/A	-3	3700-3714	3-10	14	Bindefeil	☐	☒
6	N/A	TOFD	4176-4192	3-10	16	Spredte porer	☐	☒
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-11**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 15**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **917 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	0	633-670	5-10	37	Bindefeil	☐	☒
2	N/A	TOFD	1763-2179	6-10	416	Spredte porer	☐	☒
3	N/A	+1	3956-4420	5-10	464	Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur Vegar Mosling	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-46**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 16**	Length Tested / Testlengde **2850 mm**		Defect Length / Feillengde **260 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	4160-4420	5-10	260	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :
Område før & etter 2stk løfteører mangler kontroll.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur VM JHO	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-13**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 18**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **114 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	0-114	5-10	114	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-12**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 17**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **453 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	-3	1477-1796	4-7	19	Bindefeil	☐	☒
2	N/A	TOFD	3986-4420	4-10	434	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-14**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 19**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **870 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	580-1450	0-10	870	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjon.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur VMO	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-15**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 20**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **258 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	0-126	7-10	126	Spredte porer	☐	☒
2	N/A	TOFD	4288-4420	5-10	132	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjoner.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur VMO	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-29**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 21**	Length Tested / Testlengde **4420** mm	Defect Length / Feillengde **714 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	0	0-45	5-10	45	Bindefeil	☐	☒
2	N/A	0	280-302	3-10	22	Bindefeil	☐	☒
3	N/A	TOFD	1304-1450	7-10	146	Spredte porer	☐	☒
4	N/A	TOFD	3919-4420	5-10	501	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of/ av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-16**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 22**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **640 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	570-1210	0-10	640	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjon.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur VMO	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-20**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 1, sveis 26	**4420 mm**	**563 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1257-1732	5-9	475	Spredte porer	☐	☒
2	N/A	TOFD	4332-4420	3-10	88	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjoner.

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
19/06-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
08.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-21**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 27**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **1515 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	293-1386	0-10	1093	Spredte porer	☐	☒
2	N/A	TOFD	2723-2950	6-10	227	Spredte porer	☐	☒
3	N/A	TOFD	3505-3700	5-10	195	Spredte porer	☐	☒

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjoner.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-22**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 28**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **877 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	471-1348	4-10	877	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjon.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-23**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 29**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **607 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	0-184	5-9	184	Spredte porer	☐	☒
2	N/A	TOFD	510-911	5-10	401	Spredte porer	☐	☒
3	N/A	TOFD	1438-1460	5-8	22	Spredte porer	☐	☒

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjoner.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-24**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 30**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **825 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	35-168	6-10	133	Spredte porer	☐	☒
2	N/A	TOFD	415-980	6-10	565	Spredte porer	☐	☒
3	N/A	TOFD	1450-1577	5-10	127	Spredte porer	☐	☒

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjoner.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-26**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 32**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **1043 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	443-1238	0-10	795	Spredte porer	☐	☒
2	N/A	TOFD	1395-1405	5-8	10	Spredte porer	☐	☒
3	N/A	TOFD	2582-2820	5-10	238	Spredte porer	☐	☒

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjoner.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-27**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 33**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **1255 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	0-300	5-9	300	Spredte porer	☐	☒
2	N/A	TOFD	555-1510	6-10	955	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :
Spredte porer i forskjellige dybder mellom angitt posisjoner.

Date of test / Test dato 19/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-30**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 34**	Length Tested / Testlengde **2850 mm**	Defect Length / Feillengde **433 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	60-138	6-10	78	Spredte porer	☐	☒
2	N/A	TOFD	2375-2730	5-10	355	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :
Områder rundt løfteører er ikke scannet. Mangler 2 områder på til sammen ca 1570mm.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-47**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 35**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **2995 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+6	0-262	7-10	262	Bindefeil	☐	☒
2	N/A	+5	388-1184	7-10	769	Bindefeil	☐	☒
3	N/A	+7	1508-1950	7-10	442	Bindefeil	☐	☒
4	N/A	+6	2900-4420	7-10	1520	Bindefeil	☐	☐

Comments / Kommentarer :
Bindefeiler spredt i angitte lengder ovenfor.

Date of test / Test dato 24/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-31**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 36**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **23 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	0	1194-1217	2-5	23	Bindefeil	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-32**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 37**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **110 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+2	1295-1325	3-6	30	Bindefeil	☐	☒
2	N/A	TOFD	1540-1620	6-10	80	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur VMO	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-33**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 38**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **136 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1490-1626	6-9	136	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-34**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 39**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **585 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	295-880	3-10	3-10	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :
Dårlig TOFD signal pga sliping i grunnmaterialet med slipeskive. Gjelder område 2950-4420mm.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-35**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 40**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **700 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	2250-2950	7-9	700	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur VMO	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08-21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-36**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 41**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **255 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	580-800	5-9	220	Spredte porer	☐	☒
2	N/A	TOFD	2665-2700	7-10	35	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :
Dårlig signal på TOFD pga sliping i grunnmaterialet med slipeskive. Gjelder område 2800-2950mm.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 08.06.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-40**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 45**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **25 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	3014-3039	5-9	25	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :
Dårlig signal på TOFD pga sliping i grunnmaterialet med slipeskive. Gjelder område 4000-4420mm.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-41**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 46**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **1953 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+3	0-1070	0-10	1070	Bindefeil / porer	☐	☒
2	N/A	TOFD	2970-3112	6-10	142	Spredte porer	☐	☒
3	N/A	TOFD	3487-4228	6-10	741	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-42**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis 47**	Length Tested / Testlengde **4420 mm**		Defect Length / Feillengde **415 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	530-945	4-10	415	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-44**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 1, sveis 49**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **840 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+9	260-1100	0-10	840	Bindefeil	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :
Dårlig TOFD signal pga sliping i grunnmaterialet med slipeskive. Gjelder område 1100-1900mm.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-48**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 2
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis B**	Length Tested / Testlengde **18 240 mm**		Defect Length / Feillengde **3514mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :
Resultat er samlet på side 2.
Dårlig TOFD signal pga sliping i grunnmateriale med slipeskive. Gjelder område 7320-7940mm & 12186-12247mm.
Mangler områder rundt 2stk løfteører.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 2

Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	48-120	0-10	72	Spredte porer	☐	☒
2	N/A	-3	219-227	3-5	8	Bindefeil	☐	☒
3	N/A	+2	325-347	22	5-10	Bindefeil	☐	☒
4	N/A	+6	743-2614	6-10	1871	Spredte bindefeil	☐	☒
5	N/A	+3	3050-3434	0-10	536	Bindefeil	☐	☒
6	N/A	+2	4346-4357	6-10	11	Bindefeil	☐	☒
7	N/A	-1	5613-5620	5-8	7	Bindefeil	☐	☒
8	N/A	TOFD	7056-7270	5-10	214	Spredte porer	☐	☒
9	N/A	TOFD	8712-8872	5-10	160	Spredte porer	☐	☒
10	N/A	-3	10888-10905	6-10	17	Spredte porer	☐	☒
11	N/A	TOFD	12622-12642	8-10	20	Spredte porer	☐	☒
12	N/A	TOFD	13031-13049	5-10	18	Spredte porer	☐	☒
13	N/A	TOFD	14742-14856	5-9	114	Spredte porer	☐	☒
14	N/A	-3	16087-16103	5-8	16	Bindefeil	☐	☒
15	N/A	TOFD	16322-16872	4-8	550	Spredte porer	☐	☒
16	N/A	TOFD	17180-17371	4-8	191	Spredte porer	☐	☒
17	N/A	TOFD	18766-18989	4-8	223	Spredte porer	☐	☒
							☐	☐
							☐	☐

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-45**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 2
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**			Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 1, sveis C**	Length Tested / Testlengde **18 240 mm**		Defect Length / Feillengde **4162 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :
Resultat er samlet på side 2.
Dårlig TOFD signal pga sliping i grunnmateriale med slipeskive. Gjelder område 1000-3500mm, 9680-9800mm, 10944-11176mm & 12570-13110mm.
Mangler områder rundt 2stk løfteører.

Date of test / Test dato 22/06-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 2
Approved date, name / Godkj dato, navn 08.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	0	0-165	5-10	165	Bindefeil	☐	☒
2	N/A	TOFD	957-965	5-8	8	Spredte porer	☐	☒
3	N/A	TOFD	1739-1781	5-8	42	Spredte porer	☐	☒
4	N/A	TOFD	3873-4230	0-10	357	Spredte porer	☐	☒
5	N/A	TOFD	5640-5843	5-10	203	Spredte porer	☐	☒
6	N/A	TOFD	6818-7022	5-9	204	Spredte porer	☐	☒
7	N/A	TOFD	7470-7675	3-8	205	Spredte porer	☐	☒
8	N/A	TOFD	8057-8210	3-10	153	Spredte porer	☐	☒
9	N/A	TOFD	8374-8622	3-10	248	Spredte porer	☐	☒
10	N/A	TOFD	9907-10248	3-10	341	Spredte porer	☐	☒
11	N/A	TOFD	12767-13019	8-10	252	Spredte porer	☐	☒
12	N/A	+6	13850-15834	7-10	1984	Bindefeil	☐	☒
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-21**	**6217-21-UT-10**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
---NA---	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Frønesbrua
Seksjon 1/bunn.
Kontroll etter reperasjon.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**8** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1,5 mm**	**UT Gel**	**As welded**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**47**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**43**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle mål/lengder i mm.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
bunnsveis, 01		**01**	**60/70**		**785**	**1662**	**877**			☑	☐	
bunnsveis, 01		**02**	**60/70**		**1950**	**1970**	**20**			☑	☐	
bunnsveis, 01		**03**	**60/70**		**2790**	**3600**	**238**			☑	☐	

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-21**	**6217-21-UT-10**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
bunnsveis, 02		**01**	**60/70**		**2014**	**2043**	**29**			✓		
bunnsveis, 02		**02**	**60/70**		**2440**	**2520**	**80m**			✓		
bunnsveis, 02		**03**	**60/70**		**2460**	**2484**	**24**			✓		
bunnsveis, 02		**04**	**60/70**		**5000**	**5240**	**240**			✓		
bunnsveis, 03		**01**	**60/70**		**0**	**1000**	**1000**			✓		
bunnsveis. 03		**02**	**60/70**		**1315**	**3040**	**1725**			✓		
bunnsveis. 03		**03**	**60/70**		**3493**	**3530**	**37**			✓		
bunnsveis. 03		**04**	**60/70**		**3995**	**5245**	**1250**			✓		
bunnsveis. 04		**01**	**60/70**		**40**	**250**	**210**			✓		
bunnsveis. 05		**01**	**60/70**		**1129**	**1310**	**181**			✓		
bunnsveis. 05		**02**	**60/70**		**1848**	**3320**	**1472**			✓		
bunnsveis. 05		**03**	**60/70**		**3771**	**4028**	**257**			✓		
bunnsveis. 06		**01**	**60/70**		**550**	**1579**	**1029**			✓		
bunnsveis. 06		**02**	**60/70**		**3370**	**4481**	**1111**			✓		
bunnsveis. 06		**03**	**60/70**		**4783**	**5068**	**285**			✓		
bunnsveis. 07		**01**	**60/70**		**4457**	**4975**	**518**			✓		
bunnsveis. 08		**01**	**60/70**		**130**	**185**	**55**			✓		
bunnsveis. 08		**02**	**60/70**		**2635**	**3328**	**693**			✓		
bunnsveis. 08		**03**	**60/70**		**3500**	**3855**	**355**			✓		
bunnsveis. 08		**04**	**60/70**		**4384**	**5024**	**640**			✓		
bunnsveis. 10		**01**	**60/70**		**1296**	**1393**	**97**			✓		
bunnsveis. 10		**02**	**60/70**		**4217**	**4379**	**162**			✓		
bunnsveis. 11		**01**	**60/70**		**785**	**1662**	**877**			✓		
bunnsveis. 11		**02**	**60/70**		**1950**	**1970**	**20**			✓		
bunnsveis. 11		**03**	**60/70**		**2790**	**3600**	**238**			✓		

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-23

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-23**	**6217-21-UT-14-REV3**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
--NA--	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Fronesbrua
Kontroll etter reperasjon.
Ultralyd kontroll ov sveis & HAZ på "Seksjon 1 /Topp"

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**10** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1.5 mm**	**UT Gel**	**som sveist**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**47**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**43**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle mål/lengder i mm.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
01/Topp		**01**	**60/70**		**2063**	**2138**	**75**			☑	☐	
01/Topp		**02**	**60/70**		**2800**	**2812**	**12**			☑	☐	
01/Topp		**03**	**60/70**		**3404**	**3415**	**11**			☑	☐	

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-23**	**6217-21-UT-14-REV3**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
02/Topp		01	60/70		0	80	80			✓		
02/Topp		02	60/70		1531	1671	140			✓		
02/Topp		03	60/70		1883	1907	24			✓		
02/Topp		04	60/70		2437	2450	13			✓		
03/Topp		01	60/70		92	108	16			✓		
03/Topp		02	60/70		1603	1624	21			✓		
03/Topp		03	60/70		1670	1689	19			✓		
03/Topp		04	60/70		2636	2649	13			✓		
03/Topp		05	60/70		3622	2632	10			✓		
04/Topp		01	60/70		1837	1859	22			✓		
04/Topp		02	60/70		2105	2644	539			✓		
04/Topp		03	60/70		3101	3115	14			✓		
04/Topp		04	60/70		4160	4420	260			✓		
05/Topp		01	60/70		810	828	18			✓		
05/Topp		02	60/70		3997	4004	7			✓		
06/Topp		01	60/70		1072	1092	20			✓		
06/Topp		02	60/70		1543	1587	44			✓		
06/Topp		03	60/70		1618	1630	12			✓		
06/Topp		04	60/70		1668	1674	6			✓		
06/Topp		05	60/70		3285	3294	9			✓		
06/Topp		06	60/70		3642	3660	18			✓		
06/Topp		07	60/70		4003	4019	16			✓		
06/Topp		08	60/70		4314	4320	6			✓		
06/Topp		09	60/70		4348	4386	38			✓		
07/Topp		01	60/70		22	32	10			✓		
07/Topp		02	60/70		26	44	8			✓		
07/Topp		03	60/70		504	525	21			✓		
07/Topp		04	60/70		625	655	30			✓		
07/Topp		05	60/70		820	840	20			✓		
07/Topp		06	60/70		1856	1876	20			✓		
07/Topp		07	60/70		2117	2124	7			✓		
07/Topp		08	60/70		2564	2571	7			✓		
07/Topp		09	60/70		3002	3028	26			✓		
07/Topp		10	60/70		3053	3064	11			✓		
07/Topp		11	60/70		3767	3851	84			✓		
07/Topp		12	60/70		4367	4384	17			✓		
08/Topp		01	60/70		573	581	8			✓		
08/Topp		02	60/70		840	854	14			✓		
08/Topp		03	60/70		1537	1730	193			✓		
08/Topp		04	60/70		1788	1809	21			✓		

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
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REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-24 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-24

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-23**	**6217-21-UT-15-REV1**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
--NA--	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Frønesbrua
Ultralyd kontroll ov sveis & HAZ på "Seksjon 1 /Topp"
Kontroll etter reperasjon.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**10** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1.5 mm**	**UT Gel**	**som sveist**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
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MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**43**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle mål/lengder i mm.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
08/Topp		**05**	**60/70**		**2173**	**2180**	**7**			☑	☐	
08/Topp		**06**	**60/70**		**2976**	**2995**	**19**			☑	☐	
08/Topp		**07**	**60/70**		**3542**	**3588**	**46**			☑	☐	

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-23**	**6217-21-UT-15-REV1**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
08/Topp		08	60/70		4102	4285	183			✓		
08/Topp		09	60/70		4365	4380	15			✓		
08/Topp		10	60/70		4390	4420	30			✓		
09/Topp		01	60/70		14	20	6			✓		
09/Topp		02	60/70		1537	1545	8			✓		
09/Topp		03	60/70		1610	1620	10			✓		
09/Topp		04	60/70		1680	1692	12			✓		
09/Topp		05	60/70		1775	1786	11			✓		
09/Topp		06	60/70		2785	2799	14			✓		
09/Topp		07	60/70		2824	2841	17			✓		
09/Topp		08	60/70		2294	2083	87			✓		
09/Topp		09	60/70		3386	3420	34			✓		
09/Topp		10	60/70		3497	3800	303			✓		
09/Topp		11	60/70		4086	4420	334			✓		
10/Topp		01	60/70		740	1135	395			✓		
10/Topp		02	60/70		1945	3063	1268			✓		
11/Topp		01	60/70		1371	1398	27			✓		
11/Topp		02	60/70		2327	2950	623			✓		
11/Topp		03	60/70		4078	4420	242			✓		
12/Topp		01	60/70		838	2274	1436			✓		
12/Topp		02	60/70		2562	2698	136			✓		
12/Topp		03	60/70		2950	3000	50			✓		
12/Topp		04	60/70		3486	3585	99			✓		
12/Topp		05	60/70		4374	4420	46			✓		
13/Topp		01	60/70		0	4420	4420			✓		
14/Topp		01	60/70		110	330	220			✓		
14/Topp		02	60/70		970	980	10			✓		
14/Topp		03	60/70		1395	2189	794			✓		
14/Topp		04	60/70		2907	3157	250			✓		
14/Topp		05	60/70		3700	3714	14			✓		
14/Topp		06	60/70		4176	4192	16			✓		
15/Topp		01	60/70		633	670	37			✓		
15/Topp		02	60/70		1763	2179	416			✓		
15/Topp		03	60/70		3956	4420	464			✓		
16/Topp		01	60/70		4169	4420	260			✓		
17/Topp		01	60/70		1477	1796	19			✓		
17/Topp		02	60/70		3986	4420	434			✓		
18/Topp		01	60/70		0	114	114			✓		
19/Topp		01	60/70		580	1450	870			✓		
20/Topp		04	60/70		0	126	126			✓		

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-23

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-23**	**6217-21-UT-17**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
--NA--	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Frønesbrua
Ultralyd kontroll ov sveis & HAZ på "Seksjon 1 /Topp"
Kontroll etter reperasjon.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**10** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1.5 mm**	**UT Gel**	**som sveist**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**47**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**43**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle mål/lengder i mm.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
20/Topp		**02**	**60/70**		**4288**	**4420**	**126**			☑	☐	
21/Topp		**01**	**60/70**		**0**	**45**	**45**			☑	☐	
21/Topp		**02**	**60/70**		**280**	**302**	**22**			☑	☐	

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-23**	**6217-21-UT-17**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
21/Topp		**03**	**60/70**		**1304**	**1450**	**146**			✓		
21/Topp		**04**	**60/70**		**3919**	**4420**	**501**			✓		
22/Topp		**01**	**60/70**		**570**	**1210**	**640**			✓		
26/Topp		**01**	**60/70**		**1257**	**1732**	**475**			✓		
26/Topp		**02**	**60/70**		**4332**	**4420**	**88**			✓		
27/Topp		**01**	**60/70**		**293**	**1386**	**1093**			✓		
27/Topp		**02**	**60/70**		**2723**	**2950**	**227**			✓		
27/Topp		**03**	**60/70**		**3505**	**3700**	**195**			✓		
28/Topp		**01**	**60/70**		**471**	**1348**	**877**			✓		
29/Topp		**01**	**60/70**		**0**	**184**	**184**			✓		
29/Topp		**02**	**60/70**		**510**	**911**	**401**			✓		
29/Topp		**03**	**60/70**		**1438**	**1460**	**22**			✓		
30/Topp		**01**	**60/70**		**35**	**168**	**133**			✓		
30/Topp		**02**	**60/70**		**415**	**980**	**565**			✓		
30/Topp		**03**	**60/70**		**1450**	**1577**	**127**			✓		
32/Topp		**01**	**60/70**		**443**	**1238**	**795**			✓		
32/Topp		**01**	**60/70**		**1395**	**1405**	**10**			✓		
32/Topp		**02**	**60/70**		**2582**	**2820**	**238**			✓		
33/Topp		**03**	**60/70**		**0**	**300**	**300**			✓		
33/Topp		**01**	**60/70**		**555**	**1510**	**955**			✓		

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
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REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-23

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-24**	**6217-21-UT-19-REV1**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
---NA---	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Fronesbrua
Ultralyd kontroll ov sveis & HAZ på "Seksjon 1/Topp" Sveis 0, A, D.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**10** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1.5 mm**	**UT Gel**	**som sveist**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**47**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**43**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

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☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle mål/lengder i mm.
Alle indikasjoner ble markert på sveiser.
Alle reperasjoner ble kontrollert 100%.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
A		**01**	**60**	**-6**	**0**	**150**	**150**	**6-10**	**400**	☑	☐	
A		**02**	**60**	**-3**	**2970**	**3130**	**160**	**7-10**	**400**	☑	☐	
A		**03**	**70**	**0**	**4500**	**4640**	**140**	**7-10**	**400**	☑	☐	

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-24**	**6217-21-UT-19-REV1**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
A		**04**	**70**	**-3**	**6607**	**6857**	**250**	**6-10**	**400**	✓		
A		**05**	**70**	**0**	**8220**	**8648**	**428**	**7-10**	**400**	✓		
A		**06**	**70**	**-2**	**10250**	**10850**	**600**	**6**	**300**	✓		
A		**07**	**70**	**0**	**16190**	**16530**	**340**	**7-10**	**400**	✓		
B		**01**	**70**	**-3**	**0**	**520**	**520**	**6-10**	**400**	✓		
B		**02**	**70**	**0**	**3130**	**3530**	**400**	**5**	**300**	✓		
B		**03**	**70**	**0**	**4320**	**4365**	**45**	**7-10**	**400**	✓		
B		**04**	**70**	**-6**	**4890**	**5130**	**240**	**7-10**	**400**	✓		
0		**--**	**60/70**	**--**	**--**	**--**	**--**	**--**	**--**	✓		

TYPE OF DEFECT / FEILTYPE
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402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
✓ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-24 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-24

Visual Testing / Visuell Testing (VT)

Client / Kunde **Prodtex industrier**	Report no / Rapport nr **VT- 1**
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**
Section no / Seksjon nr **Seksjon 1**	Extent of Testing / Kontrollomfang **100% av oppgitte sveiser**
Procedure / Prosedyre **SVV-R762-10.08**	Acceptance standard / Akseptstandard **NS-EN ISO 5817 Level C**

Material/ Material ☒ Carbonsteel/Karbonstål ☐ Other / Annet:	Equipment / Utstyr ☒ Weldgauge/Sveiselære ☐ Mirror/Speil ☒ Flashlight/Lykt ☐ Gapgauge/Åpningsmåler ☒ Other/Annet
Joint/ Fuge ☒ BW / Buttsveis ☐ FW / Kilsveis	Technique/ Teknikk ☒ Direct visual testing/Direkte visuell inspeksjon ☐ Remote visual testing/Indirekte visuell inspeksjon
Light illuminance/ Lys styrke 1000> Lux	Welding process/ Sveisemetode Laser hybrid

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Machined / Maskinert ☐ Painted / Malt

TEST RESULTS / TEST RESULTAT

Weld no / Sveis nr	Position / Posisjon (mm)	Length Tested / Testlengde (mm) / (%)	Defect Length / Feillengde (mm)	Defect Type / Feiltype	Defect Name / Feilnavn	Acc	Rej
						☐	☐
						☐	☐
						☐	☐

Comments / Kommentarer

Godkjente toppsveiser:
Sveisnr 1 til 49 på tvers.
Sveisnr B & C på langs.

Godkjente Bunnsveiser:
Sveisnr 2 til 11.

Date / Dato **09/08-2021**	Operator name / Inspektør navn Jørgen H. Johansen Vegar Mosling	Certificate no / Sertifikat nr **12719-N2-V** **12076-N2-V**
Place of Work / Kontrollsted **Prodtex Vanylven**	Operator signature / Inspektør signatur	Page / Side 1 of/ av 1

Magnetic Particle Testing / Magnetpulver Testing (MT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **MT- 2**
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**
Section no / Seksjon nr **Seksjon 2**	Extent of Testing / Kontrollomfang **100% av oppgitte sveisenr**
Procedure / Prosedyre **SVV-R762-10.06**	Acceptance standard / Akseptstandard **NS-EN ISO 23278**

Equipment / Utstyr ☒ Tiede Yoke AC ☐ Other / Annet	Magnetic Particle Type/ Magnetpulver Type ☒ Magnavis WB-27 ☐ Bycotest 103 ☐ PFinder 251 ☐ Tiede 690.1 ☐ Other/ Annet	
Contrast Paint / Kontrastmaling ☐ Spectracolor 971 ☒ MR Chemie 72 ☐ Bycotest 104A	Technique/ Teknikk ☐ Dry Powder / Tørrpulver ☒ Wet Powder / Våtpulver ☐ Fluorecent / Fluoriserende	
Material / thickness / Materiale/ tykkelse : **10mm**	Welding process/ Sveisemetode **Laser hybrid**	Joint / Fuge ☒ BW / Buttsveis ☐ FW / Kilsveis

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temp. / Overflate temperatur = **20°C**

TEST RESULTS / TEST RESULTAT

Weld no / Sveis nr	Position / Posisjon (mm)	Length Tested / Testlengde (mm) / (%)	Defect Length / Feillengde (mm)	Defect Type / Feiltype	Defect Name / Feilnavn	Acc	Rej
						☐	☐
						☐	☐
						☐	☐

Comments / Kommentarer

Godkjente toppsveiser (tvers) :
1,6,18,31,33,36,38,41,46.

Opplistede sveiser er godkjent i hele sin lengde (4420mm pr stk).
Til sammen 39 780mm.

Date / Dato **09/08-2021**	Operator name / Inspektør navn Jørgen H. Johansen	Certificate no / Sertifikat nr **12719-N2-M**
Place of Work / Kontrollsted **Prodtex Vanylven**	Operator signature / Inspektør signatur	Page / Side 1 of/ av 1

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-61**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 1	**4420mm**	**0 mm**	☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-66**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 6**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-76**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 18**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-89**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 31	**4420mm**	**0 mm**	☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
09.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-91**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 33**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-93**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length /Feillengde	Accept / Akseptert
Seksjon 2, sveis 36	**4420 mm**	**0 mm**	☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
06/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
09.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-95**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 38**	Length Tested / Testlengde **4420 mm**		Defect Length /Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 06/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-98**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 41**	Length Tested / Testlengde **4420 mm**	Defect Length /Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 06/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-103**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 46**	Length Tested / Testlengde **4420 mm**	Defect Length /Feillengde **0 mm**	Accept / Akseptert ☒ **Acc** ☐ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
							☐	☐
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 06/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-62**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	4 MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 2	**4420mm**	**1135 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+4	2851-2992	0-6	141	Bindefeil	☐	☒
2	N/A	TOFD	3334-4328	5-10	994	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
09.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-63**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 3**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **306 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1434-1491	0-5	57	Porer / Bindefeil	☐	☒
2	N/A	TOFD	1623-1872	5-9	249	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-64**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 4**	Length Tested / Testlengde **4420mm**		Defect Length / Feillengde **209 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+2	122-331	5-10	209	Porer / Bindefeil	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-65**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	4 MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 5	**4420mm**	**901 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	443-800	5-10	357	Porer / Bindefeil	☐	☒
2	N/A	+9	3160-3704	6-10	544	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
09.08.21 Geir Amund Indahl	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-67**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 7**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **650 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	0-152	6-10	152	Spredte porer	☐	☒
2	N/A	TOFD	406-892	5-10	498	Porer / Bindefeil	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-68**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 8**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **1024 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	260-845	3-10	585	Porer / Bindefeil	☐	☒
2	N/A	+1	1299-1346	3-6	47	Bindefeil	☐	☒
3	N/A	+6	1398-1513	5-10	115	Bindefeil	☐	☒
4	N/A	+5	2332-2440	6-10	108	Bindefeil	☐	☒
5	N/A	+1	2915-3084	4-10	169	Porer / Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-69**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 9**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **1993 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	518-870	5-10	352	Spredte porer	☐	☒
2	N/A	TOFD	2342-2450	4-8	108	Bindefeil	☐	☒
3	N/A	TOFD	2887-4420	4-10	1533	Porer / Bindefeil	☐	☒

Comments / Kommentarer :
Feil nr3 har 3stk bindefeil spredt innen område 2887-4420mm (+6dB), samt spredte porer hele lengden.

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-70**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 10**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **1159 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	+7	1400-1610	5-8	210	Porer / Bindefeil	☐	☒
2	N/A	TOFD	2947-3896	3-10	949	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :
Bindefeil 1437-1470mm.
Porer 1515-1610mm.

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-106**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	4 MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 11	**4420mm**	**93 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	2913-3006	4-8	93	Bindefeil	☐	☒
2								
3								

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
04.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-71**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 12**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **266 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	0	1500-1547	3-8	47	Bindefeil	☐	☒
2	N/A	+8	2942-2982	5-10	40	Bindefeil	☐	☒
3	N/A	TOFD	3285-3464	3-10	179	Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-73**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 13**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **350 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	0-227	5-10	227	Spredte porer	☐	☒
2	N/A	TOFD	1447-1468	3-7	21	Spredte porer	☐	☒
3	N/A	TOFD	2978-3080	5-9	102	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-72**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 14**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **497 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	360-830	5-10	470	Spredte porer	☐	☒
2	N/A	TOFD	1441-1468	3-7	27	Bindefeil	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-74**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	4 MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 15	**4420mm**	**1024 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD / +6	289-970	2-10	681	Porer / Bindefeil	☐	☒
2	N/A	TOFD	1426-1612	2-10	186	Spredte porer	☐	☒
3	N/A	TOFD	2991-3148	6-10	157	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
09.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-75**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 17**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **822 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	2142-2281	3-7	139	Spredte porer	☐	☒
2	N/A	TOFD	2266-2949	4-10	683	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-77**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 19**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **212 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1497-1560	5-10	63	Porer / Bindefeil	☐	☒
2	N/A	TOFD	2501-2571	5-10	70	Porer / Bindefeil	☐	☒
3	N/A	TOFD	4237-4316	5-10	71	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-78**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 20**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **219 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	2727-2946	6-10	219	Porer / Bindefeil	☐	☒
2							☐	☐
3							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-79**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 21	**4420mm**	**539 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	447-940	0-10	493	Spredte porer	☐	☒
2	N/A	TOFD	1521-1567	5-10	46	Spredte porer	☐	☒
3							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
09.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-80**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 22**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **1156 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1445-2601	0-10	1156	Porer / Bindefeil	☐	☒
2							☐	☐
3							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-81**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 23**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **1522 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	165-1006	0-10	841	Porer / Bindefeil	☐	☒
2	N/A	TOFD	1577-1774	5-10	197	Spredte porer	☐	☒
3	N/A	TOFD	2665-3149	5-10	484	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-82**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 24**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **2073 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	0-605	3-10	605	Porer / Bindefeil	☐	☒
2	N/A	TOFD	2952-4420	4-10	1468	Porer / Bindefeil	☐	☒
3							☐	☐

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-83**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 25**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **646 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	478-950	4-10	472	Porer / Bindefeil	☐	☒
2	N/A	TOFD	1388-1614	5-10	226	Spredte porer	☐	☒
3	N/A	TOFD	3166-3414	6-10	248	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-84**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	4 MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 26	**4420mm**	**2036 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	437-847	5-10	410	Spredte porer	☐	☒
2	N/A	TOFD	1276-2226	5-10	950	Porer / Bindefeil	☐	☒
3	N/A	TOFD	3090-3766	5-10	676	Porer / Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-85**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 27**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **707 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	400-1061	4-10	661	Spredte porer	☐	☒
2	N/A	TOFD	1507-1514	5-8	7	Spredte porer	☐	☒
3	N/A	+1	1958-1971	4-7	13	Bindefeil	☐	☒
4	N/A	0	2759-2775	4-8	16	Bindefeil	☐	☒
5	N/A	0	4410-4420	3-6	10	Bindefeil	☐	☒

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-86**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 28**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **1130 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	448-795	6-10	347	Spredte porer	☐	☒
2	N/A	TOFD	978-1135	5-10	157	Spredte porer	☐	☒
3	N/A	TOFD	3211-381	4-10	600	Porer / Bindefeil	☐	☒
4	N/A	+4	4214-4240	6-10	26	Bindefeil	☐	☒
5								

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 Geir Amund Indahl	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-87**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 29**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **819 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	355-989	4-10	634	Porer / Bindefeil	☐	☒
2	N/A	TOFD	1531-1716	3-8	185	Porer / Bindefeil	☐	☒
3								

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 Geir Amund Indahl	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-88**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 30**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **179 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	513-657	5-10	144	Spredte porer	☐	☒
2	N/A	TOFD	2900-2935	6-9	35	Spredte porer	☐	☒
3								

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-90**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 32**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **408 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD / +6	2798-3071	6-10	273	Porer / Bindefeil	☐	☒
2	N/A	TOFD	3615-3750	3-9	135	Spredte porer	☐	☒
3								

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-92**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 35**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **340 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1424-1463	5-8	39	Porer/Bindefeil	☐	☒
2	N/A	TOFD	2986-3287	6-10	301	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 06/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-94**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens 4 MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 37**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **84 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	2863-2947	5-9	84	Porer/Bindefeil	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 06/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-96**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 39	**4420 mm**	**443 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	403-846	3-10	443	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
06/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
09.08.21 GEIR AMUND INDAHL	Geir Amund Indahl	2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-97**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	4 MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 40	**4420 mm**	**142 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	2979-3121	5-10	142	Spredte porer	☐	☒
							☐	☐
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
06/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-99**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	4 MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 42	**4420mm**	**319 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1495-1557	5-9	62	Spredte porer	☐	☒
2	N/A	TOFD	1891-1944	5-9	53	Spredte porer	☐	☒
3	N/A	TOFD	2852-3056	5-9	204	Spredte porer	☐	☒

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
05/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn	Approved sign / Godkjent sign	Cert no/ Sert nr
09.08.21 Geir Amund Indahl	Geir Amund Indahl	2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-100**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 43**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **336 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1148-1484	3-10	336	Porer / Bindefeil	☐	☒
2								
3								

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-101**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**
Material Quality / Material kvalitet ☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐				
Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**		Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB		Sens. Level / Forsterkning **+6** dB
Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°		Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm
Surface / Overflate ☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert Surface temperature / Overflate temperatur: **15°C**				
Weld no / Sveis nr **Seksjon 2, sveis 44**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **642 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**	

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	3107-3749	6-10	642	Porer / Bindefeil	☐	☒
2								
3								

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-102**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 45**	Length Tested / Testlengde **4420mm**	Defect Length / Feillengde **249 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	1504-1753	5-10	249	Spredte porer	☐	☒
2								
3								

Comments / Kommentarer :

Date of test / Test dato 05/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1

Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VITEC AS — Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**			Report no / Rapport nr **PAUT-104**	
Client order no / Kunde ordre nr **2116000**			Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**			Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**			Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
			Testing Level / Test Nivå **EXC 3**	
Welders / Sveisere **N/A**	Groove / Fugetype **I-fuge**	Diameter **N/A**	Thickn / Tykkelse **10mm**	Inspection cat / Insp kat **B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr ☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	Transfer correction/Overflate komp **Skew 90 +5** dB **Skew 270 +5** dB	Sens. Level / Forsterkning **+6** dB

Couplant / Koplingsmedium **Vann**	Frequency / Frekvens **4** MHz	Beamset – min / max angle ☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	Reference block / Kalibreringsblokk T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr **Seksjon 2, sveis 47**	Length Tested / Testlengde **4420 mm**	Defect Length / Feillengde **572 mm**	Accept / Akseptert ☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	482-795	3-10	313	Spredte porer	☐	☒
2	N/A	TOFD	2707-2966	5-10	301	Spredte porer	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato 06/07-2021	Operator name / Inspektør navn Vegar Mosling Jørgen H. Johansen	Certificate no / Sertifikat nr 12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

Phased Array Testing (PAUT)

Client / Kunde **Prodtex industrier AS**	Report no / Rapport nr **PAUT-105**	
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**	Page / Side 1 of / av 1
Drawing no / Tegnings nr **N/A**	Extent of Testing / Kontrollomfang **100%**	
Procedure / Prosedyre **SVV-FRØN-10.25E**	Acceptance standard / Akseptstandard **PAUT : ISO 19285-2017 / TOFD : ISO 15626-2018**	
	Testing Level / Test Nivå **EXC 3**	

Welders / Sveisere	Groove / Fugetype	Diameter	Thickn / Tykkelse	Inspection cat / Insp kat
N/A	**I-fuge**	**N/A**	**10mm**	**B**

Material Quality / Material kvalitet
☒ Carbon Steel ☐ Carbon Steel (TMCP) ☐ 316L ☐ 6MO ☐ Duplex ☐ Super Duplex ☐ Titan ☐

Equipment / Utstyr	Transfer correction/Overflate komp	Sens. Level / Forsterkning
☒ Omniscan MX2/X3 ☐ M2M Gekko ☒ Supplementary method TOFD Serial number/Serienummer: **QC-0074079**	**Skew 90 +5** dB **Skew 270 +5** dB	**+6** dB

Couplant / Koplingsmedium	Frequency / Frekvens	Beamset – min / max angle	Reference block / Kalibreringsblokk
Vann	**4** MHz	☒ Sectorial Group 1: Vpa 1-33 70° ☒ Linear Group 2: 63-72° ☐ Compound Group 3: 50-72°	T= **10** mm Ø= **2,5** mm T= **8** mm Ø= **2,5** mm

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Painted / Malt ☐ Machined / Maskinert
Surface temperature / Overflate temperatur: **15°C**

Weld no / Sveis nr	Length Tested / Testlengde	Defect Length / Feillengde	Accept / Akseptert
Seksjon 2, sveis 48	**4420 mm**	**491 mm**	☐ **Acc** ☒ **Rej**

TEST RESULTS / TEST RESULTAT

No / Nr	Probe angel / Lydvinkel	Echo height / Feilnivå (dB)	Position / Posisjon (mm)	Depth / Dybde (mm)	Length / Lengde (mm)	Defect description / Feilbeskrivelse	Acc	Rej
1	N/A	TOFD	532-757	5-10	225	Spredte porer	☐	☒
2	N/A	TOFD	2983-3249	5-10	266	Porer/Bindefeil	☐	☒
							☐	☐

Comments / Kommentarer :

Date of test / Test dato	Operator name / Inspektør navn	Certificate no / Sertifikat nr
06/07-2021	Vegar Mosling Jørgen H. Johansen	12076-N3-U 12719-N2-U
Place of Work / Kontrollsted Fiskå Vanylven	Operator signature / Inspektør signatur	Page / Side 1 of / av 1
Approved date, name / Godkj dato, navn 09.08.21 GEIR AMUND INDAHL	Approved sign / Godkjent sign Geir Amund Indahl	Cert no/ Sert nr 2679-N3-U

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-21**	**6217-21-UT-11**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
---NA---	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Frønesbrua
Ultralyd kontroll ov sveis & HAZ på Seksjon 2/bunn.
sveis no. 01-11
Totalt lengde på hver sveis 5492mm.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**8** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1,5 mm**	**UT Gel**	**As welded**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**47**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**48**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle indikasjoner ble merket på objekt/sveiser.
Alle reperasjoner ble kontrollert på nytt 100%.
Alle mål/lengder i mm.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
bunnsveis,01	**02.08.2021**	**01**	**60/70**	**-2db**	**3150**	**3558**	**408**	**5-8**	**400**	☑	☐	
bunnsveis,01	**02.08.2021**	**02**	**60/70**	**-6db**	**4447**	**4886**	**439**	**3-8**	**300**	☑	☐	
bunnsveis,02	**02.08.2021**	**01**	**60/70**	**-2db**	**0**	**590**	**590**	**2-6**	**300**	☑	☐	

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-21**	**6217-21-UT-11**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
bunnsveis,04	**02.08.2021**	**01**	**60/70**	**-4db**	**4440**	**5445**	**1005**	**3-8**	**400**	✓		
bunnsveis,05	**02.08.2021**	**01**	**60/70**	**-4db**	**5300**	**5460**	**160**	**5-8**	**400**	✓		
bunnsveis,07	**02.08.2021**	**01**	**60/70**	**-4db**	**884**	**1384**	**500**	**6-8**	**400**	✓		
bunnsveis,08	**02.08.2021**	**01**	**60/70**	**-06db**	**0**	**439**	**439**	**6-8**	**400**	✓		
bunnsveis,08	**02.08.2021**	**02**	**60/70**	**-3db**	**4010**	**4300**	**290**	**6-8**	**400**	✓		

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-23

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-22**	**6217-21-UT-12**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
---NA---	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Frønesbrua
Ultralyd kontroll ov sveis & HAZ på "Seksjon 2 /Topp"
Kontroll etter reperasjon.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**10** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1,5 mm**	**UT Gel**	**som sveist**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**47**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**43**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle mål/lengder i mm.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
02/Topp		**01**	**60/70**		**2851**	**2992**	**141**			☑	☐	
02/Topp		**02**	**60/70**		**3334**	**4328**	**994**			☑	☐	
03/Topp		**01**	**60/70**		**1434**	**1491**	**57**			☑	☐	

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-22**	**6217-21-UT-12**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
03/Topp		02	60/70		1623	1872	249			✓		
04/Topp		01	60/70		122	331	209			✓		
05/Topp		01	60/70		443	800	357			✓		
05/Topp		02	60/70		3160	3704	544			✓		
07/Topp		01	60/70		0	152	152			✓		
07/Topp		02	60/70		406	892	498			✓		
08/Topp		01	60/70		260	845	585			✓		
08/Topp		02	60/70		1299	1346	47			✓		
08/Topp		03	60/70		1398	1513	115			✓		
08/Topp		03	60/70		2332	2440	108			✓		
08/Topp		05	60/70		2915	3084	169			✓		
09/Topp		01	60/70		518	870	352			✓		
09/Topp		02	60/70		2342	2450	108			✓		
09/Topp		03	60/70		2887	4420	1533			✓		
10/Topp		01	60/70		1400	1610	210			✓		
10/Topp		02	60/70		2947	3896	949			✓		
11/Topp		01	60/70		2913	3006	93			✓		
12/Topp		01	60/70		1500	1547	47			✓		
12/Topp		02	60/70		2942	2982	40			✓		
12/Topp		03	60/70		3285	3464	179			✓		
13/Topp		01	60/70		0	227	227			✓		
13/Topp		02	60/70		1447	1468	21			✓		
13/Topp		03	60/70		2978	3080	102			✓		
14/Topp		01	60/70		360	830	470			✓		
14/Topp		02	60/70		1441	1468	27			✓		
15/Topp		01	60/70		289	970	681			✓		
15/Topp		02	60/70		1426	1612	186			✓		
15/Topp		03	60/70		2991	3148	157			✓		
17/Topp		01	60/70		2142	2281	139			✓		
17/Topp		02	60/70		2266	2949	683			✓		
19/Topp		01	60/70		1497	1560	63			✓		
19/Topp		02	60/70		2501	2571	70			✓		
19/Topp		03	60/70		4237	4316	71			✓		
20/Topp		01	60/70		2727	2946	219			✓		
21/Topp		01	60/70		447	940	493			✓		
21/Topp		02	60/70		1521	1567	46			✓		
22/Topp		01	60/70		1445	2601	1156			✓		
23/Topp		01	60/70		165	1006	841			✓		
23/Topp		02	60/70		1577	1774	197			✓		
23/Topp		03	60/70		2665	3149	484			✓		

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-23

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-22**	**6217-21-UT-13-REV1**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
--NA--	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Frønesbrua
Ultralyd kontroll ov sveis & HAZ på "Seksjon 2 /Topp"
Kontroll etter reperasjon.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**10** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1.5 mm**	**UT Gel**	**som sveist**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**47**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**43**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle mål/lengder i mm.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
24/Topp		**01**	**60/70**		**0**	**605**	**605**			☑	☐	
24/Topp		**02**	**60/70**		**2952**	**4420**	**1468**			☑	☐	
25/Topp		**01**	**60/70**		**478**	**950**	**472**			☑	☐	

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-22**	**6217-21-UT-13-REV1**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
25/Topp		**02**	**60/70**		**1388**	**1614**	**226**			✓		
25/Topp		**03**	**60/70**		**3166**	**3414**	**248**			✓		
26/Topp		**01**	**60/70**		**437**	**847**	**410**			✓		
26/Topp		**02**	**60/70**		**1276**	**2226**	**950**			✓		
26/Topp		**03**	**60/70**		**3090**	**3766**	**676**			✓		
27/Topp		**01**	**60/70**		**400**	**1061**	**661**			✓		
27/Topp		**02**	**60/70**		**1507**	**1514**	**7**			✓		
27/Topp		**03**	**60/70**		**1958**	**1971**	**13**			✓		
27/Topp		**04**	**60/70**		**2759**	**2775**	**16**			✓		
27/Topp		**05**	**60/70**		**4410**	**4420**	**10**			✓		
28/Topp		**01**	**60/70**		**448**	**795**	**347**			✓		
28/Topp		**02**	**60/70**		**978**	**1135**	**157**			✓		
28/Topp		**03**	**60/70**		**3211**	**3811**	**600**			✓		
28/Topp		**04**	**60/70**		**4214**	**4240**	**26**			✓		
29/Topp		**01**	**60/70**		**355**	**989**	**634**			✓		
29/Topp		**02**	**60/70**		**1531**	**1716**	**186**			✓		
30/Topp		**01**	**60/70**		**513**	**657**	**144**			✓		
30/Topp		**02**	**60/70**		**2900**	**2935**	**35**			✓		
32/Topp		**01**	**60/70**		**2798**	**3071**	**273**			✓		
32/Topp		**02**	**60/70**		**3615**	**3750**	**135**			✓		
35/Topp		**01**	**60/70**		**1424**	**1463**	**39**			✓		
35/Topp		**02**	**60/70**		**2986**	**3287**	**301**			✓		
37/Topp		**01**	**60/70**		**2863**	**2947**	**84**			✓		
39/Topp		**01**	**60/70**		**403**	**846**	**443**			✓		
40/Topp		**01**	**60/70**		**2979**	**3121**	**142**			✓		
42/Topp		**01**	**60/70**		**1495**	**1557**	**62**			✓		
42/Topp		**02**	**60/70**		**1891**	**1944**	**53**			✓		
42/Topp		**03**	**60/70**		**2852**	**3056**	**204**			✓		
43/Topp		**01**	**60/70**		**1148**	**1184**	**336**			✓		
44/Topp		**01**	**60/70**		**3107**	**3749**	**642**			✓		
45/Topp		**01**	**60/70**		**1504**	**1753**	**249**			✓		
47/Topp		**01**	**60/70**		**482**	**795**	**313**			✓		
47/Topp		**02**	**60/70**		**2707**	**2966**	**301**			✓		
48/Topp		**01**	**60/70**		**532**	**757**	**225**			✓		
48/Topp		**02**	**60/70**		**2983**	**3249**	**266**			✓		

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-23
		

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-24**	**6217-21-UT-20**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
---NA---	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Fronesbrua
Ultralyd kontroll ov sveis & HAZ på "Seksjon 2/Topp" Sveis 0, A, D.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**10** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1.5 mm**	**UT Gel**	**som sveist**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**47**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**43**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle indikasjoner ble reparert og kontrollert 100%

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
0		**01**	**60**	**-6**	**700**	**1150**	**450**	**4**	**300**	☑	☐	
D		**--**	**60/70**	**--**	**--**	**--**	**--**	**--**	**--**	☑	☐	
A		**01**	**70**	**-6**	**8345**	**8383**	**38**	**5**	**300**	☑	☐	

VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-24**	**6217-21-UT-20**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
A		**02**	**70**	**4**	**16017**	**16135**	**118**	**7-10**	**400**	☑	☐	

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☑ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-24 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-24

Visual Testing / Visuell Testing (VT)

Client / Kunde **Prodtex industrier**	Report no / Rapport nr **VT-2**
Client order no / Kunde ordre nr **2116000**	Project / Prosjekt **Frønesbrua**
Section no / Seksjon nr **Seksjon 2**	Extent of Testing / Kontrollomfang **100% av oppgitte sveiser**
Procedure / Prosedyre **SVV-R762-10.08**	Acceptance standard / Akseptstandard **NS-EN ISO 5817 Level C**

Material/ Material ☒ Carbonsteel/Karbonstål ☐ Other / Annet:	Equipment / Utstyr ☒ Weldgauge/Sveiselære ☐ Mirror/Speil ☒ Flashlight/Lykt ☐ Gapgauge/Åpningsmåler ☒ Other/Annet
Joint/ Fuge ☒ BW / Buttsveis ☐ FW / Kilsveis	Technique/ Teknikk ☒ Direct visual testing/Direkte visuell inspeksjon ☐ Remote visual testing/Indirekte visuell inspeksjon
Light illuminance/ Lys styrke 1000> Lux	Welding process/ Sveisemetode Laser hybrid

Surface / Overflate
☒ As welded / Sveist ☒ Grinded / Slipt ☐ Blasted / Sandblåst ☐ Machined / Maskinert ☐ Painted / Malt

TEST RESULTS / TEST RESULTAT

Weld no / Sveis nr	Position / Posisjon (mm)	Length Tested / Testlengde (mm) / (%)	Defect Length / Feillengde (mm)	Defect Type / Feiltype	Defect Name / Feilnavn	Acc	Rej
						☐	☐
						☐	☐
						☐	☐

Comments / Kommentarer

Godkjente toppsveiser:
Sveisnr 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,35,36,37,38,39,40, 41,42,43,44,45,46,47,48 på tvers.

Date / Dato **09/08-2021**	Operator name / Inspektør navn Jørgen H. Johansen Vegar Mosling	Certificate no / Sertifikat nr **12719-N2-V** **12076-N2-V**
Place of Work / Kontrollsted **Prodtex Vanylven**	Operator signature / Inspektør signatur	Page / Side 1 of/ av 1

VERTIKALSERVICE Ultrasonic testing Ultralydprųving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-23**	**6217-21-UT-16**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
NA	**Prodtex/Fikåholmen**	**Bindiu Odon Bogdan**	**0**

OBJECT / KONTROLL AV

Project: Fronesbrua
Ultralyd kontroll ov sveis & HAZ på Section 3 topp.
Welds 23 to 50.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**10** mm	**I**	**135 Laser hybrid**	**NA**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO (SN:GOPLS13090067)	**2020-11-02**	**Ø 3 mm**	**Gel**	**As welded**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
67749	**4**	**0**	**48**	**0**	**0-100**
50928/60-4	**4**	**60**	**41**	**+4**	**0-100**
1197666/70-4	**4**	**70**	**51**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
3

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRŲVEUTFŲRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER

Alle indikasjoner ble reparert og kontrollert 100%

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
23		**401**	**60**	**-6**	**1000**		**200**	**6**	**401**	☑	☐	
24		**401**	**60**	**-6**	**2550**		**290**	**7**	**401**	☑	☐	
25		**401**	**60**	**-6**	**3560**		**240**	**6**	**401**	☑	☐	

VERTIKALSERVICE Ultrasonic testing Ultralydprụving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-23**	**6217-21-UT-16**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
26		**401**	**60**	**-4**	**700**		**300**	**7**	**401**	☑	☐	
26		**401**	**60**	**-6**	**1640**		**200**	**6**	**401**	☑	☐	
26		**401**	**60**	**-6**	**3080**		**250**	**6**	**401**	☑	☐	
29		**401**	**60**	**-6**	**1490**		**460**	**7**	**401**	☑	☐	
29		**401**	**60**	**-4**	**2610**		**270**	**7**	**401**	☑	☐	
30		**401**	**60**	**-4**	**970**		**240**	**5**	**401**	☑	☐	
33		**401**	**60**	**-6**	**820**		**280**	**5**	**401**	☑	☐	
33		**401**	**60**	**-6**	**1500**		**300**	**6**	**401**	☑	☐	
34		**401**	**60**	**-4**	**970**		**330**	**5**	**401**	☑	☐	
37		**401**	**60**	**-6**	**1590**		**1230**	**6**	**401**	☑	☐	
38		**401**	**60**	**-6**	**300**		**200**	**7**	**401**	☑	☐	
38		**401**	**60**	**-6**	**2100**		**350**	**7**	**401**	☑	☐	
40		**401**	**60**	**-4**	**3100**		**200**	**6**	**401**	☑	☐	
47		**401**	**60**	**-6**	**100**		**400**	**7**	**401**	☑	☐	
47		**401**	**60**	**-6**	**950**		**1000**	**7**	**401**	☑	☐	
47		**401**	**60**	**-6**	**2500**		**450**	**7**	**401**	☑	☐	
48		**401**	**60**	**-6**	**100**		**400**	**6**	**401**	☑	☐	
48		**401**	**60**	**-6**	**1050**		**350**	**6**	**401**	☑	☐	
48		**401**	**60**	**-6**	**2500**		**290**	**5**	**401**	☑	☐	
A		**401**	**60**	**-6**	**7200**		**400**	**6**	**401**	☑	☐	
A		**401**	**60**	**-6**	**13050**		**250**	**6**	**401**	☑	☐	
D		**401**	**60**	**-6**	**6100**		**300**	**6**	**401**	☑	☐	
D		**401**	**60**	**-6**	**8150**		**270**	**7**	**401**	☑	☐	

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☑ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	() 1950	Bindiu Odon Bogdan ()
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:	OPERATOR / OPERATØR DATO:2021-10-06
	Bindiu	Bindiu Ingått signatur

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**Order 124**	**2021-09-23**	**6217-21-UT-18**	**1 of/av 1**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
---NA---	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Fronesbrua.
Ultralyd kontroll av sveis & HAZ på Seksjon 3/bunn. Sveis 0-11 tottalt lengde av hver sveis 5492mm.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**8** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1,5 mm**	**UT Gel**	**As welded**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**47**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77364	**4**	**70**	**43**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle mål/lengder i mm.
Alle Indikasjoner ble markert på objekt/sveis.
Alle reperasjoner ble konntrollert 100%.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
										☐	☐	
										☐	☐	
										☐	☐	

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-23

VERTIKALSERVICE

Magnetic testing
Magnetpulverprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-23**	**6217-21-MP-8**	**1 of/av 1**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
---NA---	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

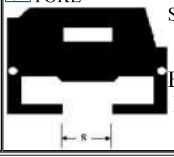
OBJECT / KONTROLL AV
"Fronesbrua"
"Seksjon 3 /Topp/bunn"
MPI kontroll av sveis & HAZ på sveiser, Topp.0.1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,30,31,32,33,34,35,40,41,42,43,44,45,46,47. Bunn, 0.1.2.3.4.5.6.7.8.9.10.11

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.11.00 (iht.DNV)		**100%**	**ISO 23278**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	SURFACE / OVERFLATE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS
CS	**No / Nei**	**As welded**	**I**	**135 Laser hybrid**

MAGNETIC PARTICLE INK / MAGNETISK PULVER TYPE
PFINDER 251
BATCH / PARTI
--

☑ YOKE



$S_{max.}$= 150 mm

Equipment(serialno.)
MY2(1405016)

☐ OTHER / ANNEN METODE

OBJECT TEMPERATURE / OVERFLATETEMPERATUR
15

CURRENT / STRØM
☑ AC ☐ DC

MEDIUM
☑ WET / VÅTT ☐ DRY / TØRT ☑ BLACK / SVART ☐ FLUORESCENT / FLUORISERENDE **1000^2Lux**

CONTRAST COLOR / KONTRASTFARGE
Bycotest 104 A/White

LIFTING CAPACITY / LØFTEKAPASITET	FIELD STRENGTH / FELT STYRKE	FIELD INDICATOR / FELTINDIKATOR
4,5 kg	**min 2,4 kA/cm2No**	**Castrolstrips**

MAGNETIZED FOR / MAGNETISERT FOR
LONGITUDINAL + TRANSVERSE DEFECTS /LANGSGÅENDE + TVERRGÅENDE INDIKASJONER

TEST RESULTS - REMARKS / RESULTATER - BEMERKNINGER
Totalt Lengde på hver sveis, 4420mm.

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-M)	Ivan Khashayarpour (11101-N2-M)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:

VERTIKALSERVICE Ultrasonic testing Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-20**	**6217-21-UT-9-REV1**	**1 of/av 2**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
--NA--	**Prodtex/Fikåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Frønesbrua
Ultralyd kontroll ov sveis & HAZ på "Seksjon 3 /Topp siden" Sveis 0-22

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.13.00 (iht.DNV)		**100%**	**ISO 19285-2017**

MATERIAL TYPE / MATERIALTYPE	HEAT TREATED / VARMEBEHANDLET	MATERIAL THICKNESS / MATERIALTYKKELSE	GROOVE / FUGEGEOMETRI	WELDING PROCESS / SVEISEPROSESS	WELDERS ID / SVEISER ID
CS	**No / Nei**	**10** mm	**I**	**135 Laser hybrid**	**--NA--**

UTEQUIP SERIALNO / UTAPP. SERIENR.	CALIBR. DATE / KALIBRERINGSDATO	CALIBR. / KALIBR.	COUPLANT / KONTAKTMIDDEL	SURFACE / OVERFLATE
USM GO+(SN:GOPLS13090152)	**2020-10-15**	**Ø 1.5 mm**	**Gel**	**As welded**

Lydhode type/nr Probe type/no.	MHz	Vinkel Angle	Ref. forst. Prim Gain dB	Overfl. Surf dB	Område Range mm
MSEB 0-4/SM-57462	**4**	**0**	**48**	**0**	**0-100**
MWB 60-4 / 75424	**4**	**60**	**41**	**+4**	**0-100**
MWB 70-4 /77284	**4**	**70**	**51**	**+4**	**0-100**

REPORTING LEVEL PERCENT OF DAC/ RAPPORTERINGSNIVÅ % AV DAK
80%

Ø mm DGS SCREEN TYPE / Ø mm AVG SKJERMTYPE
--

SCANNING TECHNIQUE FOR / PRØVEUTFØRELSE M.H.P.

LONGITUDINAL DEFECTS / LANGSGÅENDE FEIL

1 SIDE, 2 SURFACES / 1 SIDE, 2 OVERFLATER ☑
2 SIDES, 4 SURFACES / 2 SIDER, 4 OVERFLATER ☐
OTHER / ANNET ☐ SEE SKETCH / SE SKISSE

TRANSVERCE DEFECTS / TVERRGÅENDE FEIL

☐ AT FLUSH GROUND REINFORCEMENT / PÅ PLANSLIPT RÅK
☐ AT REINFORCEMENT / PÅ RÅK
☑ FROM THE PARENT METAL / FRA GRUNNMATERIALET

SCANNING TECHNIQUE FOR DEFECTS IN THE PARENT MATERIAL / PRØVEUTFØRELSE M.H.P. FEIL I GRUNNMATERIALET

NORMALPROBE / NORMALLYDHODE ☑ ANGLE PROBE / VINKELLYDHODE ☐

COMMENTS / KOMMENTARER
Alle indikasjoner ble markert på sveiser.
Alle reperasjoner ble kontrollert på nytt 100% og godkjent.
Alle mål/lengder i mm.

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
0/Topp		**01**	**70**	**-4**	**1440**	**2780**	**1340**	**4-10**	**400**	☑	☐	
03/Topp		**01**	**70**	**4**	**3840**	**4380**	**540**	**6-10**	**400**	☑	☐	
05/Topp		**01**	**70**	**2**	**2360**	**3000**	**640**	**7-10**	**400**	☑	☐	

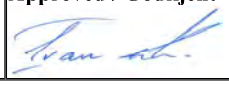
VERTIKALSERVICE **Ultrasonic testing**
Ultralydprøving

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-20**	**6217-21-UT-9-REV1**	**2 of/av 2**

WELD NO SVEIS NR	DATE AND TIME DATO KL.	DEFECT NO DEFEKT NR	PROBE LYDHODE	ECHO AMPL. dB NIVÅ	FROM FRA X	FROM FRA Y	LENGTH LENGDE	DEPTH DYBDE	TYPE OF DEFECT FEILTYPE	ACC. OK	REJ. NOK	REMARKS ANMERKNINGER
06/Topp		**01**	**70**	**-5**	**3010**	**3870**	**860**	**5-10**	**400**	✓		
11/Topp		**01**	**70**	**-2**	**1440**	**1750**	**310**	**6-10**	**400**	✓		
11/Topp		**02**	**70**	**-6**	**2630**	**2992**	**362**	**6-10**	**400**	✓		
12/Topp		**01**	**70**	**-2**	**0**	**550**	**550**	**7-10**	**400**	✓		
12/Topp		**02**	**70**	**-4**	**1440**	**2000**	**560**	**6-10**	**400**	✓		
15/Topp		**01**	**70**	**0**	**910**	**1015**	**105**	**6-10**	**400**	✓		
16/Topp		**01**	**70**	**-4**	**0**	**400**	**400**	**5-10**	**400**	✓		
16/Topp		**02**	**70**	**-2**	**3910**	**4220**	**310**	**5-10**	**400**	✓		
18/Topp		**01**	**70**	**-3**	**2330**	**2945**	**615**	**8-10**	**400**	✓		
19/Topp		**01**	**70**	**-2**	**0**	**510**	**510**	**7-10**	**400**	✓		
19/Topp		**02**	**70**	**-2**	**1270**	**1460**	**190**	**7-10**	**400**	✓		
19/Topp		**03**	**70**	**-3**	**2000**	**2470**	**470**	**7-10**	**400**	✓		
19/Topp		**04**	**70**	**-4**	**2720**	**2950**	**230**	**7-10**	**400**	✓		
20/Topp		**01**	**70**	**-4**	**260**	**430**	**170**	**7-10**	**400**	✓		
21/Topp		**01**	**70**	**-2**	**2160**	**2310**	**150**	**7-10**	**400**	✓		
21/Topp		**02**	**70**	**0**	**2400**	**2590**	**590**	**7-10**	**400**	✓		
22/Topp		**01**	**70**	**4**	**2775**	**2890**	**115**	**7-10**	**400**	✓		

TYPE OF DEFECT / FEILTYPE
100 = Sprekk **200** = Hulrom, porer **300** = Fast inneslutting, Slagg **400** = Bindefeil og manglende gjennomsveising **401** = Bindefeil
402 = Rotfeil **500** = Uregelmessig form **501** = Sårkant **600** = Andre uregelmessigheter (spesifiser)

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (11101-N2-U)	Ivan Khashayarpour (11101-N2-U)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:2021-09-23
		

VERTIKALSERVICE

Visual Control
Visuell kontroll

CLIENT / KUNDE	CLIENT O.NO / KUNDE O.NR	DATE OF TESTING / KONTROLLDATO	REPORT NO. / RAPPORT NR.	PAGE / SIDE
PRODTEX AS	**124**	**2021-09-23**	**6217-21-VT-8**	**1 of/av 1**

DRAWING NO. / TEGNING NO.	PLACE OF WORK / KONTROLLSTED	OPERATOR / OPERATØR	ATTACHMENT / VEDLEGG
---NA---	**PRODTEX/ Fiskåholmen**	**Ivan Khashayarpour**	**0**

OBJECT / KONTROLL AV
Project: Fronesbrua.

PROCEDURE / PROSEDYRE	REV	EXTENT OF TESTING / KONTROLLOMFANG	ACCEPTANCE STANDARD / AKSEPTSTANDARD
NDT-5.10.00-EN (Iht.DNV)		**100%**	**EN ISO.5817 Lev C**

COMMENTS / KOMMENTARER

VT kontroll av sviser 0-49/ Tvergående.
B & C langsgående.

Bunnsveiser 0-11

REPAIRS MARKED ON / REPARASJONER AVMERKET PÅ
☐ OBJECT / OBJEKT ☐ SKETCH / SKISSE

NAME CERT. NO. / NAVN SERT. NR.	N2 NAME CERT. NO. / N2 NAVN SERT. NR.	OPERATOR NAME CERT. NO. / OPERATØR NAVN SERT. NR.
()	Ivan Khashayarpour (TIS1049)	Ivan Khashayarpour (TIS1049)
APPROVED / GODKJENT DATO:	APPROVED / GODKJENT DATO:2021-09-23 **Approved / Godkjent**	OPERATOR / OPERATØR DATO:

VEDLEGG D: Sveiselogg

Test Nr	Sveis Nr	Prosjekt	Beskrivelse	Type	Innbrenning	Material	Sertifikat nr	Plate tykkelse	Plate lengde	Plate bredde	Vekt sveise-prøve	Overflate sveiseosne	Fuge dybde	Fuge vinkel	Fart meter / Minutt	Gass type	Gass Mengde	Pistol vinkel	Tråd matning	Tråd Type	Tråd utstikk	Tråd Dim	Arc length	Dyn	Parametere rMig (Volt, Amper)	Fronius program Puls, CMT, ..	Laser effekt	Vurdering	Visuell kontroll	Røntgen	Ultralyd	Makroslip	Plasmo	Bilde	Status
			8mm butt																															
1				BW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,2	8%co2	20lpm	10° stikkende laser	8,4 m/min	Carbomig 3N	18mm	1,2	3	-6			10000w								
2				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,2	8%co2	20lpm	10° stikkende laser	8,4 m/min	Carbomig 3N	18mm	1,2	3	-6			10000w								
3				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,2	8%co2	20lpm	10° stikkende laser	8,5 m/min	Carbomig 3N	18mm	1,2	3	-6			10000w								
4				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,2	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-5			10000w								
5				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,2	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-5			9000w								
6				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,2	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	4	-5			10000w								
7				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,2	8%co2	20lpm	10° stikkende laser	8,6 m/min	carbomig 3N	18mm	1,2	3	-5			10000w								
8				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-5			10000w								
9				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
10				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	8%co2	20lpm	10° stikkende laser	8,7 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
11				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
12				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
13				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,7	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-6			9800w								
14				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
15				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,8 m/min	carbomig 3N	18mm	1,2	2	-6			10000w								
16				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
17				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
18				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
19				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,8 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
20				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,8 m/min	carbomig 3N	18mm	1,2	4	-6			10000w								
21				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-6			10000w								
22				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,3	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
23				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,4	8%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
24				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	10° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
25				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	10° stikkende laser	8,4 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
26				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,9	2%co2	20lpm	10° stikkende laser	8,4 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
27				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	2%co2	20lpm	10° stikkende laser	8,4 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
28				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,15	2%co2	20lpm	10° stikkende laser	8,4 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
29				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,15	2%co2	20lpm	10° stikkende laser	8,0m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
30				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,15	2%co2	20lpm	10° stikkende laser	8,2 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
31				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,15	2%co2	20lpm	10° stikkende laser	8,7 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
32				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	10° stikkende laser	8,7 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
33				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	20° stikkende laser	8,7 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
34				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,2	2%co2	20lpm	20° stikkende laser	8,7 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
35				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	20° stikkende laser	8,4 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
36				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	30° stikkende laser	8,4 m/min	carbomig 3N	18mm	1,2	3	-4			10000w								
37				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	30° stikkende laser	8,4 m/min	carbomig 3N	18mm	1,2	0	0			10000w								
38				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	2%co2	20lpm	30° stikkende laser	8,4 m/min	carbomig 3N	18mm	1,2	0	0			10000w								
39				BW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	2%co2	20lpm	30° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	0	0			10000w								
40				BW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	40° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	0	0			10000w								
41				BW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	40° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	-1	0			10000w								
42				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	40° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	-1	1			10000w								
43				BW	Full	SSAB 355ML	522383	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	40° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	-3	3			10000w	OK		OK	Ser bra ut		Sendt inn for godkjenning
			10mm butt																															
1				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	2,1	2%co2	20lpm	40° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
2				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	2%co2	20lpm	40° stikkende laser	8,5 m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
3				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	2%co2	20lpm	40° stikkende laser	8,6m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
4				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	2%co2	20lpm	30° stikkende laser	8,7m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
5				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	2%co2	20lpm	30° stikkende laser	8,8m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
6				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,9	2%co2	20lpm	30° stikkende laser	8,8m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
7				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	2%co2	20lpm	30° stikkende laser	8,8m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
8				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	2%co2	20lpm	30° stikkende laser	8,9m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
9				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	2%co2	20lpm	25° stikkende laser	8,9m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
10				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,7	2%co2	20lpm	25° stikkende laser	8,9m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
11				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,6	2%co2	20lpm	25° stikkende laser	8,9m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
12				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,6	2%co2	20lpm	20° stikkende laser	8,9m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
13				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,7	2%co2	20lpm	20° stikkende laser	9,0m/min	carbomig 3N	18mm	1,2	-3	3			10000w								
14				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,7	2%co2	20lpm	20° stikkende laser	8,9m/min	carbomig 3N	18mm	1,2	0	0			10000w								
15				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,7	2%co2	20lpm	20° stikkende laser	8,9m/min	carbomig 3N	15mm	1,2	1	-5			10000w								
16				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	2%co2	20lpm	15° stikkende laser	8,9m/min	carbomig 3N	15mm	1,2	1	-5			10000w								
17				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	2%co2	20lpm	15° stikkende laser	9,0m/min	carbomig 3N	15mm	1,2	1	-7			10000w								
18				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,9	2%co2	20lpm	15° stikkende laser	9,1m/min	carbomig 3N	15mm	1,2	2	-7			10000w								
19				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,9	2%co2	20lpm	15,6° stikkende laser	9,0m/min	carbomig 3N	15mm	1,2	3	-8			10000w								
20				BW	Full	SSAB 355ML	538283	10mm	800mm	200mm		Laserkutt	Ingen fuge	1,9	2%co2	20lpm	15,6° stikkende laser	9,0m/min	carbomig 3N	15mm	1,2	2	-10			10000w	OK		OK	Ser bra ut		Sendt inn for godkjenning
			Kilsveis 8mm steg på 10mm flens																															
1				FW	Full	SSAB 355ML	522383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,0	2%co2	20lpm	10° stikkende + 13°	9,0m/min	carbomig 3N	20mm	1,2	0	0			8000w								
2				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,0	2%co2	20lpm	10° stikkende + 13°	8,9m/min	carbomig 3N	20mm	1,2	1	1			8000w								
3				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	0,9	2%co2	20lpm	10° stikkende + 13°	8,9m/min	carbomig 3N	20mm	1,2	1	3			8000w								
4				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	10° stikkende + 13°	8,8m/min	carbomig 3N	20mm	1,2	1	4			8000w								
5				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	10° stikkende + 13°	8,8m/min	carbomig 3N	20mm	1,2	1	4			10000w								
6				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,2	2%co2	20lpm	10° stikkende + 13°	8,8m/min	carbomig 3N	20mm	1,2	0	5			10000w								
7				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,2	2%co2	20lpm	7° stikkende + 13°	8,8m/min	carbomig 3N	20mm	1,2	0	5			10000w								
8				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	7° stikkende + 13°	8,9m/min	carbomig 3N	20mm	1,2	0	5			10000w								
9				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	7° stikkende + 13°	9,0m/min	carbomig 3N	20mm	1,2	0	5			10000w								
10				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,0	2%co2	20lpm	5° stikkende + 13°	9,0m/min	carbomig 3N	20mm	1,2	0	5			10000w								
11				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,2	2%co2	20lpm	5° stikkende + 11,5°	9,0m/min	carbomig 3N	20mm	1,2	1	6			10000w								
12				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,2	2%co2	20lpm	5° stikkende + 11,5°	9,0m/min	carbomig 3N	20mm	1,2	2	8			10000w								
13				FW	Full	SSAB 355ML	52-2383 + 52-0337	8+10mm	800mm	200mm		Laserkutt	Ingen fuge	1,2	2%co2	20lpm	5° stikkende + 11,5°	9,0m/min	carbomig 3N	20mm	1,2	0	10			10000w	OK		OK	Ser bra ut		Sendt inn for godkjenning
			Kilsveis 8mm steg på 8mm flens vertikal																															
1				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,0	2%co2	20lpm	7° stikkende + 11,5°	9,0m/min	carbomig 3N	20mm	1,2	0	10			10000w								
2				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,0	2%co2	20lpm	7° stikkende + 11,5°	8,8m/min	carbomig 3N	20mm	1,2	0	10			10000w								
3				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,0	2%co2	20lpm	7° stikkende + 11,5°	8,8m/min	carbomig 3N	20mm	1,2	0	10			7000w								
4				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,0	2%co2	20lpm	7° stikkende + 11,5°	8,8m/min	carbomig 3N	20mm	1,2	0	0			7000w								
5				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,0	2%co2	20lpm	7° stikkende + 11,5°	8,8m/min	carbomig 3N	24mm	1,2	0	0			6000w								
6				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	7° stikkende + 11,5°	8,8m/min	carbomig 3N	24mm	1,2	0	10			6000w								
7				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	7° stikkende + 11,5°	8,8m/min	carbomig 3N	24mm	1,2	0	10			6000w								
8				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	5° stikkende +9°	8,8m/min	carbomig 3N	24mm	1,2	0	10			7000w								
9				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	5° stikkende +9°	8,8m/min	carbomig 3N	24mm	1,2	0	10			8000w								
10				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	5° stikkende +9°	8,9m/min	carbomig 3N	24mm	1,2	0	10			8500w								
11				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	5° stikkende +9°	8,9m/min	carbomig 3N	24mm	1,2	0	5			8500w								
12				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	5° stikkende +9°	8,9m/min	carbomig 3N	24mm	1,2	0	10			9000w								
13				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	2° stikkende +8°	8,9m/min	carbomig 3N	24mm	1,2	0	10			9000w								
14				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	2° stikkende +8°	8,9m/min	carbomig 3N	24mm	1,2	0	10			9000w								
15				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,1	2%co2	20lpm	2° stikkende +8°	9,0m/min	carbomig 3N	24mm	1,2	0	10			9000w								
16				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,2	2%co2	20lpm	2° stikkende +8°	9,0m/min	carbomig 3N	24mm	1,2	0	10			9000w								
17				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,2	2%co2	20lpm	2° stikkende +8°	9,1m/min	carbomig 3N	24mm	1,2	0	10			9000w								
18				FW	Full	SSAB 355ML	52-2383	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,2	2%co2	20lpm	0,2° stikkende +8°	9,0m/min	carbomig 3N	23mm	1,2	0	10			9000w	OK		OK	Ser bra ut		Sendt inn for godkjenning
			8mm butt vertikal																															
1				BW	Full	SSAB 355ML	52-1454	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,7	2%co2	20lpm	15° stikkende laser	9,0m/min	carbomig 3N	18mm	1,2	0	10			9000w								
2				BW	Full	SSAB 355ML	52-1454	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	2%co2	20lpm	15° stikkende laser	7,0m/min	carbomig 3N	18mm	1,2	0	10			9000w								
3				BW	Full	SSAB 355ML	52-1454	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	2%co2	20lpm	15° stikkende laser	7,0m/min	carbomig 3N	18mm	1,2	0	10			9000w								
4				BW	Full	SSAB 355ML	52-1454	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	2%co2	20lpm	15° stikkende laser	7,0m/min	carbomig 3N	18mm	1,2	0	10			9000w								
5				BW	Full	SSAB 355ML	52-1454	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,8	2%co2	20lpm	15° stikkende laser	7,0m/min	carbomig 3N	18mm	1,2	0	10			9000w								
6				BW	Full	SSAB 355ML	52-1454	8mm	800mm	200mm		Laserkutt	Ingen fuge	1,9	2%co2	20lpm	10° stikkende laser	6,5m/min	carbomig 3N	18mm	1,2	0	10			9000w								
7				BW	Full	SSAB 355ML	52-1454	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	2%co2	20lpm	10° stikkende laser	6,0m/min	carbomig 3N	18mm	1,2	0	10			9000w								
8				BW	Full	SSAB 355ML	52-1454	8mm	800mm	200mm		Laserkutt	Ingen fuge	2,0	2%co2	20lpm	10° stikkende laser	5,0m/min	carbomig 3N	18mm	1,2	0	10			9800w	OK		OK	Ser bra ut		Sendt inn for godkjenning

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