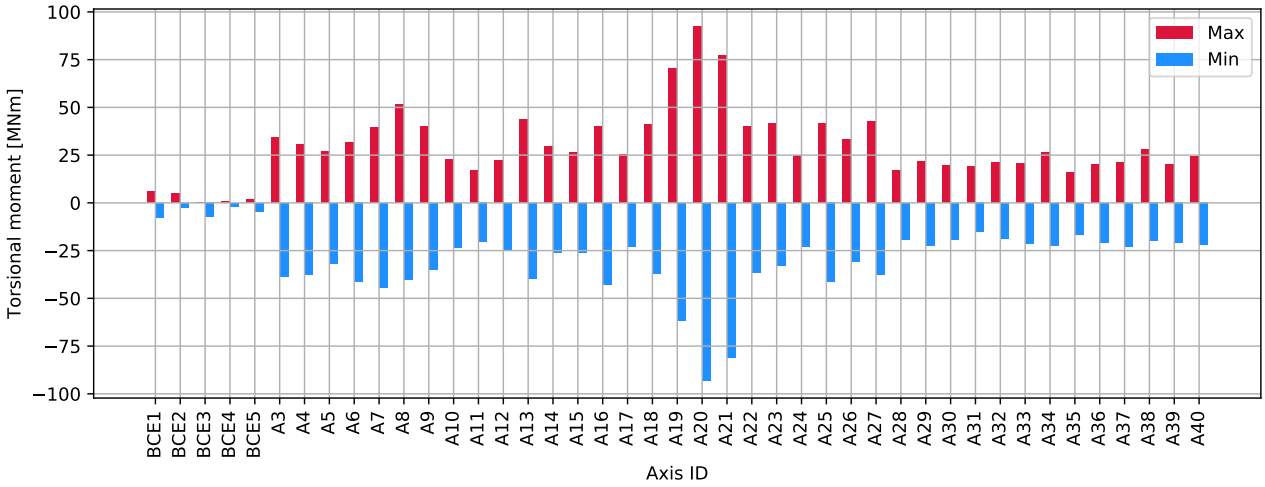

Figure 3.207: P A20 0deg - columns top : Torsional moment [MNm]

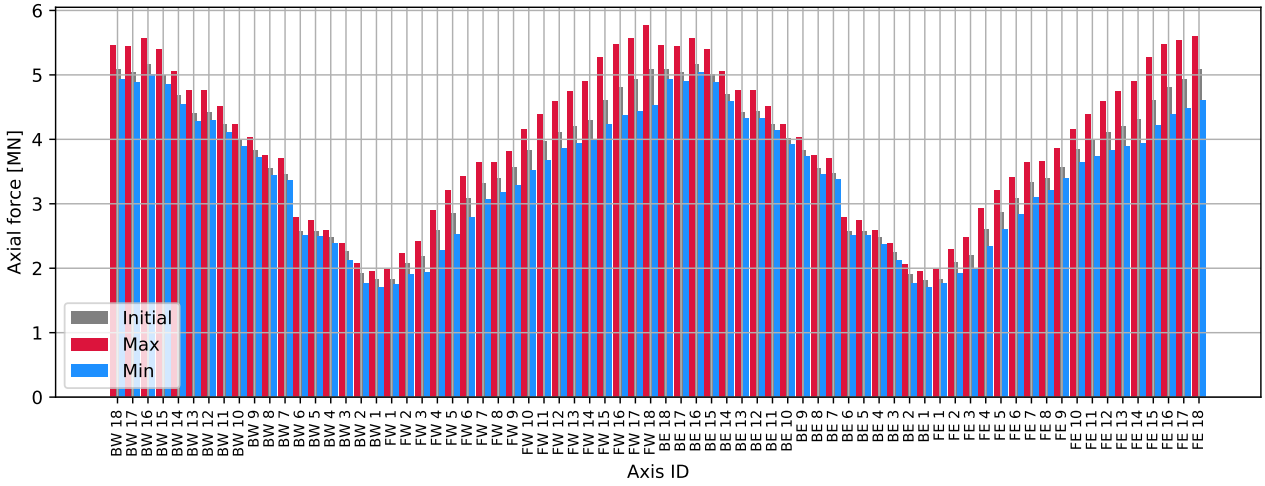

Figure 3.208: P A20 0deg - cables : Axial force [MN]

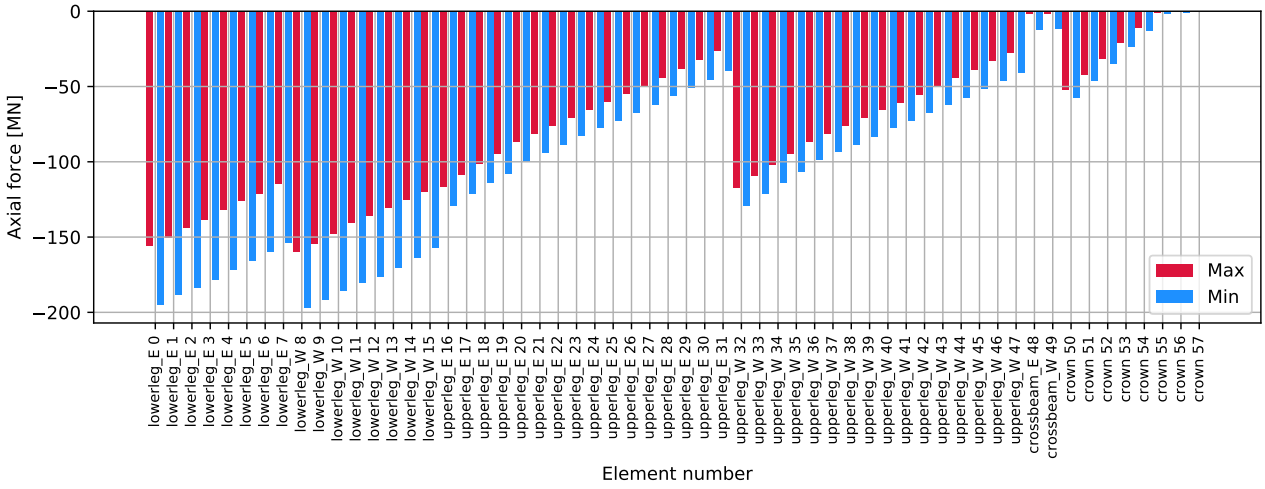

Figure 3.209: P A20 0deg - tower: Axial force [MN]

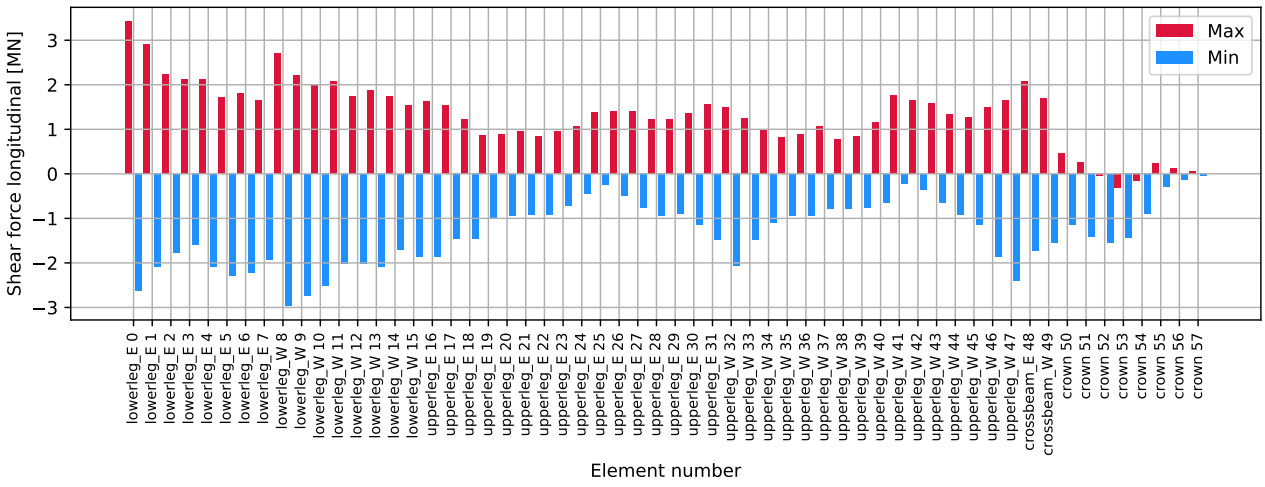

Figure 3.210: P A20 0deg - tower: Shear force longitudinal [MN]

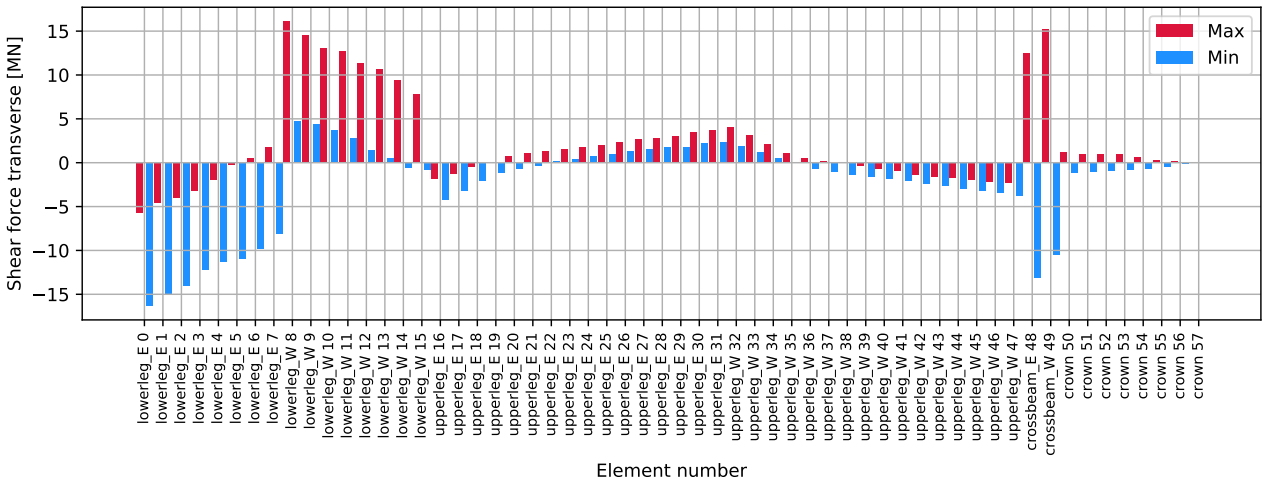

Figure 3.211: P A20 0deg - tower: Shear force transverse [MN]

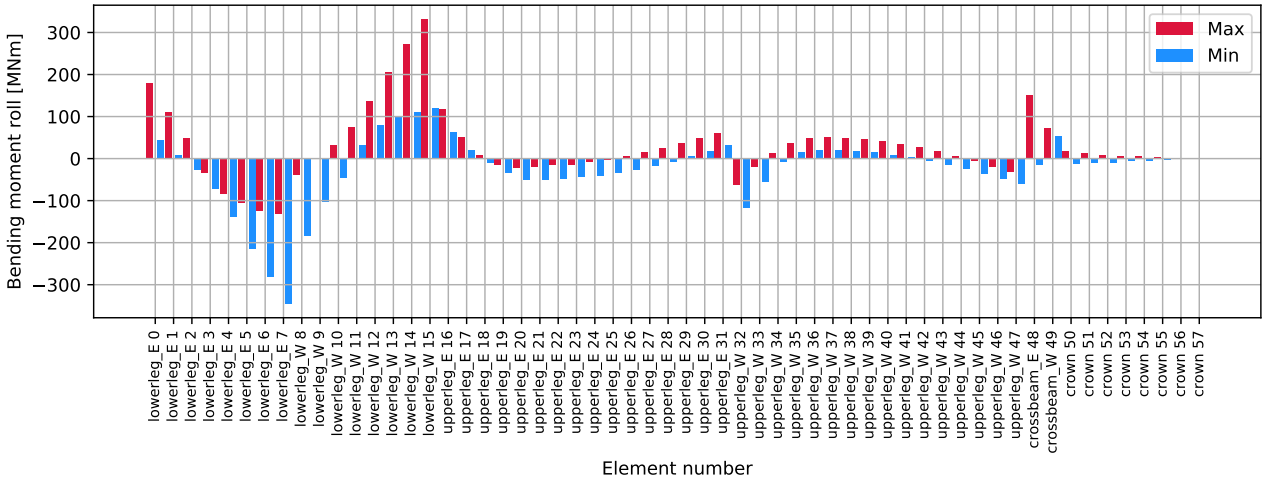

Figure 3.212: P A20 0deg - tower: Bending moment roll [MNm]

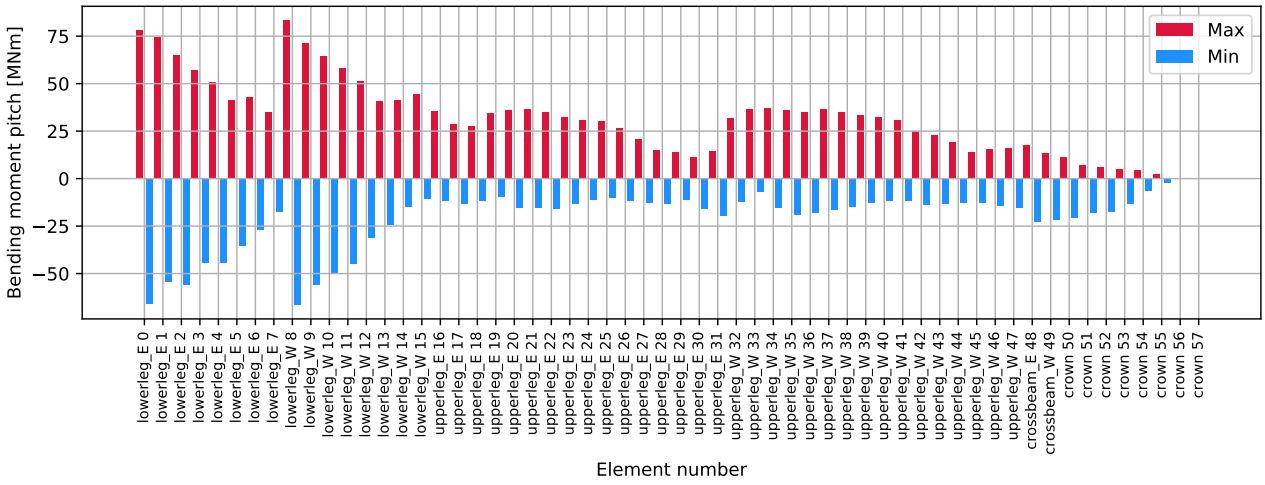

Figure 3.213: P A20 0deg - tower: Bending moment pitch [MNm]

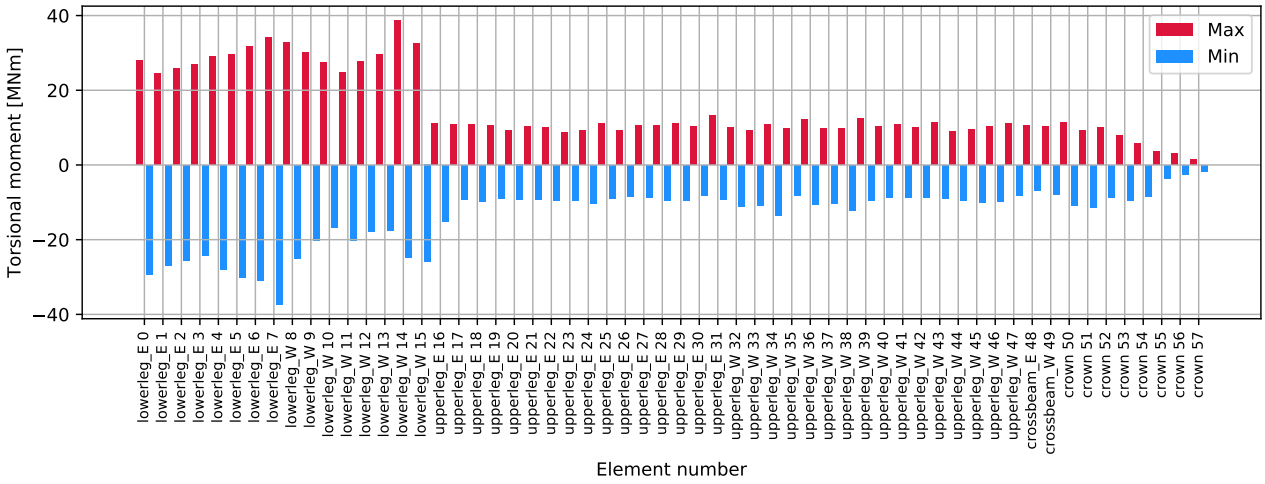

Figure 3.214: P A20 0deg - tower: Torsional moment [MNm]

3.5.3 Time series

Note : Time series are filtered using a Saviotzky-Golay filter for increased readability of the time history plots. Hence, maximum values that occur due to a rapid vibration are not shown in the plots. For maximum values, refer to the tabulated data.
All elements are numbered from South to North, bottom to top

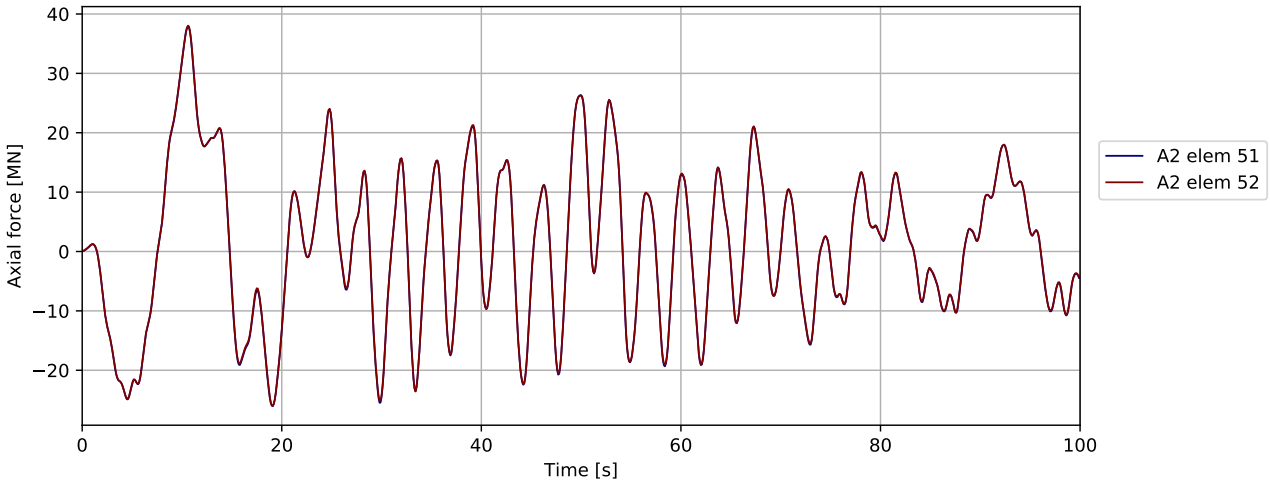

Figure 3.215: P A20 0deg - bridgegirder @ pylon: Axial force [MN]

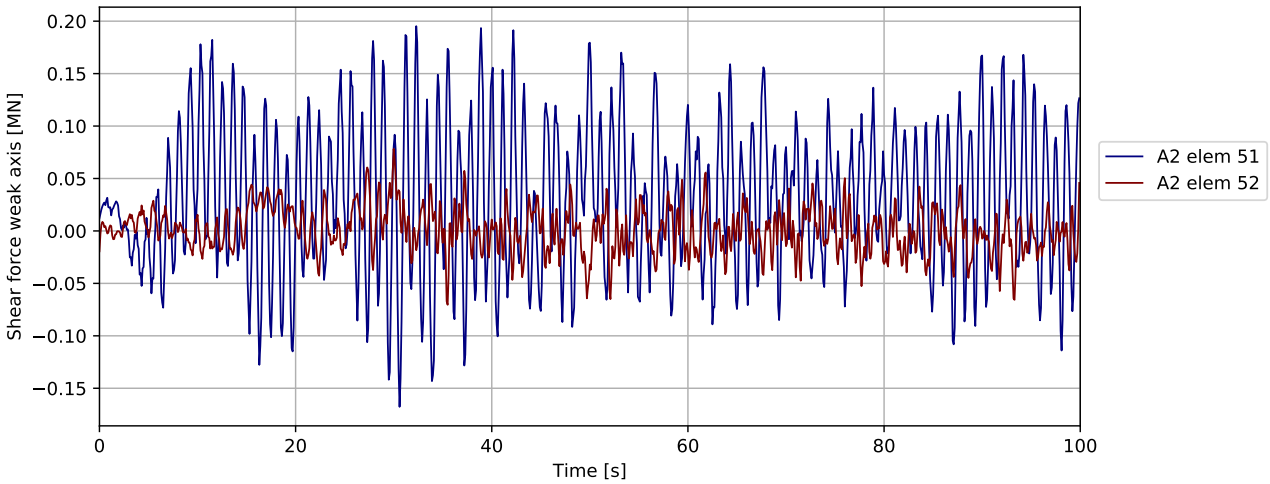

Figure 3.216: P A20 0deg - bridgegirder @ pylon: Shear force weak axis [MN]

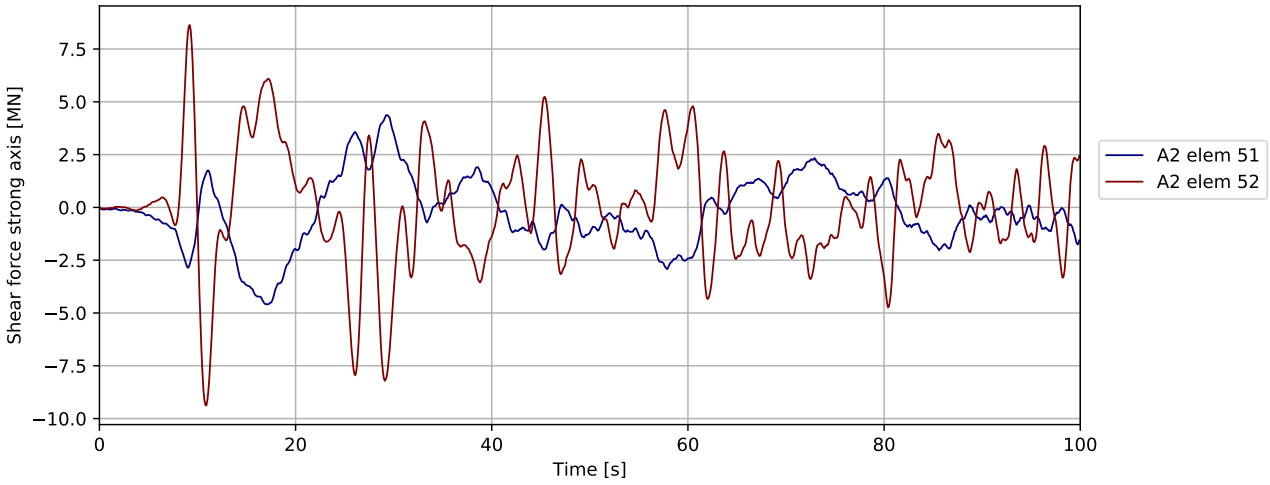

Figure 3.217: P A20 0deg - bridgegirder @ pylon: Shear force strong axis [MN]

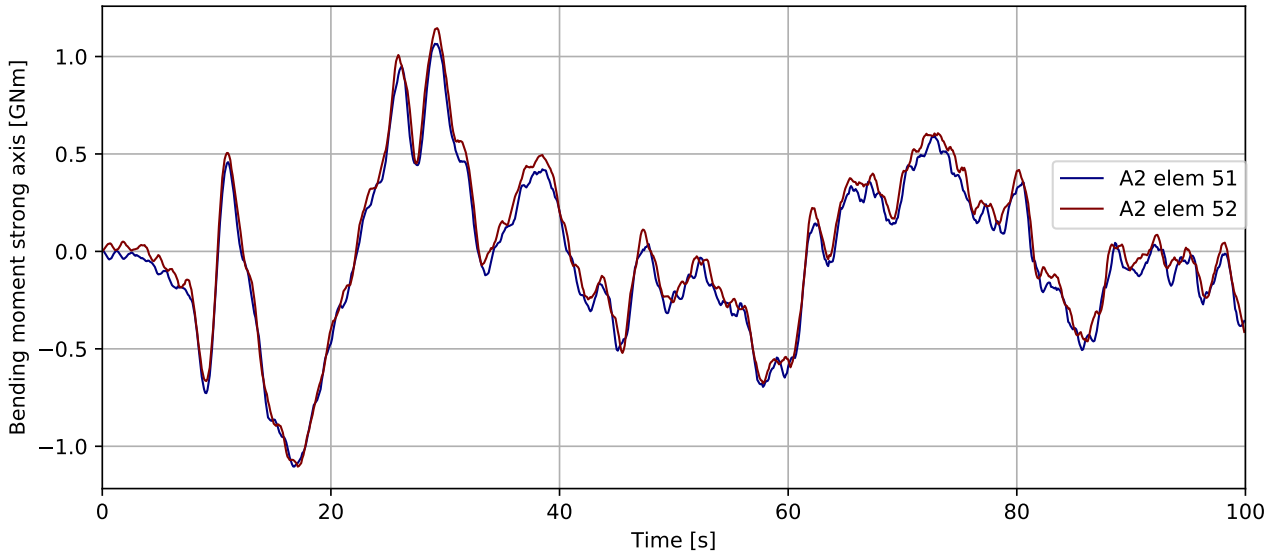

Figure 3.218: P A20 0deg - bridgegirder @ pylon: Bending moment strong axis [GNm]

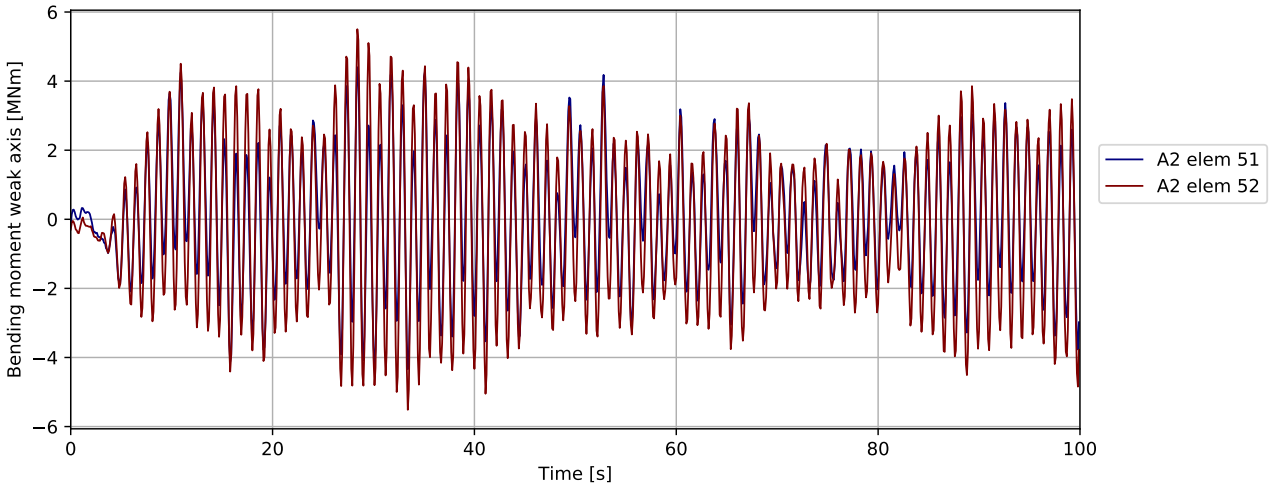

Figure 3.219: P A20 0deg - bridgegirder @ pylon: Bending moment weak axis [MNm]

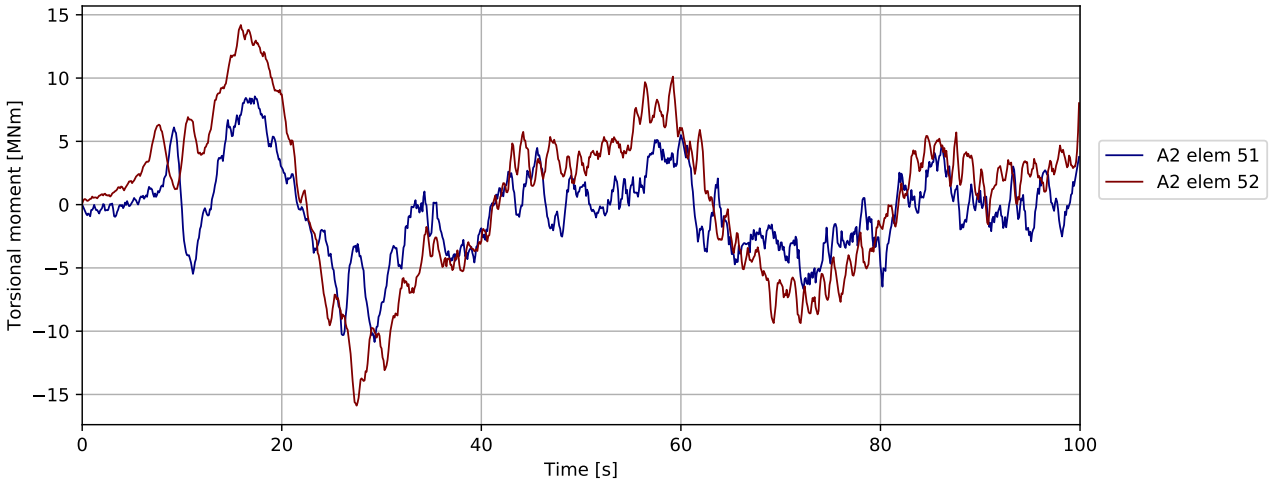

Figure 3.220: P A20 0deg - bridgegirder @ pylon: Torsional moment [MNm]

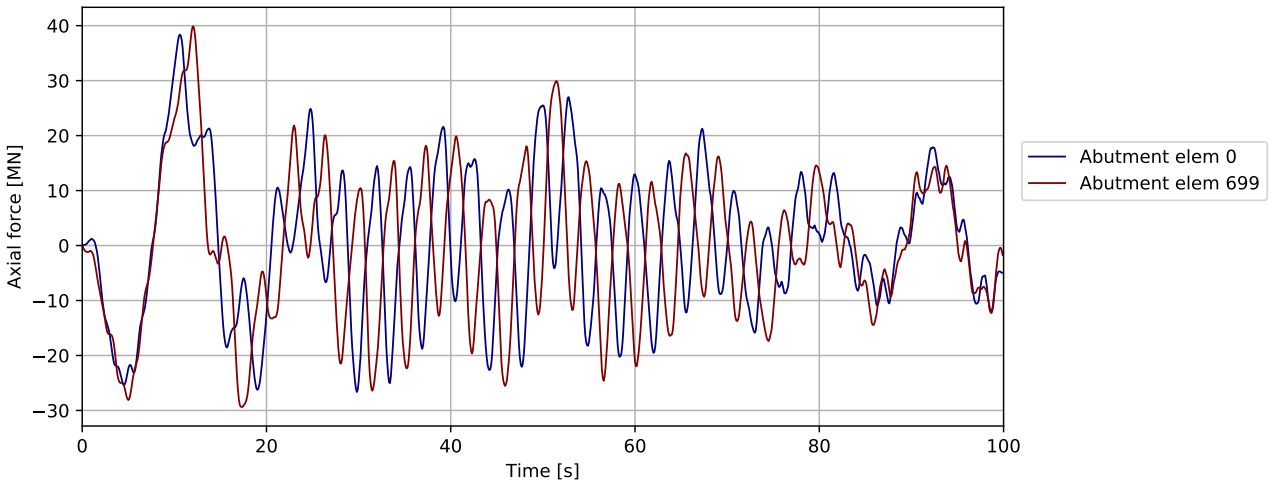

Figure 3.221: P A20 0deg - bridgegirder @abutments: Axial force [MN]

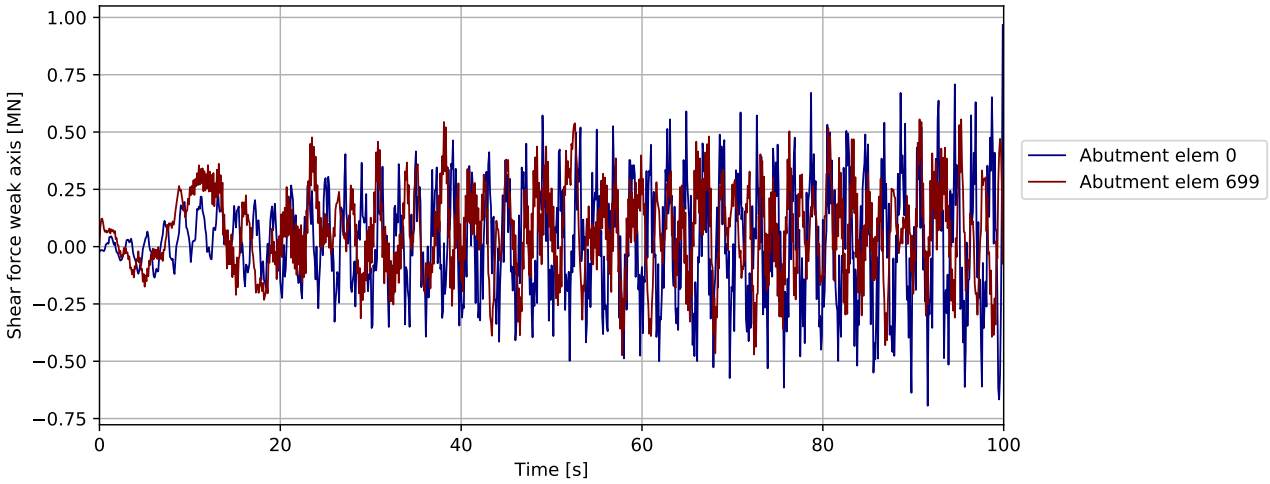

Figure 3.222: P A20 0deg - bridgegirder @abutments: Shear force weak axis [MN]

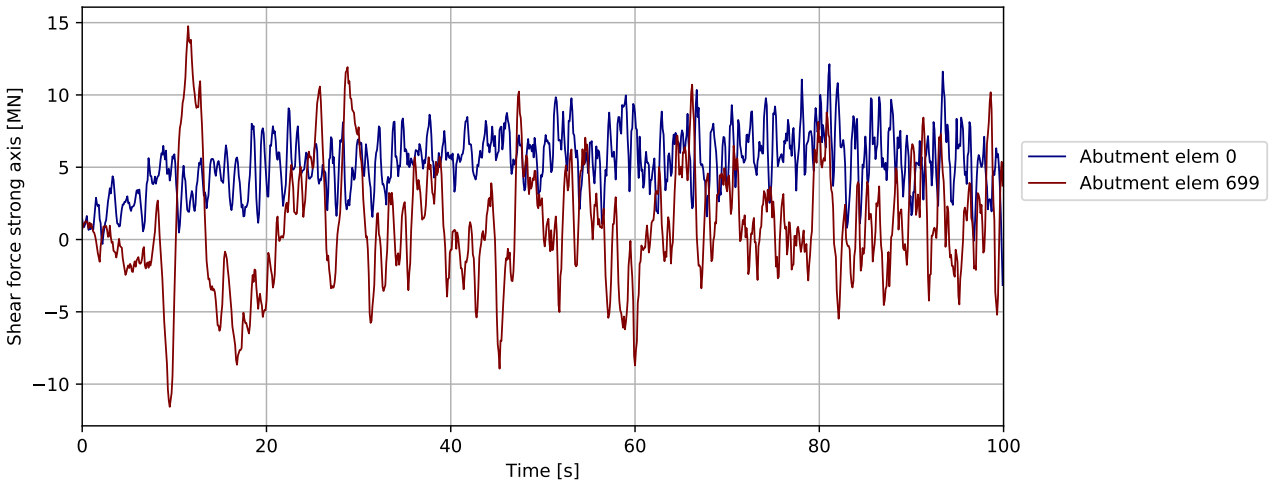

Figure 3.223: P A20 0deg - bridgegirder @abutments: Shear force strong axis [MN]

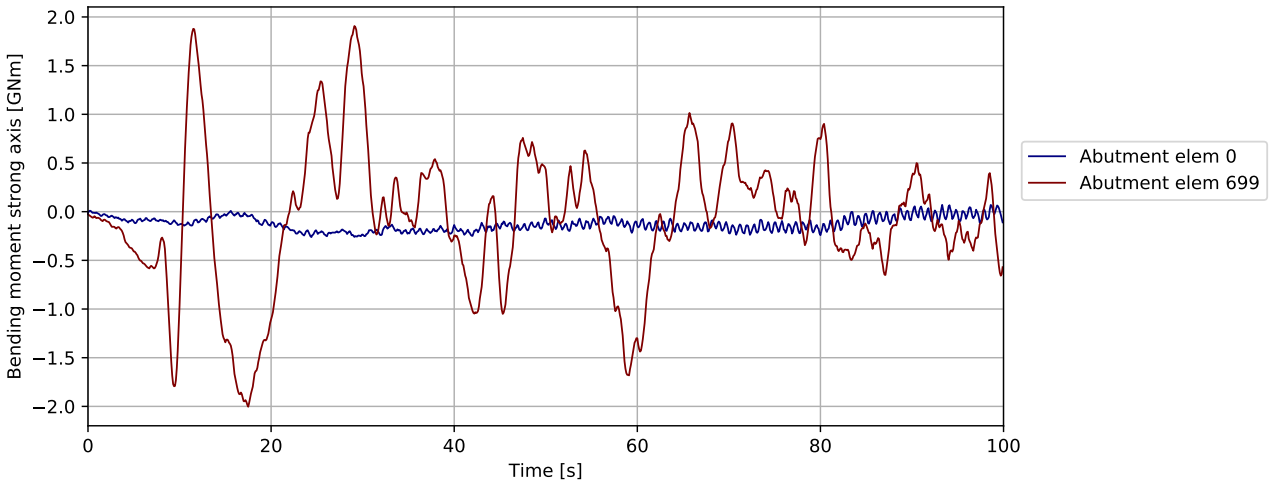

Figure 3.224: P A20 0deg - bridgegirder @abutments: Bending moment strong axis [GNm]

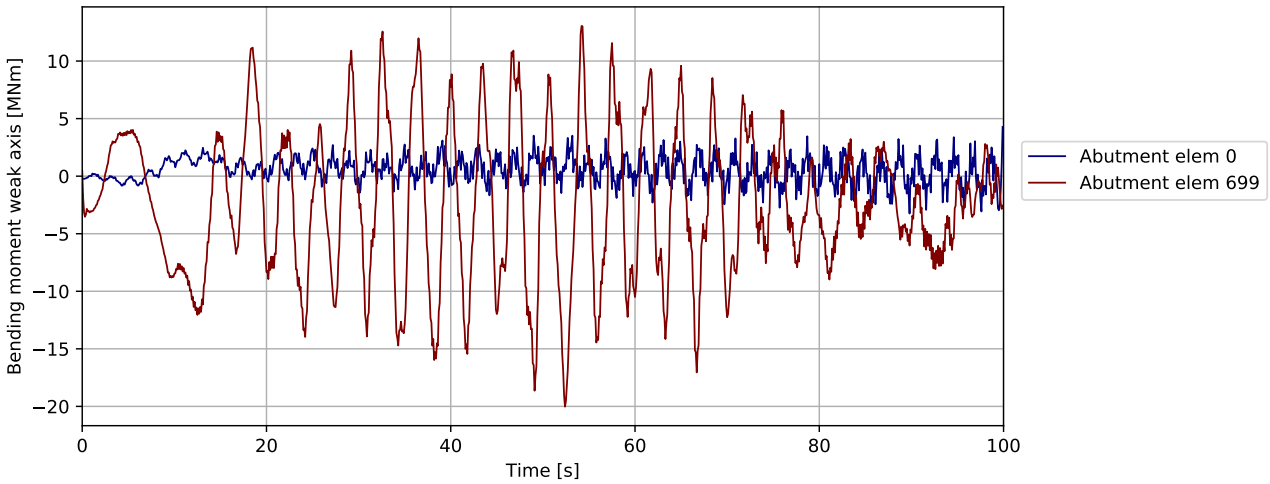

Figure 3.225: P A20 0deg - bridgegirder @abutments: Bending moment weak axis [MNm]

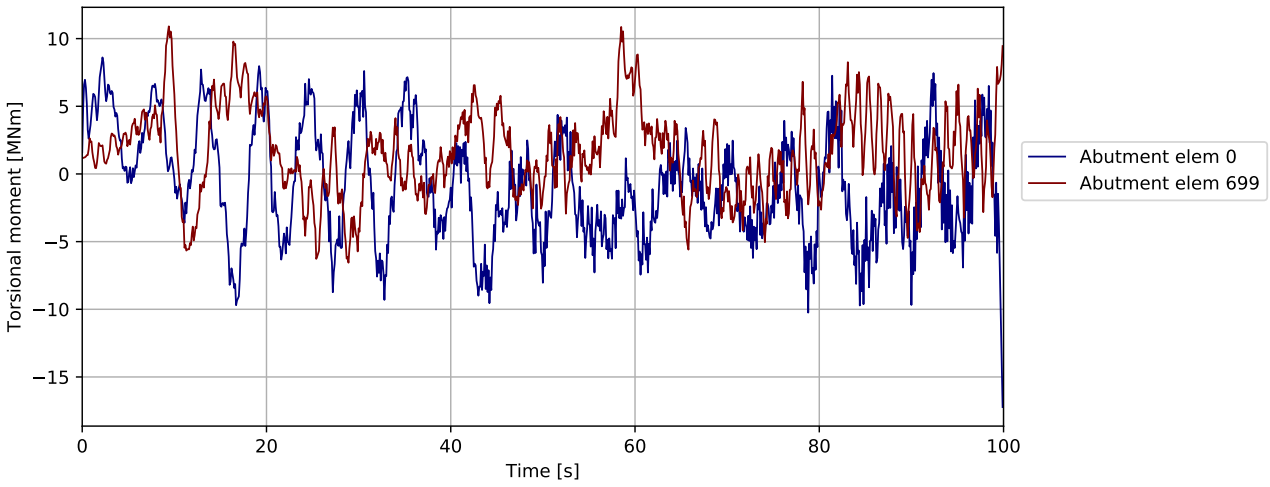

Figure 3.226: P A20 0deg - bridgegirder @abutments: Torsional moment [MNm]

Note : Compressive spring force is negative

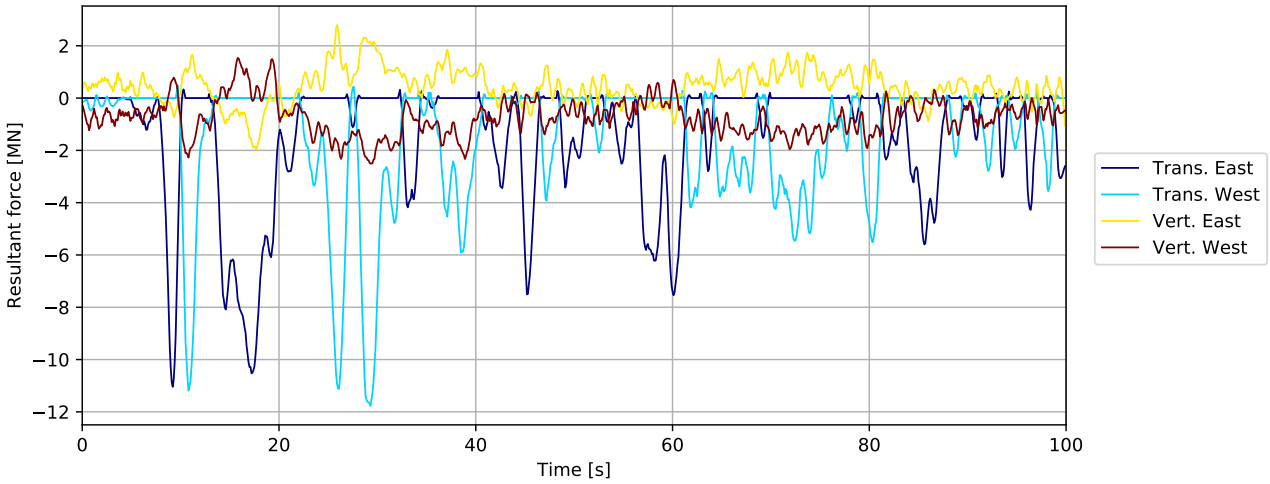

Figure 3.227: P A20 0deg - bridgegirder supports in tower: Resultant force [MN]

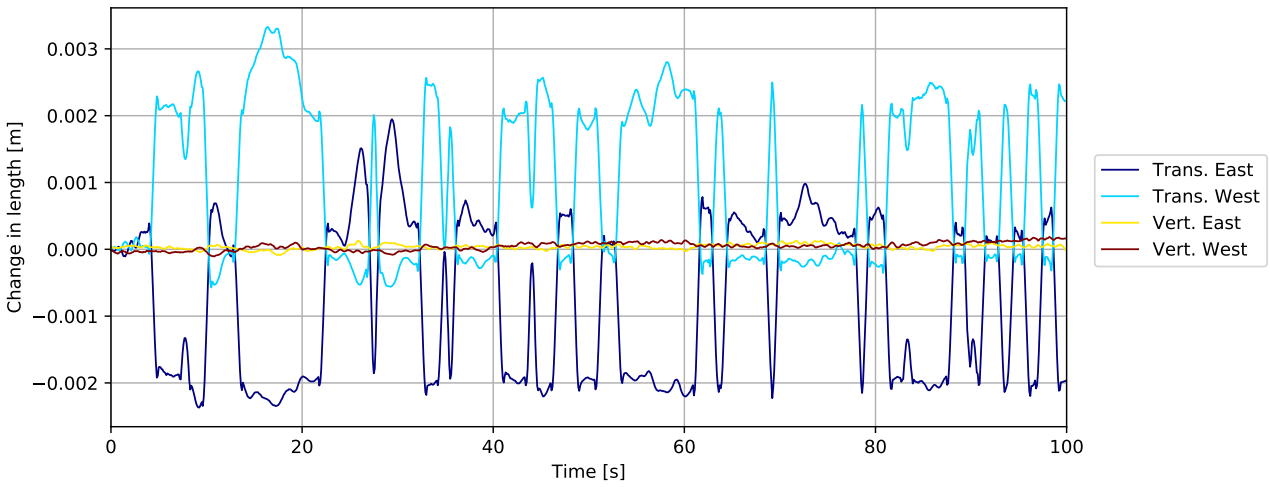

Figure 3.228: P A20 0deg - bridgegirder supports in tower: Change in length [m]

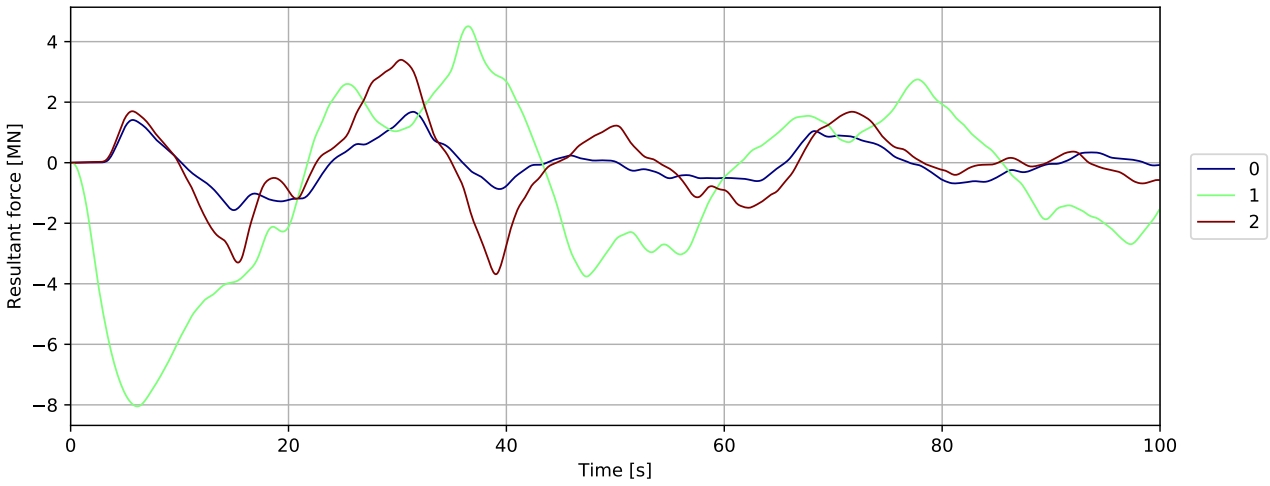

Figure 3.229: Mooring force

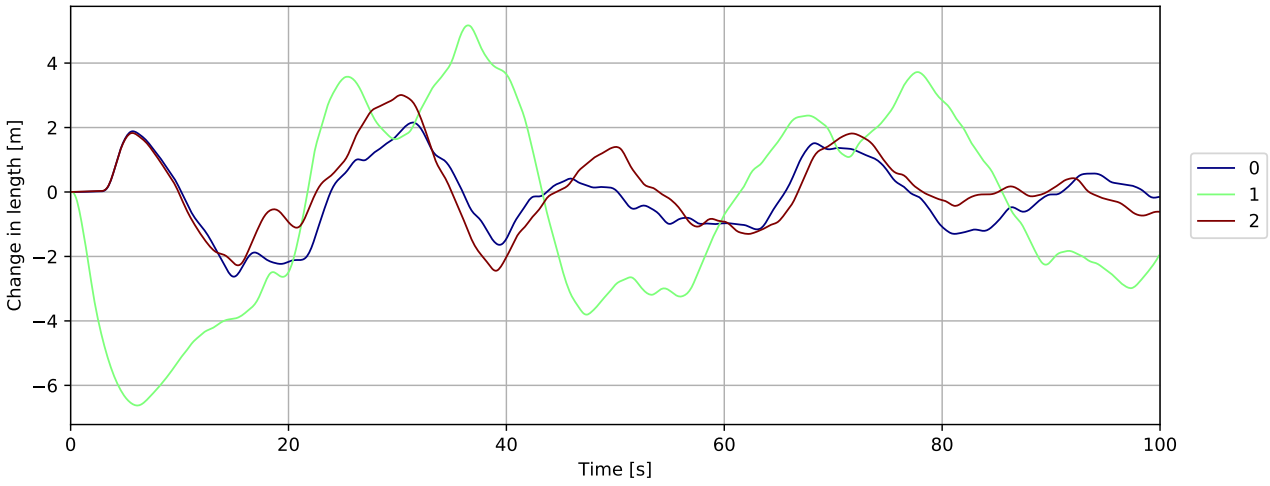

Figure 3.230: Mooring displacement

3.6 PontoonA30 0deg

3.6.1 Overall response

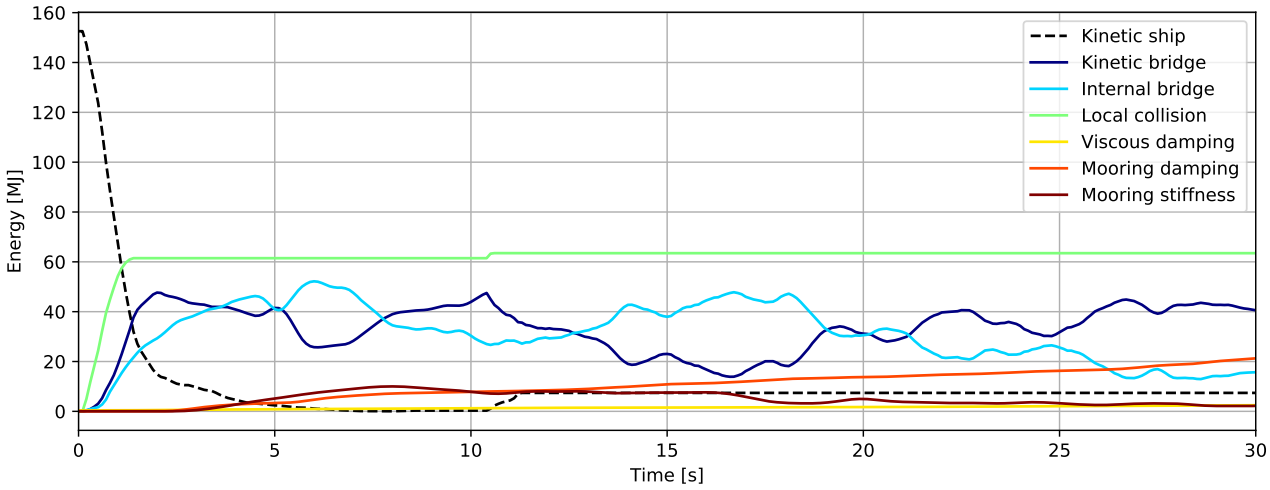

Figure 3.231: Energy [MJ] - initial phase

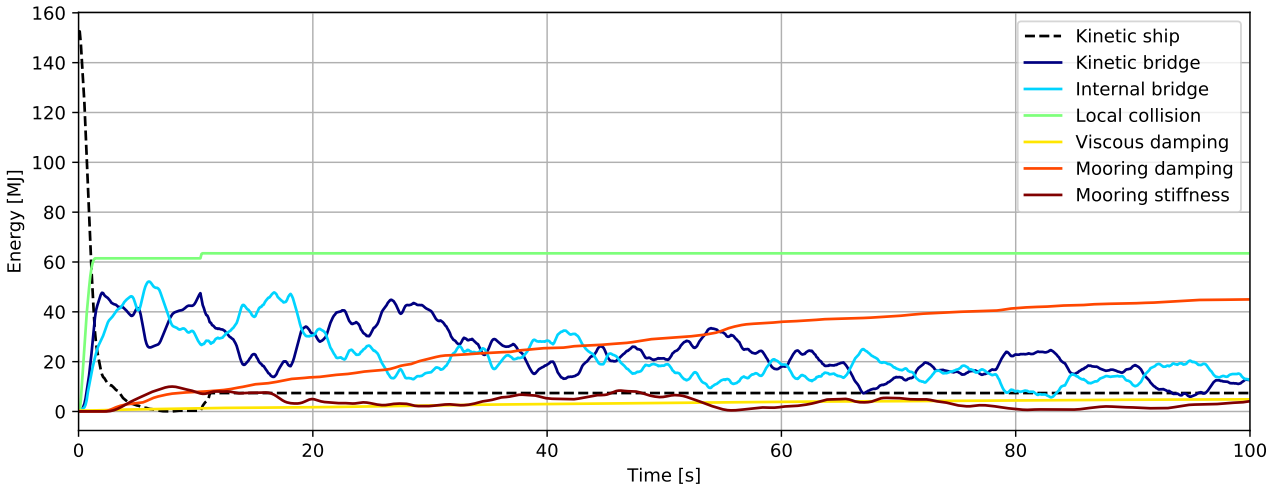

Figure 3.232: Energy [MJ]

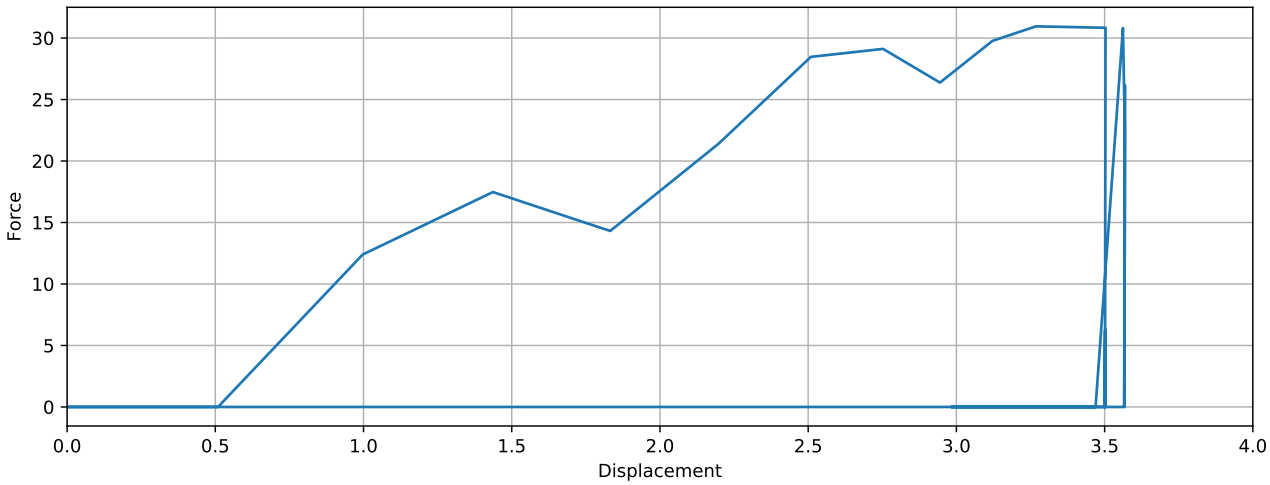

Figure 3.233: Simulated local collision force-displacement

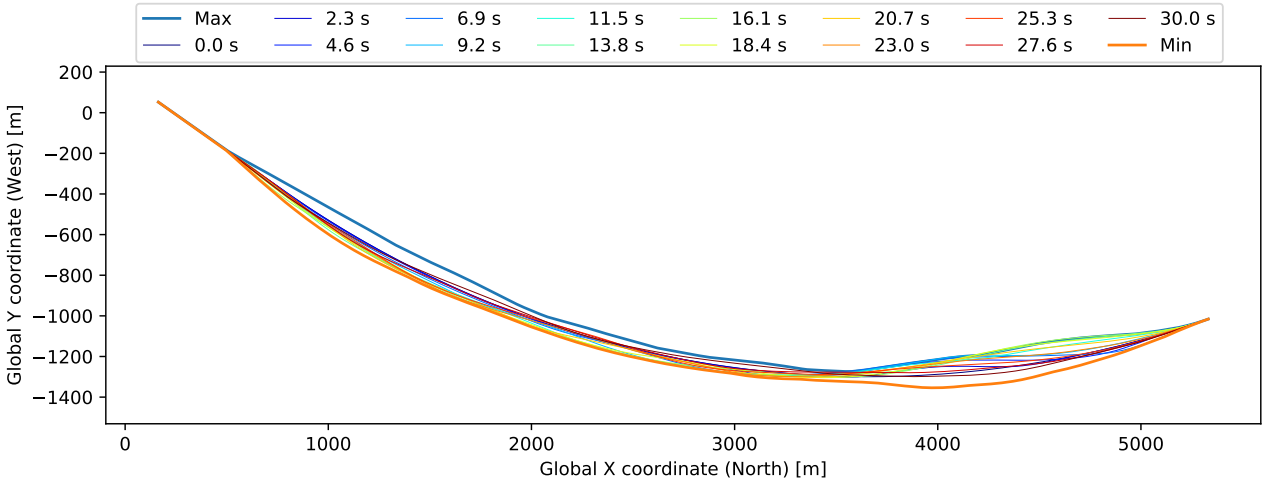

Figure 3.234: Bridgegirder deflection (10x displacment scaling)

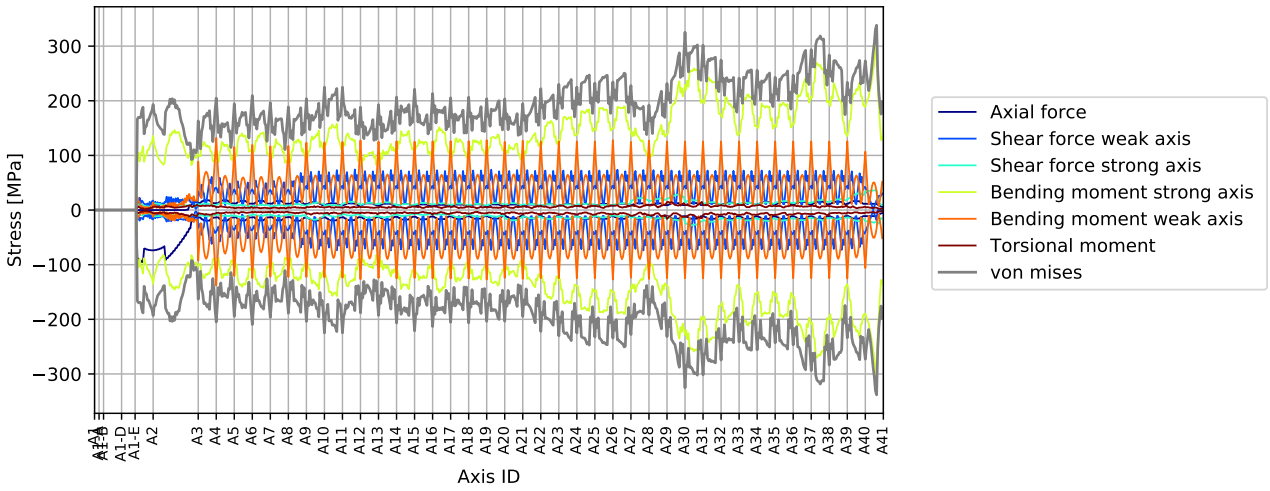

Figure 3.235: Stress envelope from all force components

3.6.2 Envelope plots

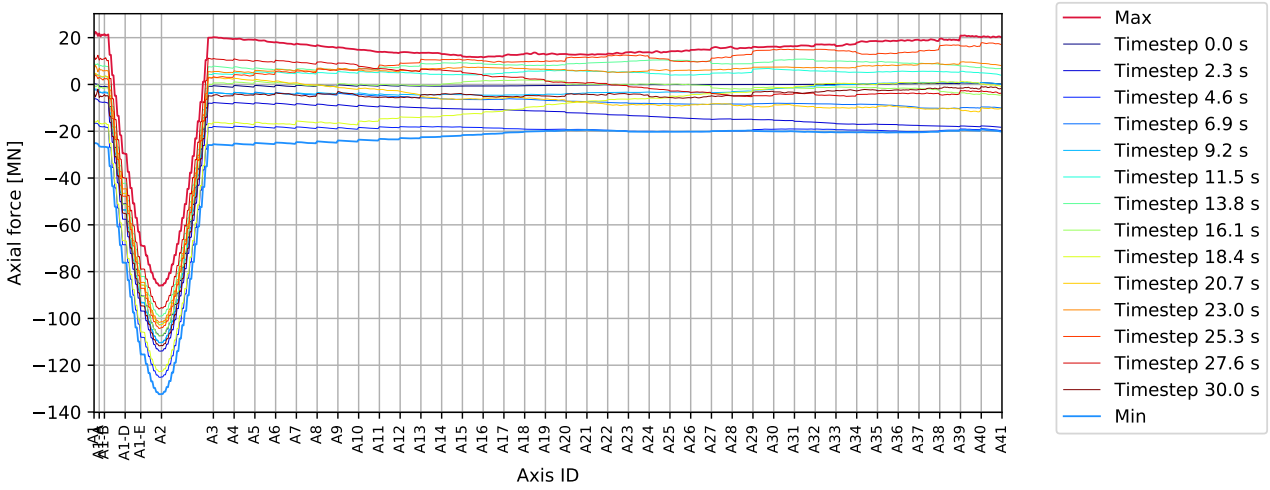

Figure 3.236: P A30 0deg - bridgegirder : Axial force [MN]

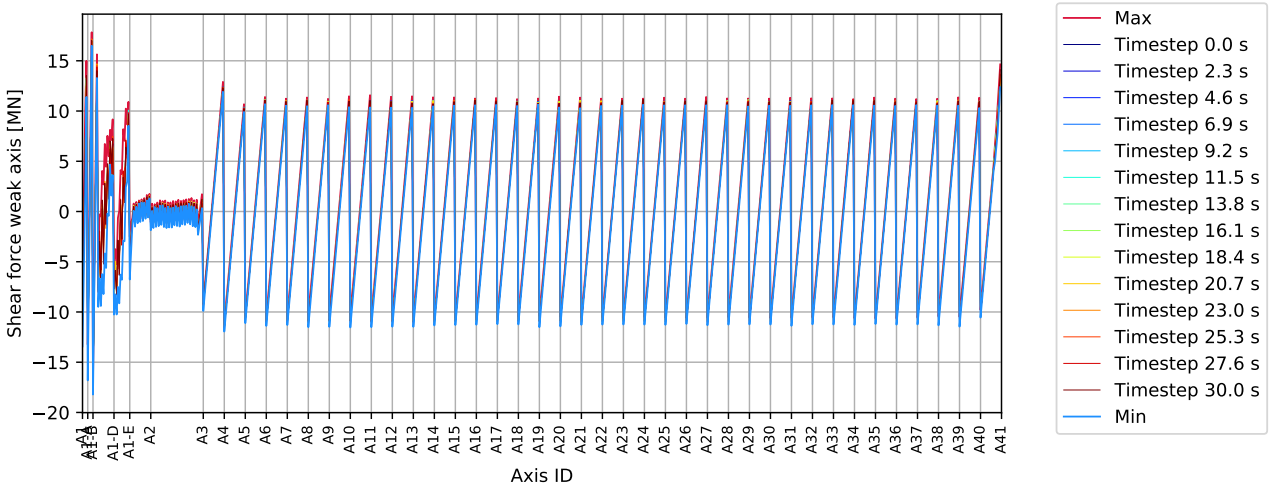

Figure 3.237: P A30 0deg - bridgegirder : Shear force weak axis [MN]

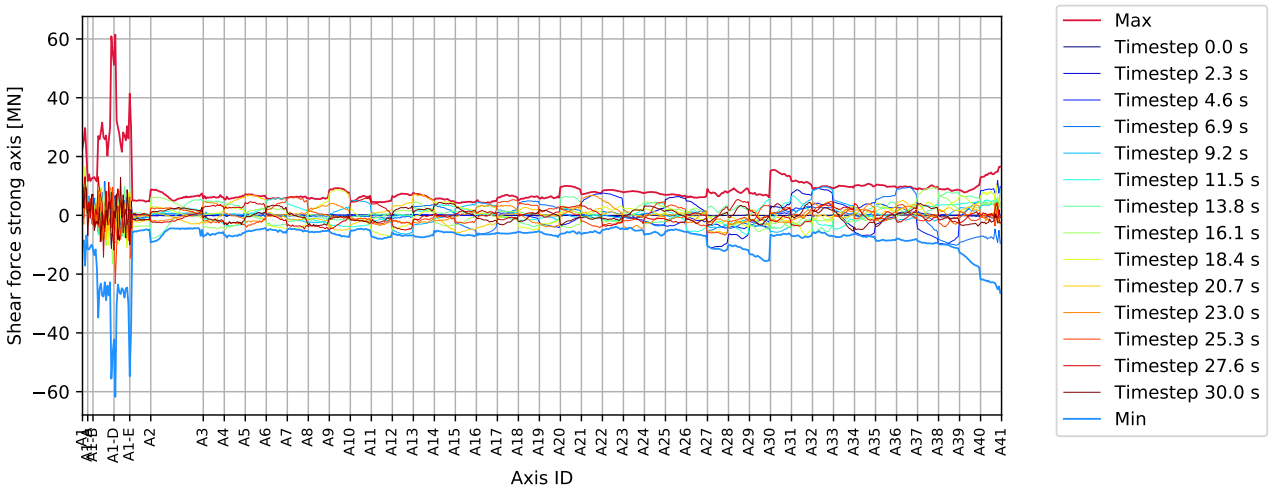

Figure 3.238: P A30 0deg - bridgegirder : Shear force strong axis [MN]

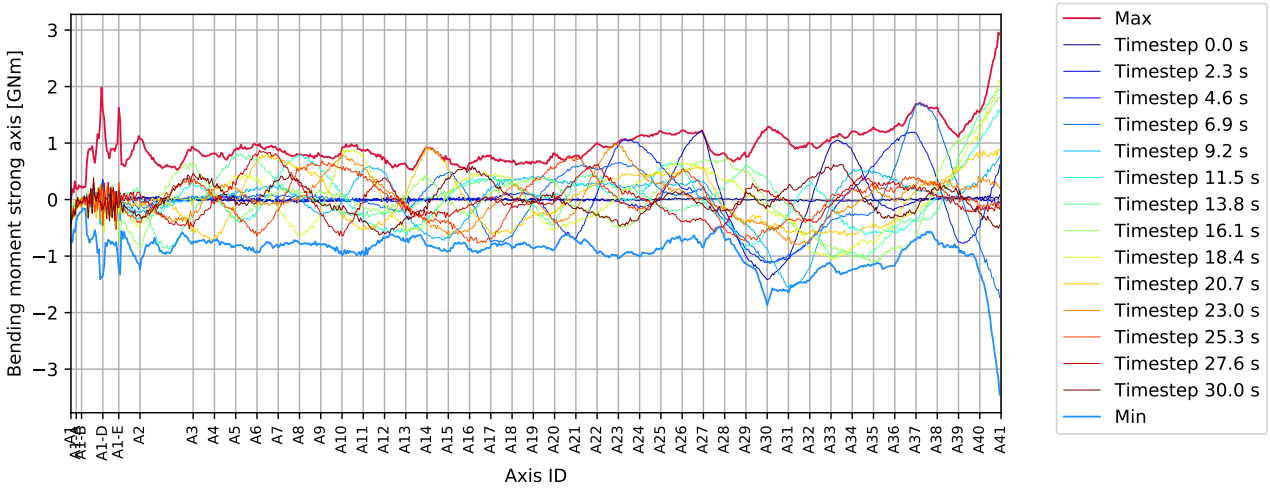

Figure 3.239: P A30 0deg - bridgegirder : Bending moment strong axis [GNm]

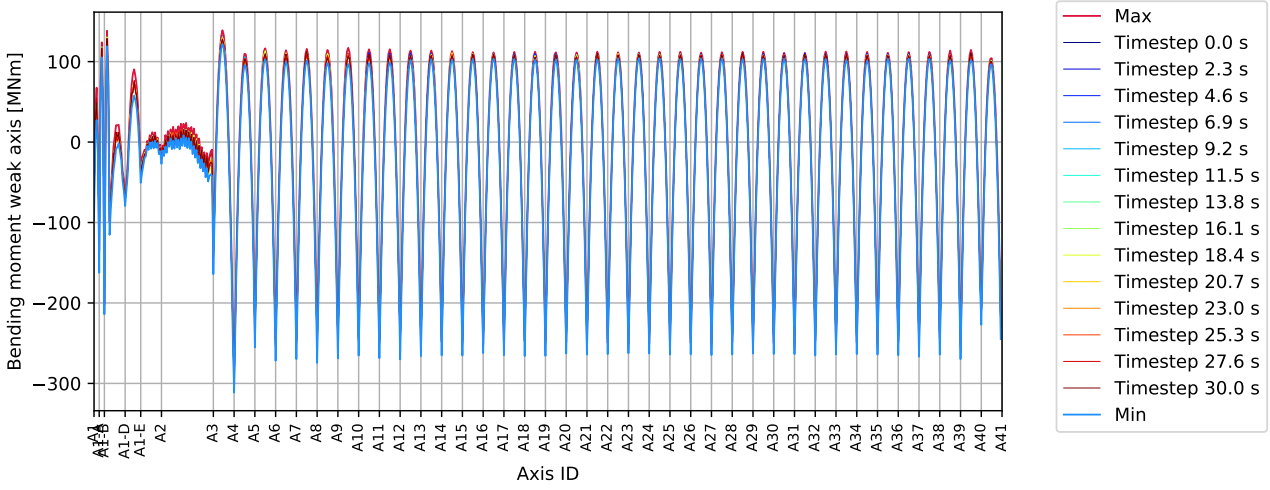

Figure 3.240: P A30 0deg - bridgegirder : Bending moment weak axis [MNm]

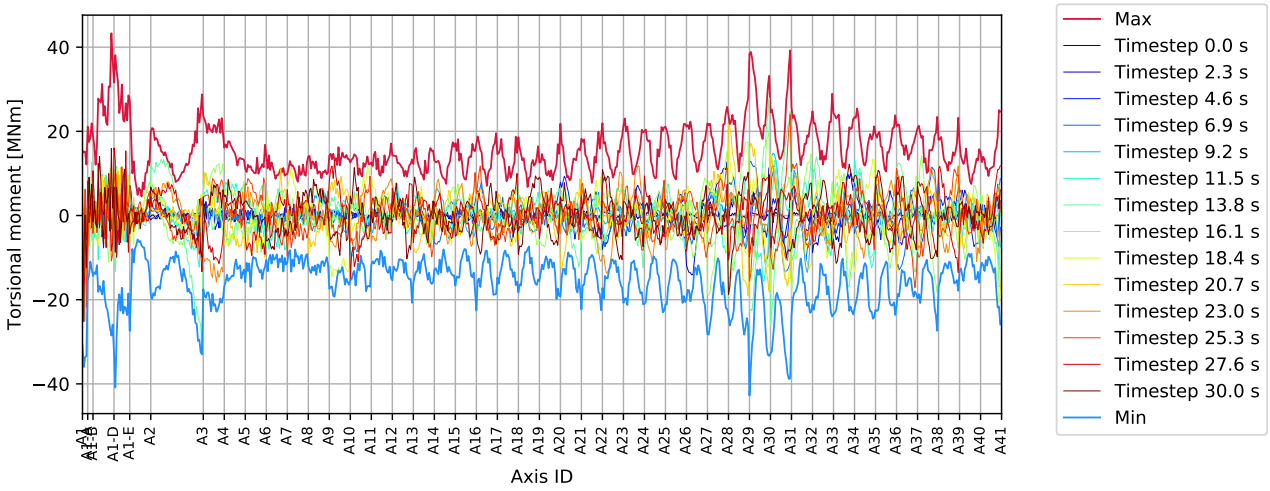

Figure 3.241: P A30 0deg - bridgegirder : Torsional moment [MNm]

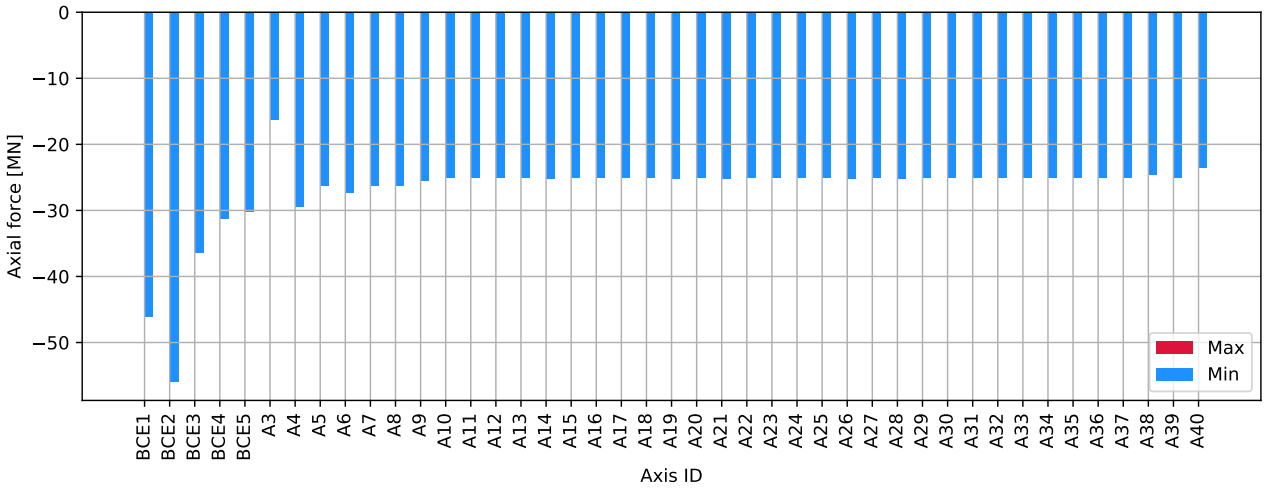

Figure 3.242: P A30 0deg - columns bottom : Axial force [MN]

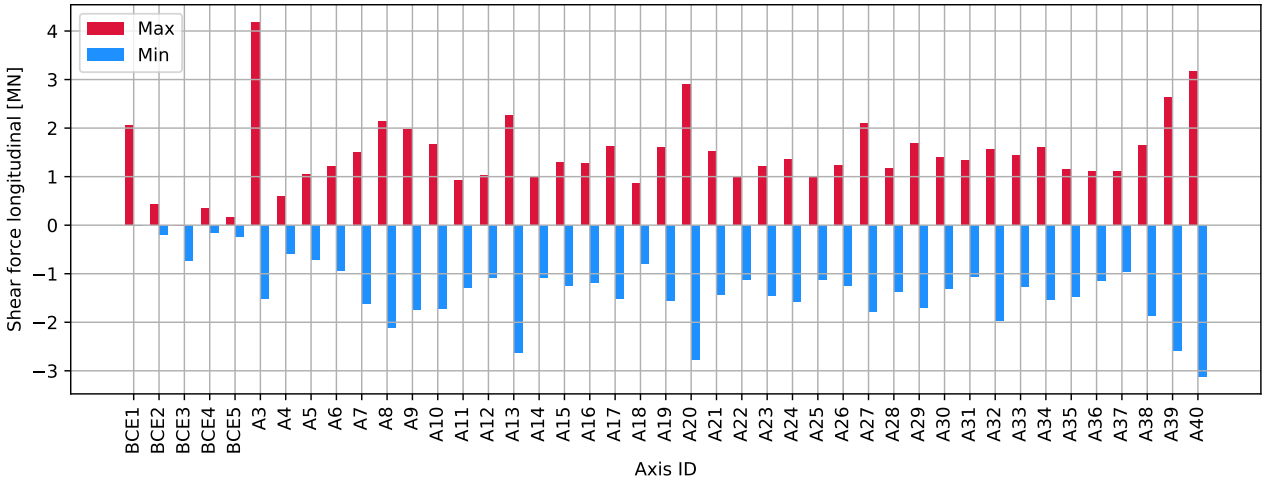

Figure 3.243: P A30 0deg - columns bottom : Shear force longitudinal [MN]

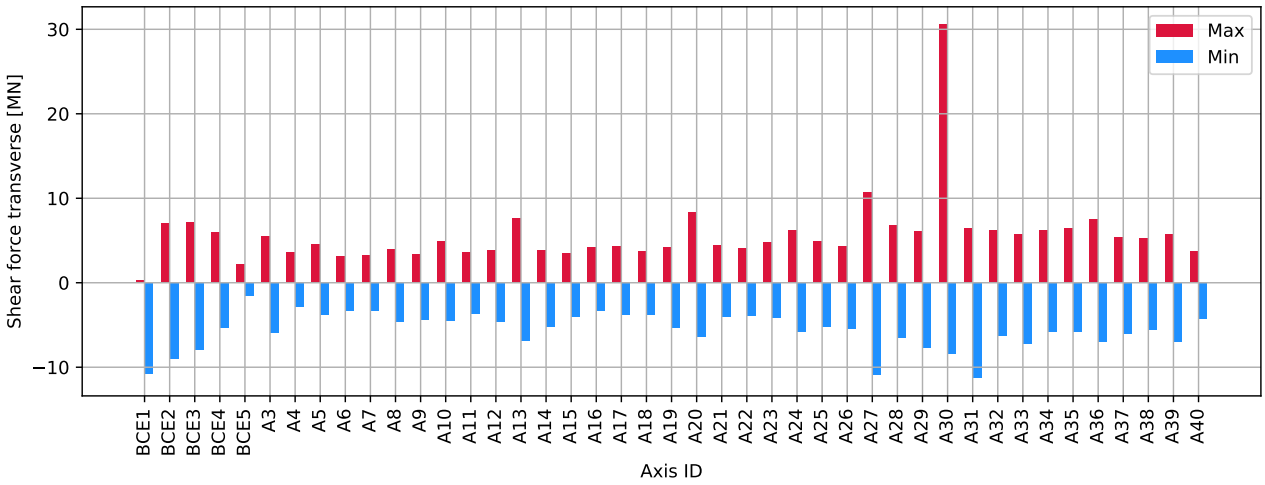

Figure 3.244: P A30 0deg - columns bottom : Shear force transverse [MN]

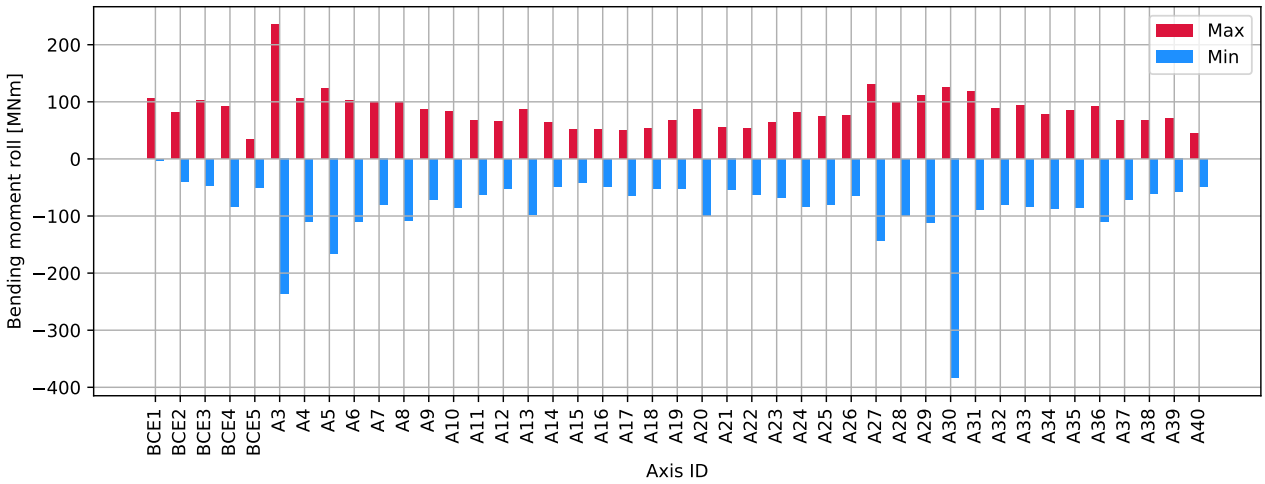

Figure 3.245: P A30 0deg - columns bottom : Bending moment roll [MNm]

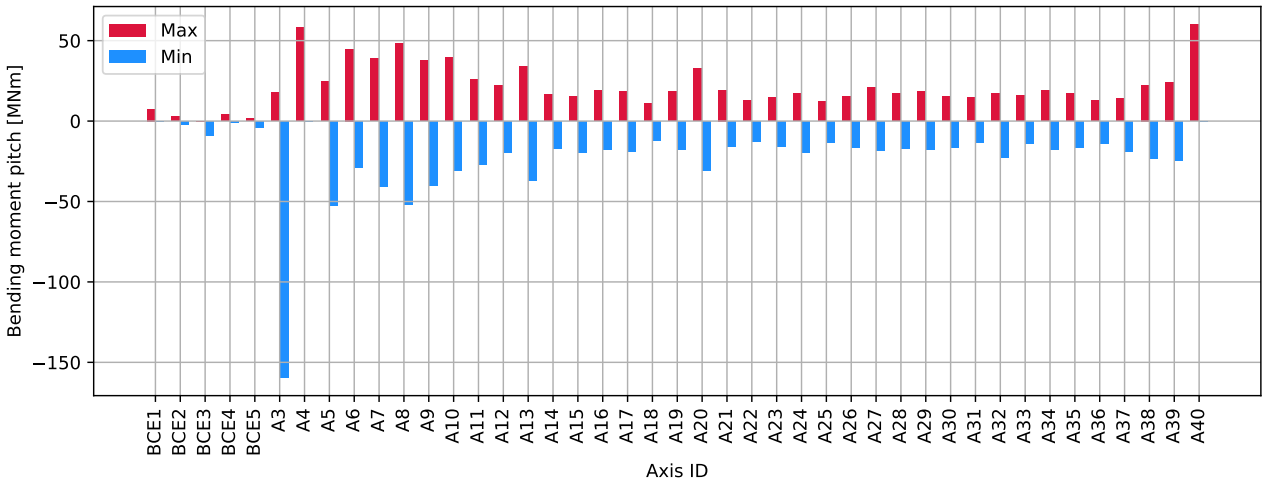

Figure 3.246: P A30 0deg - columns bottom : Bending moment pitch [MNm]

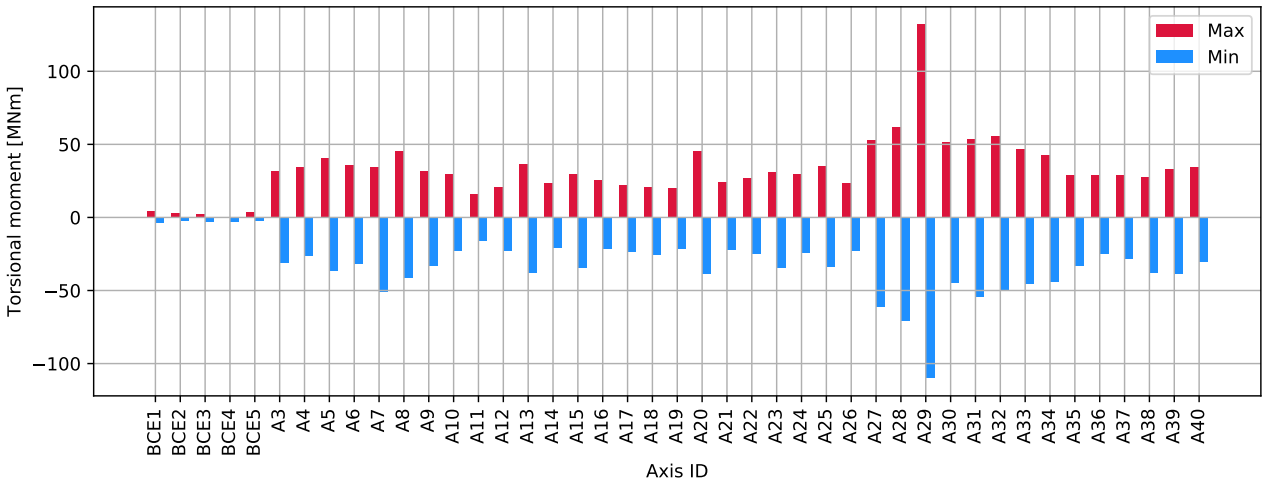

Figure 3.247: P A30 0deg - columns bottom : Torsional moment [MNm]

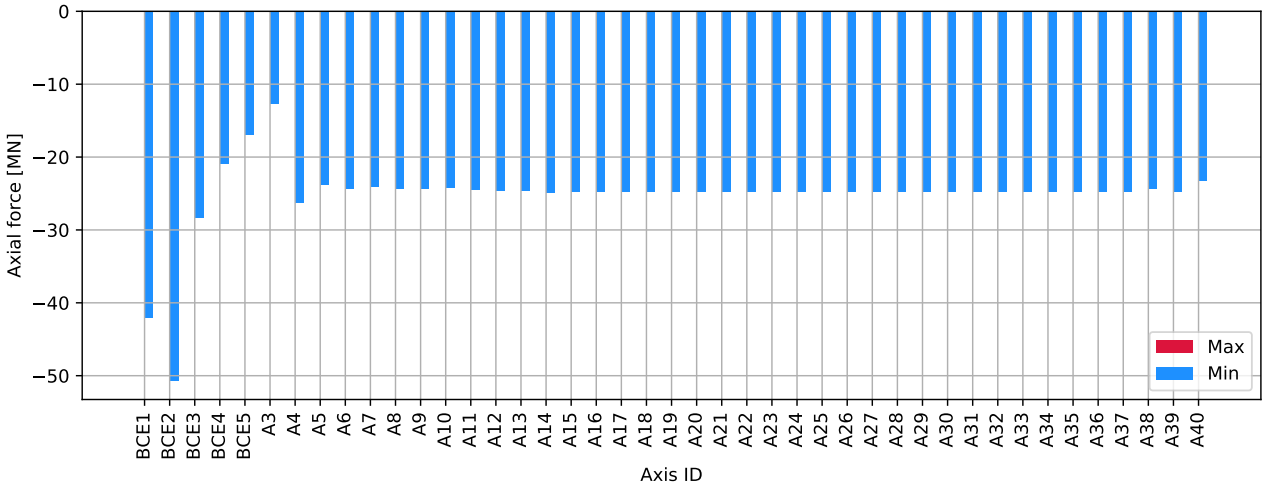

Figure 3.248: P A30 0deg - columns top : Axial force [MN]

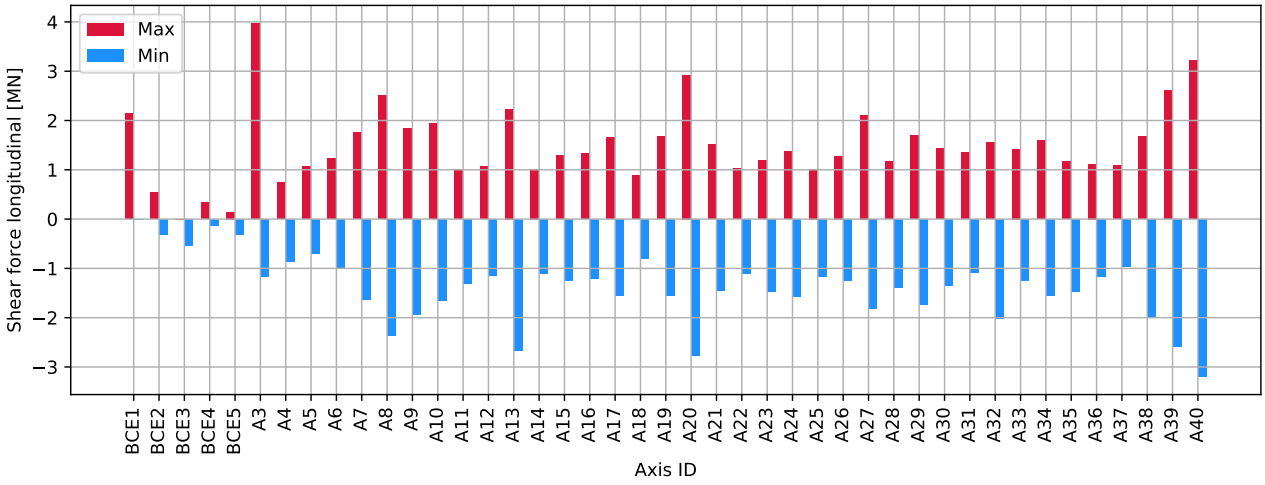

Figure 3.249: P A30 0deg - columns top : Shear force longitudinal [MN]

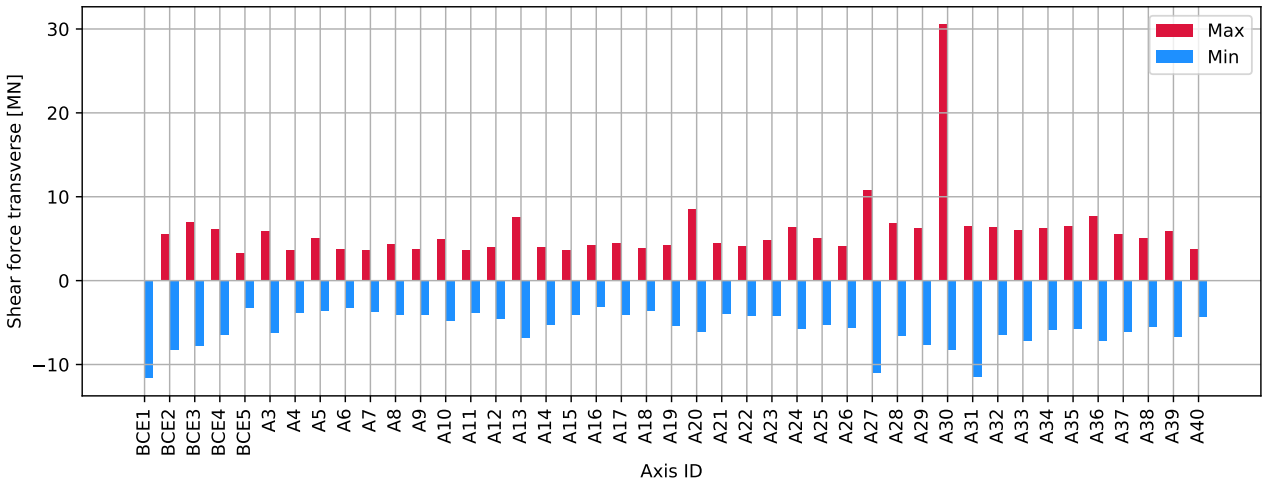

Figure 3.250: P A30 0deg - columns top : Shear force transverse [MN]

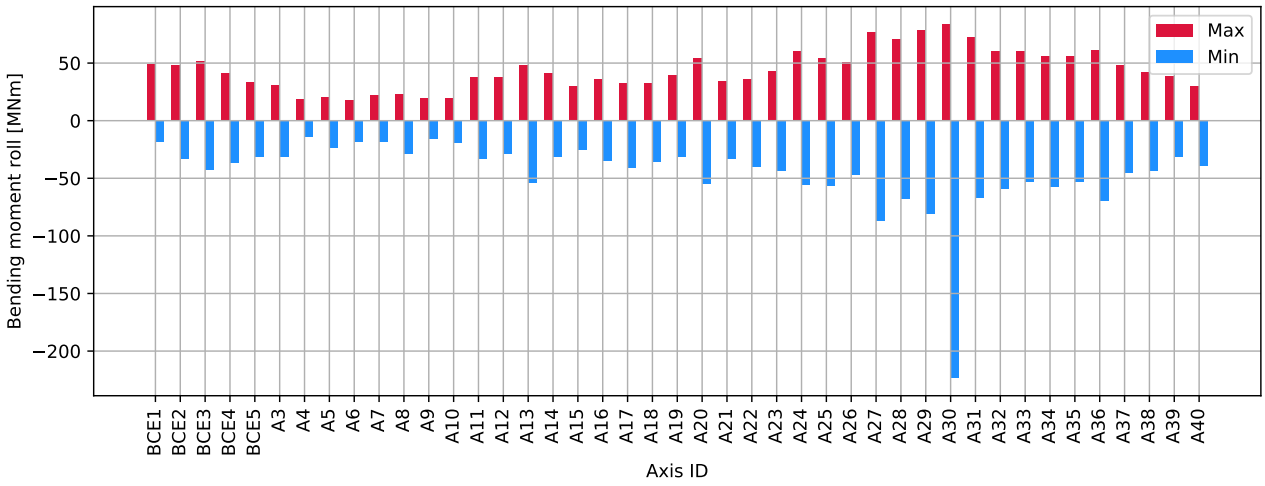

Figure 3.251: P A30 0deg - columns top : Bending moment roll [MNm]

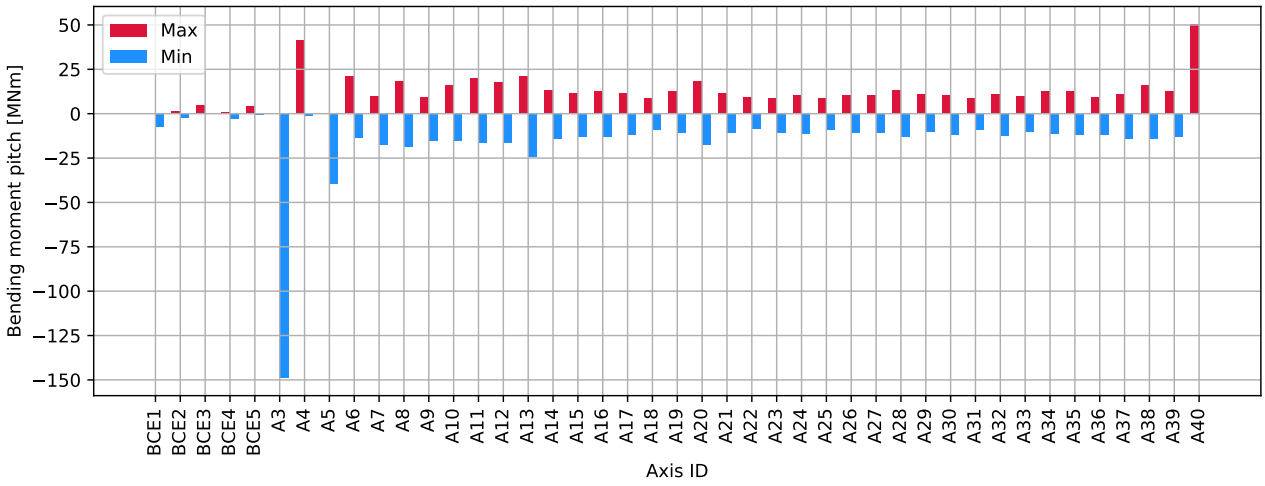

Figure 3.252: P A30 0deg - columns top : Bending moment pitch [MNm]

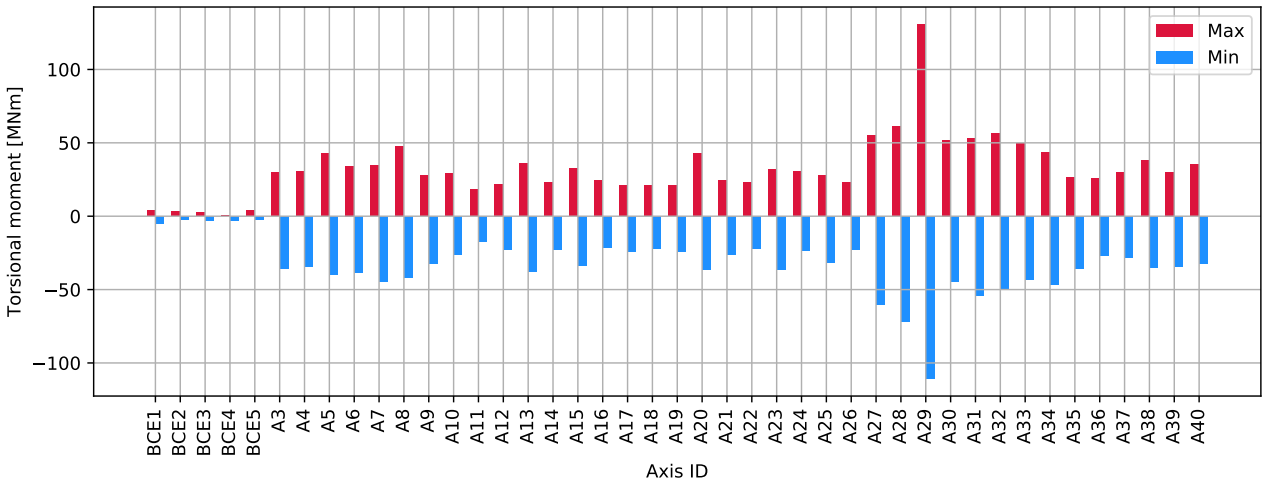

Figure 3.253: P A30 0deg - columns top : Torsional moment [MNm]

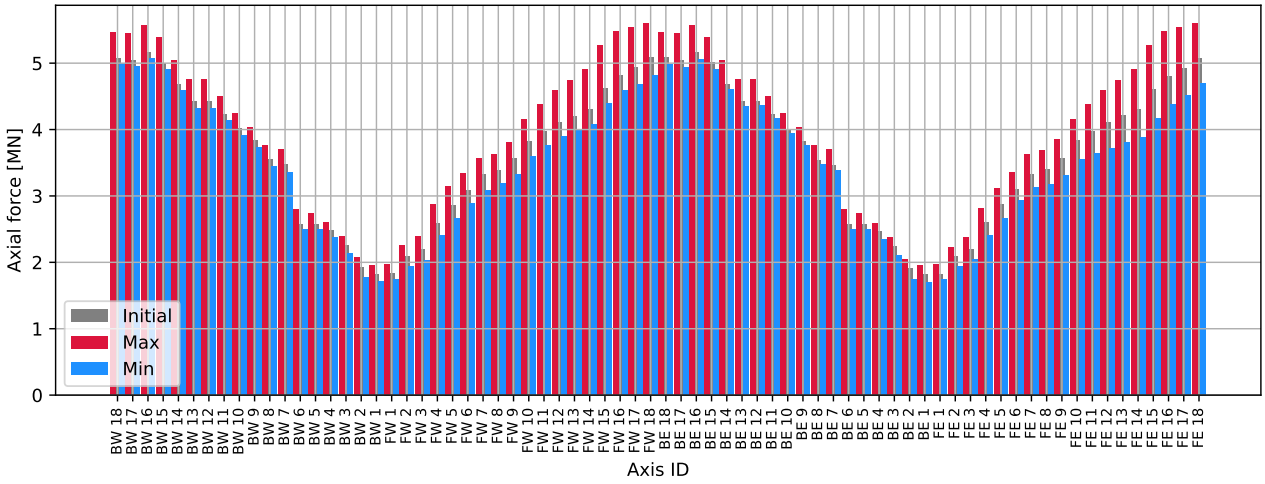

Figure 3.254: P A30 0deg - cables : Axial force [MN]

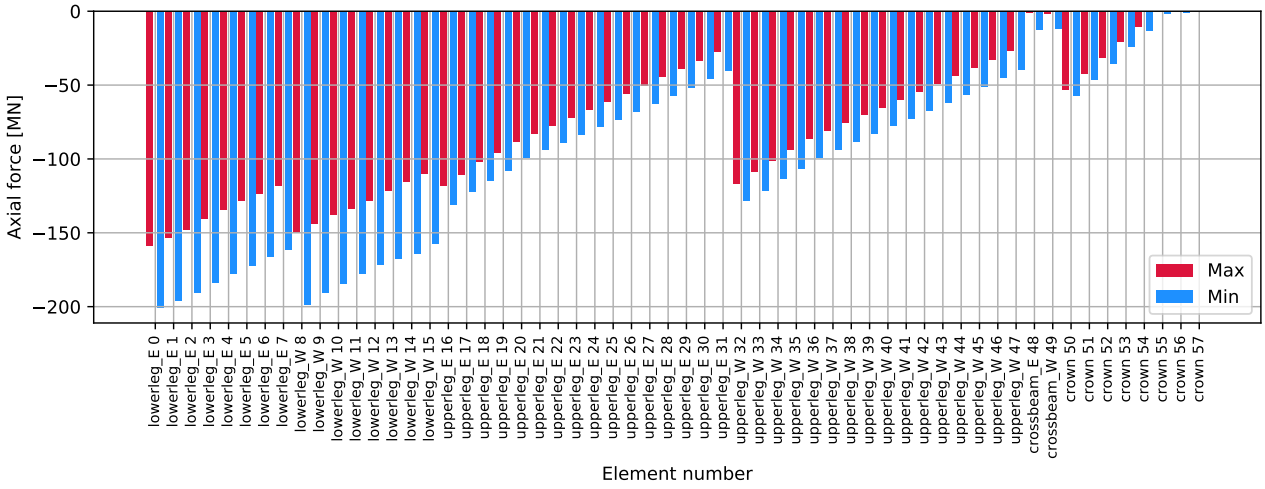

Figure 3.255: P A30 0deg - tower: Axial force [MN]

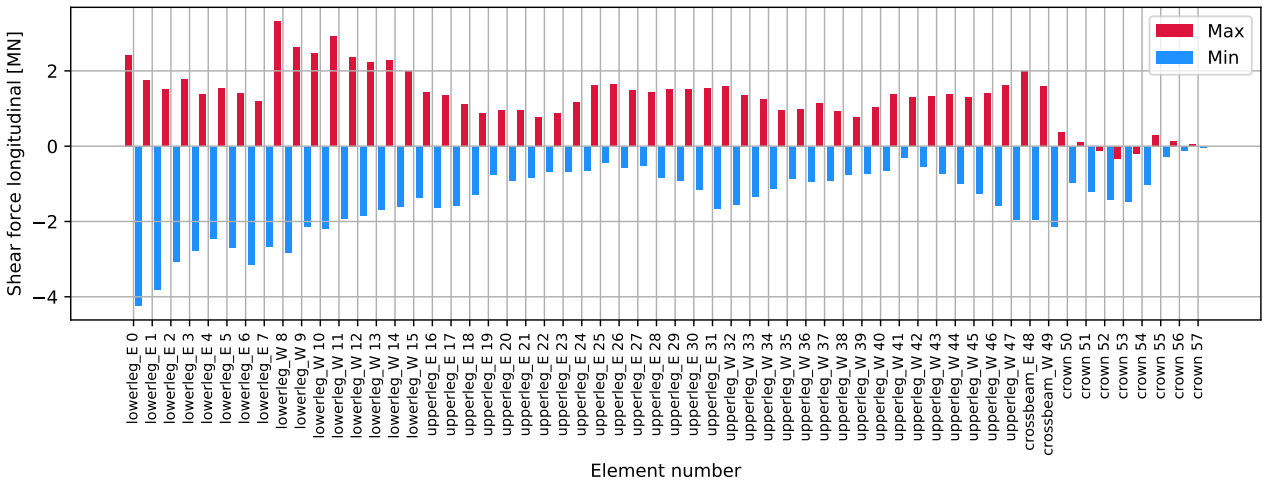

Figure 3.256: P A30 0deg - tower: Shear force longitudinal [MN]

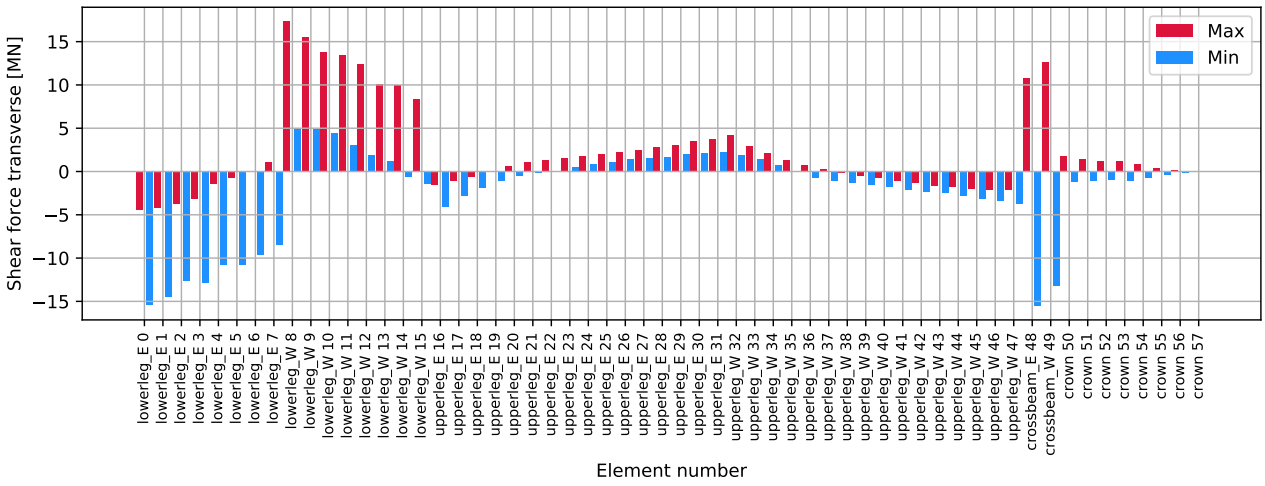

Figure 3.257: P A30 0deg - tower: Shear force transverse [MN]

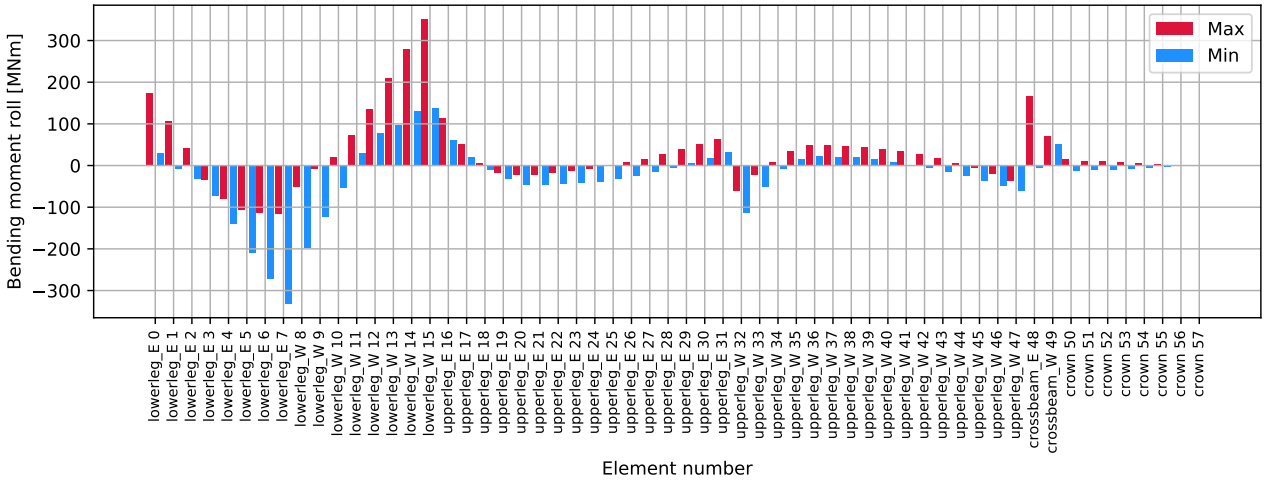

Figure 3.258: P A30 0deg - tower: Bending moment roll [MNm]

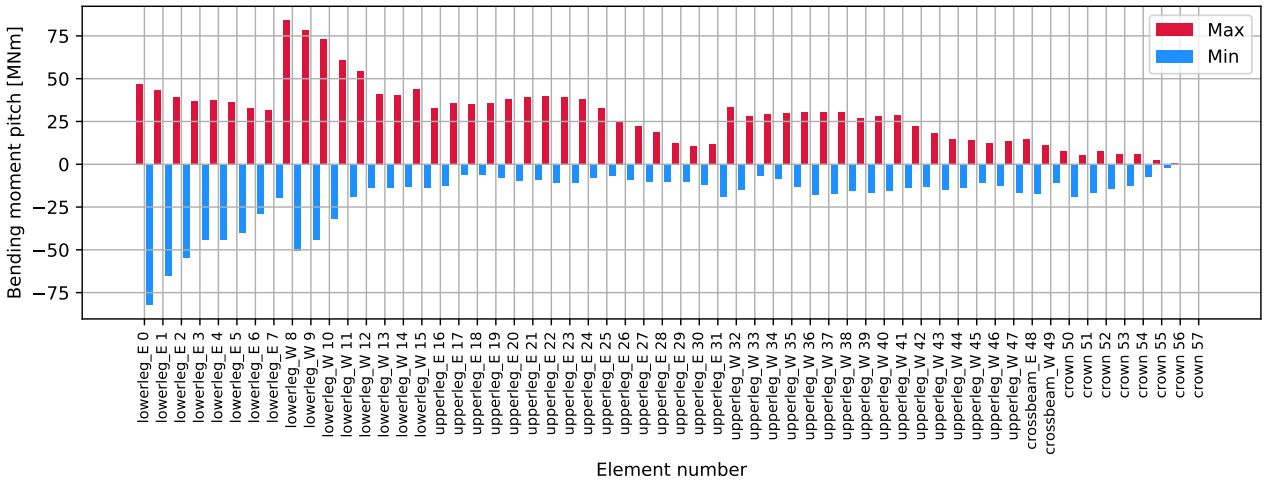

Figure 3.259: P A30 0deg - tower: Bending moment pitch [MNm]

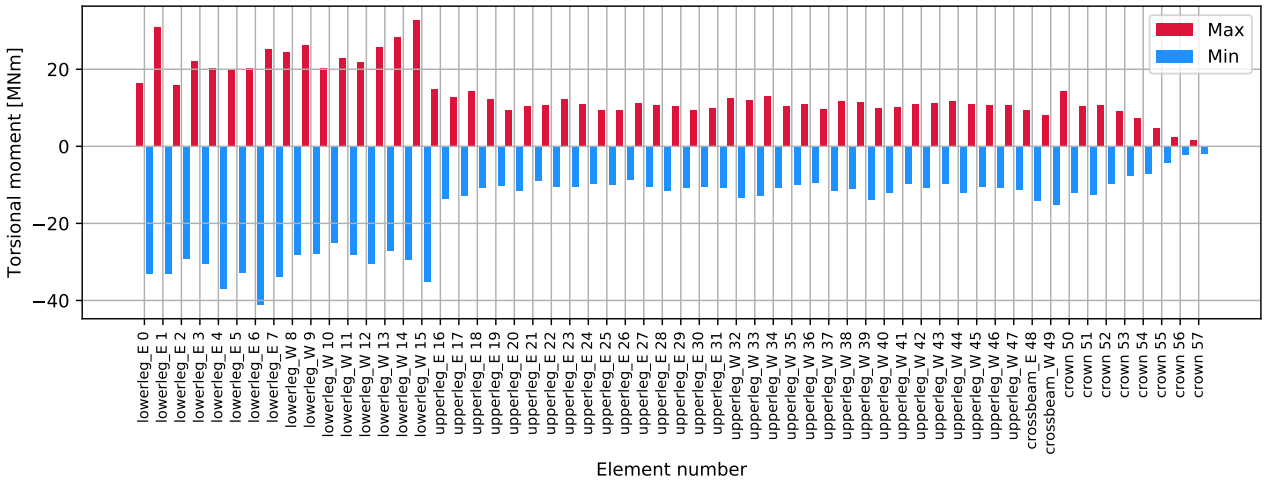

Figure 3.260: P A30 0deg - tower: Torsional moment [MNm]

3.6.3 Time series

Note : Time series are filtered using a Saviotzky-Golay filter for increased readability of the time history plots. Hence, maximum values that occur due to a rapid vibration are not shown in the plots. For maximum values, refer to the tabulated data.
All elements are numbered from South to North, bottom to top

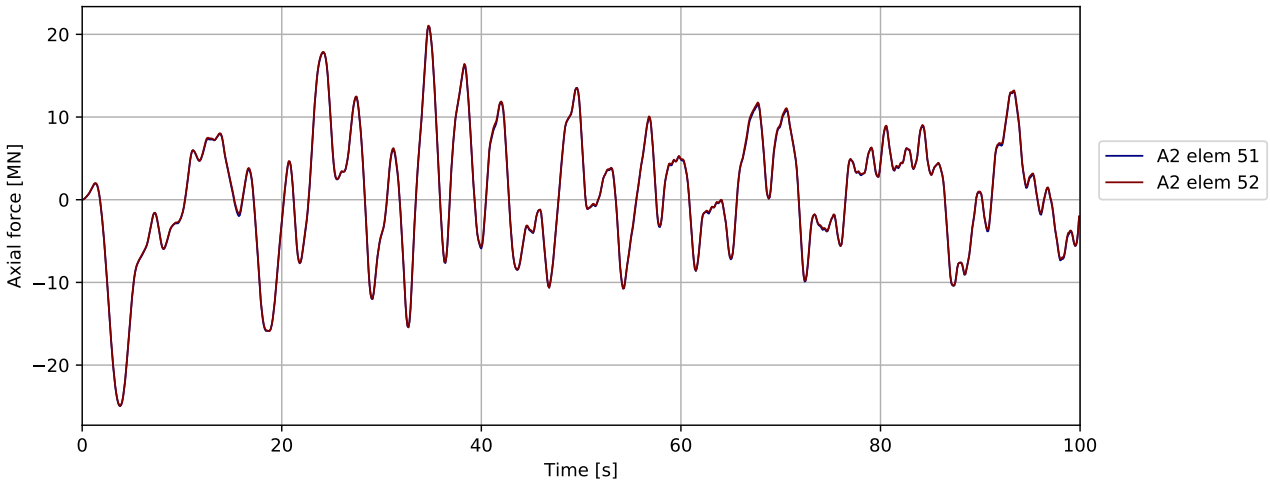

Figure 3.261: P A30 0deg - bridgegirder @ pylon: Axial force [MN]

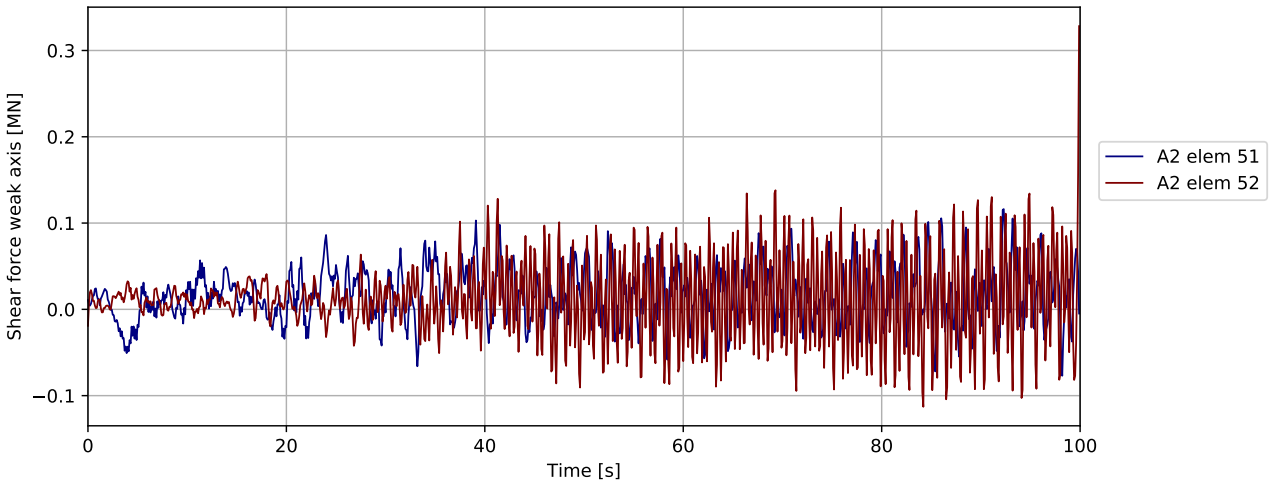

Figure 3.262: P A30 0deg - bridgegirder @ pylon: Shear force weak axis [MN]

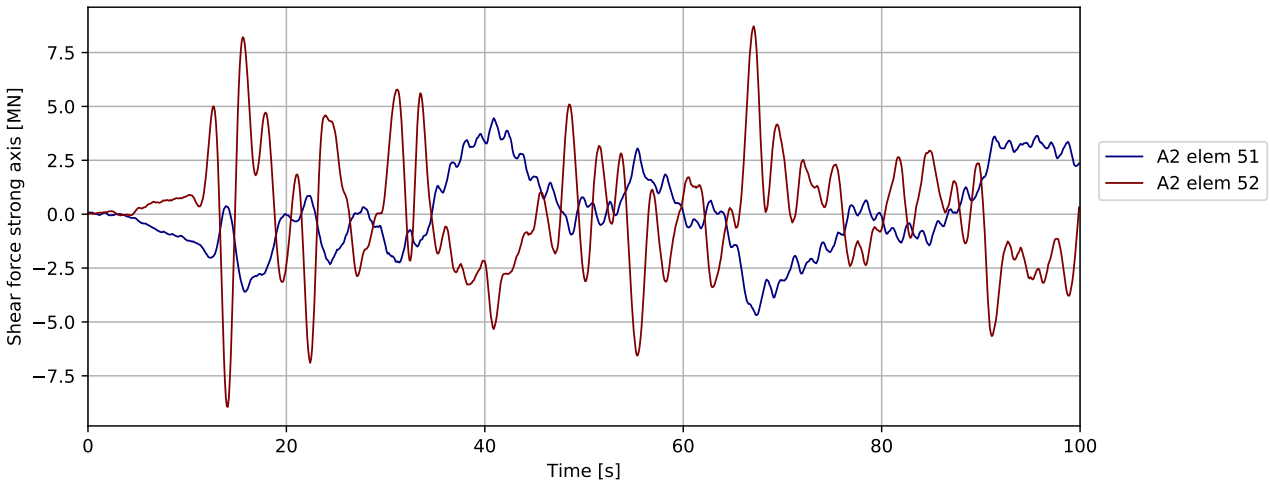

Figure 3.263: P A30 0deg - bridgegirder @ pylon: Shear force strong axis [MN]

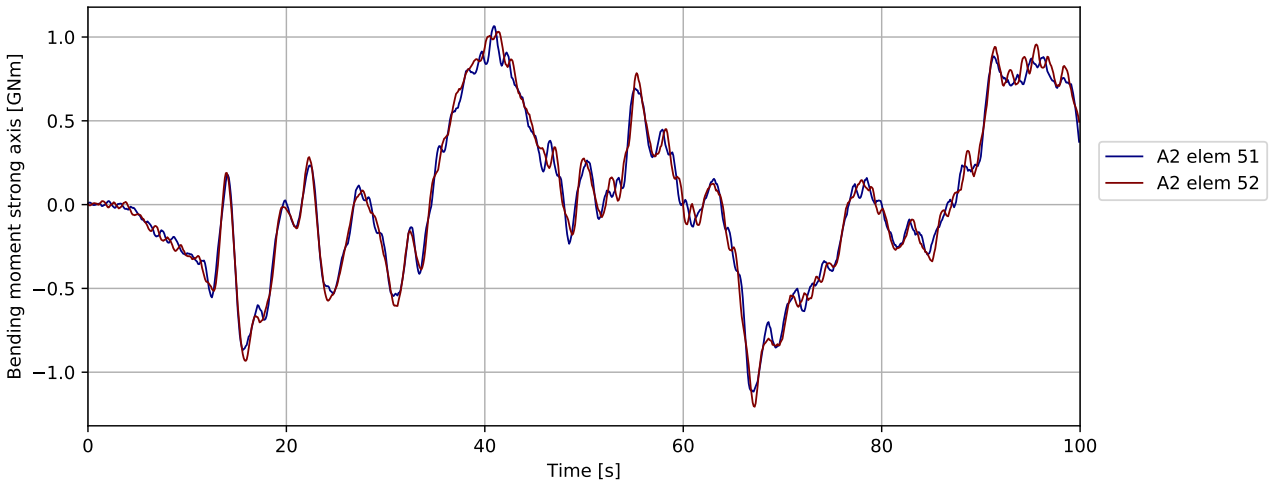

Figure 3.264: P A30 0deg - bridgegirder @ pylon: Bending moment strong axis [GNm]

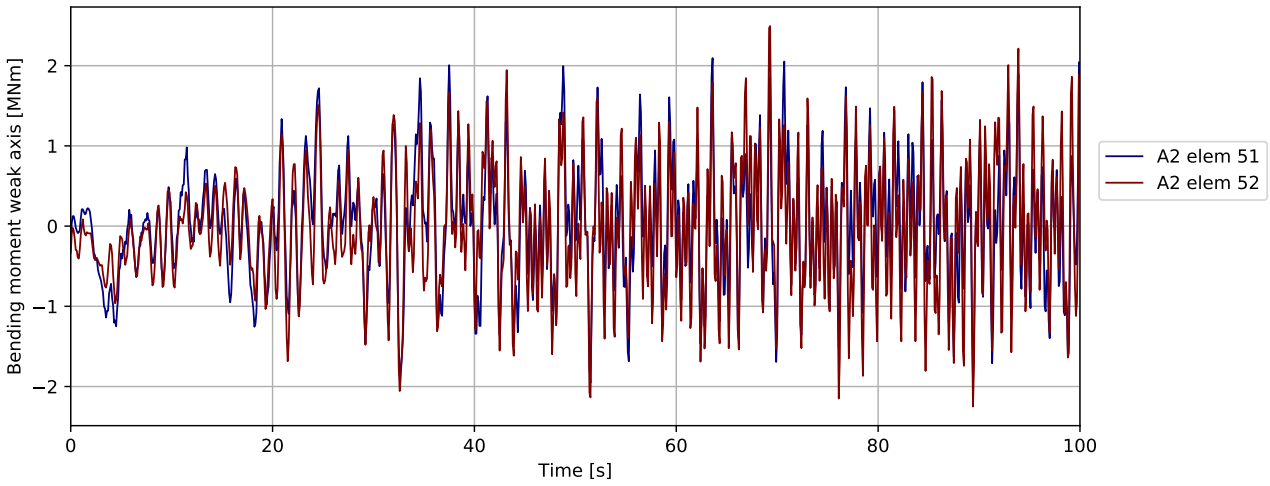

Figure 3.265: P A30 0deg - bridgegirder @ pylon: Bending moment weak axis [MNm]

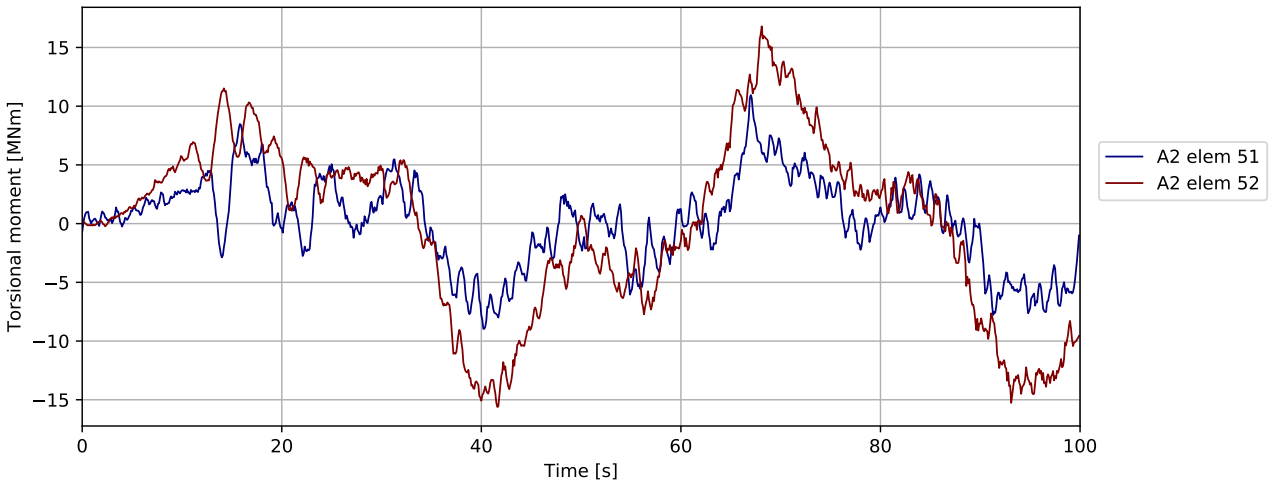

Figure 3.266: P A30 0deg - bridgegirder @ pylon: Torsional moment [MNm]

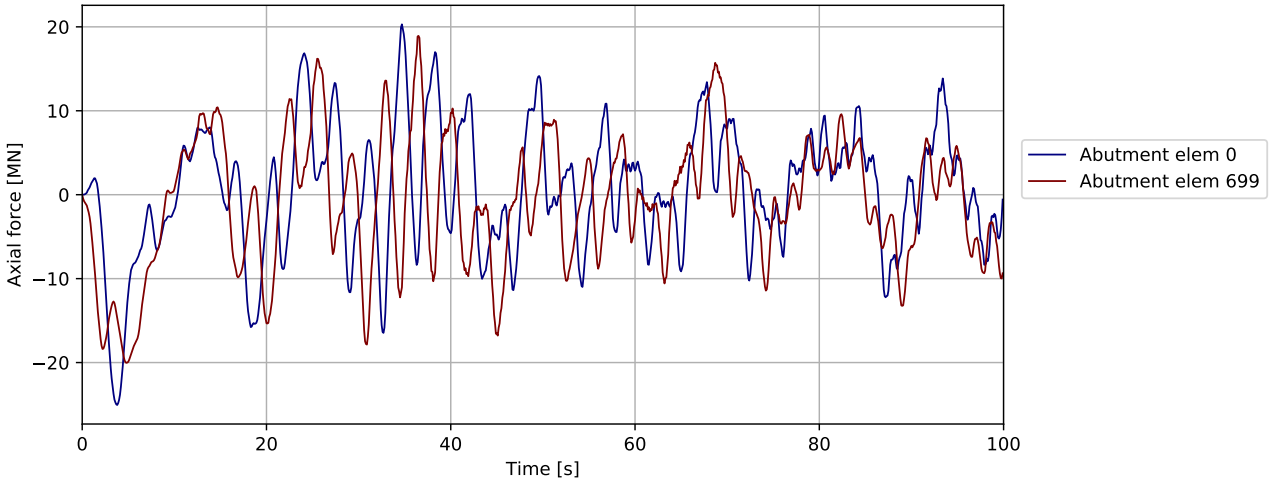

Figure 3.267: P A30 0deg - bridgegirder @abutments: Axial force [MN]

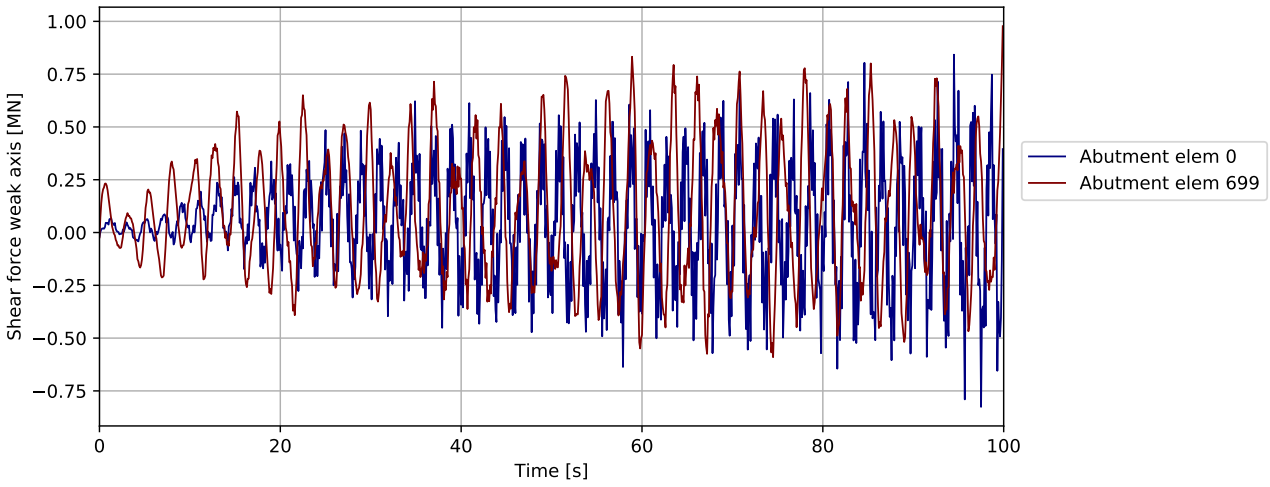

Figure 3.268: P A30 0deg - bridgegirder @abutments: Shear force weak axis [MN]

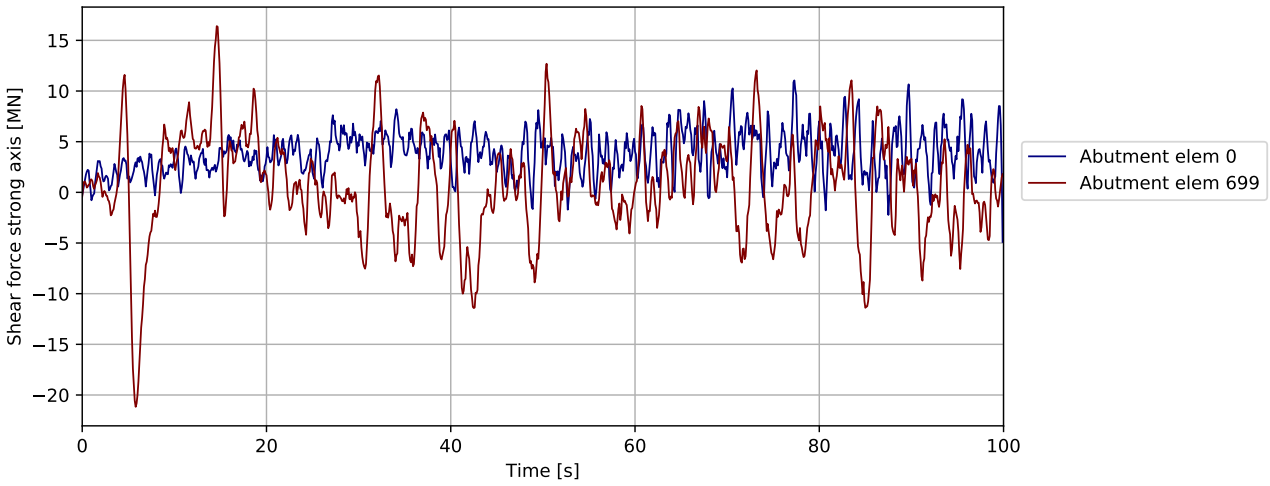

Figure 3.269: P A30 0deg - bridgegirder @abutments: Shear force strong axis [MN]

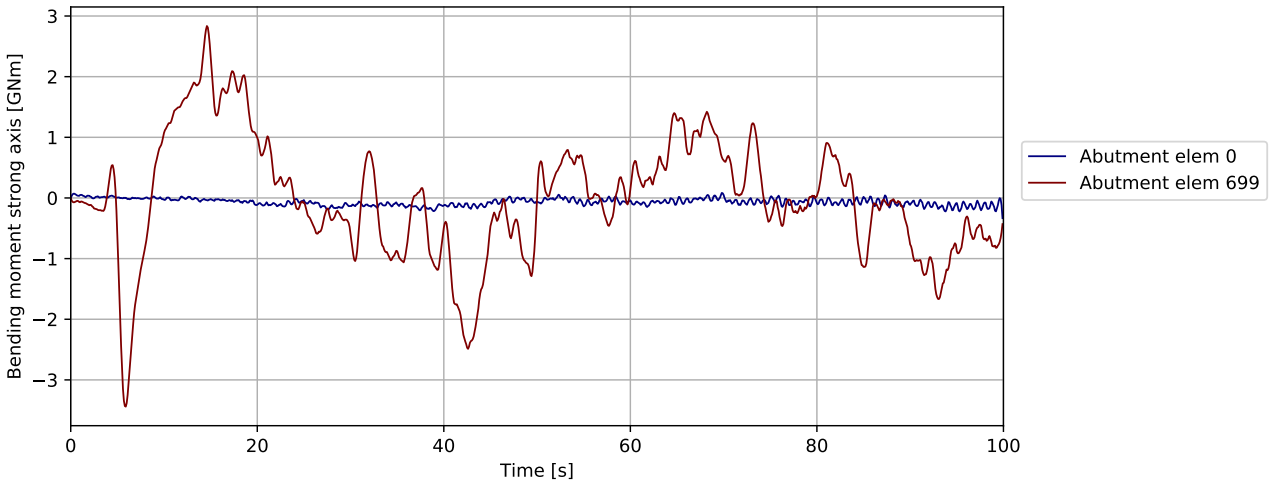

Figure 3.270: P A30 0deg - bridgegirder @abutments: Bending moment strong axis [GNm]

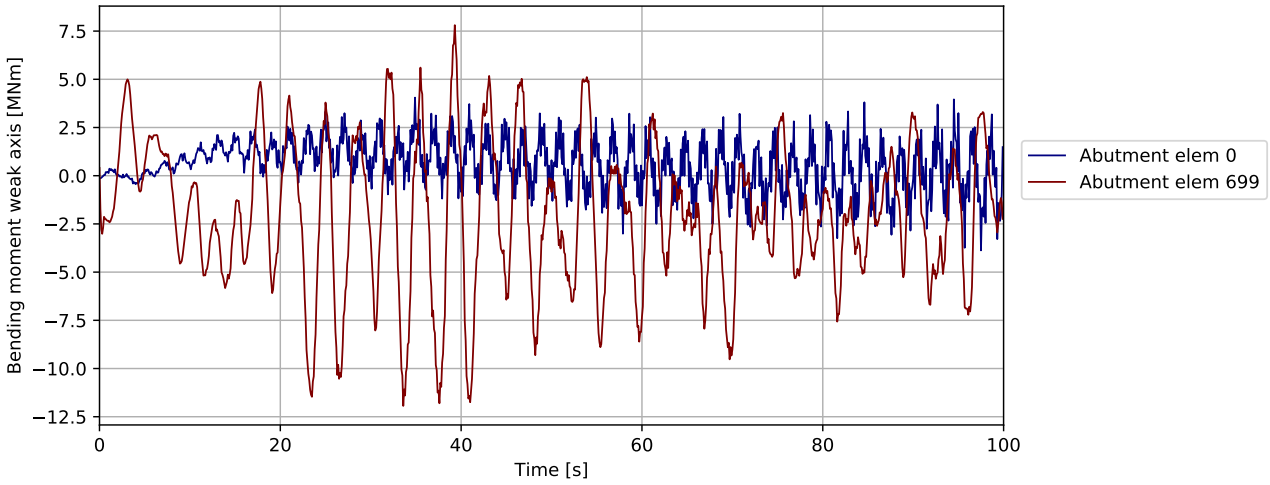

Figure 3.271: P A30 0deg - bridgegirder @abutments: Bending moment weak axis [MNm]

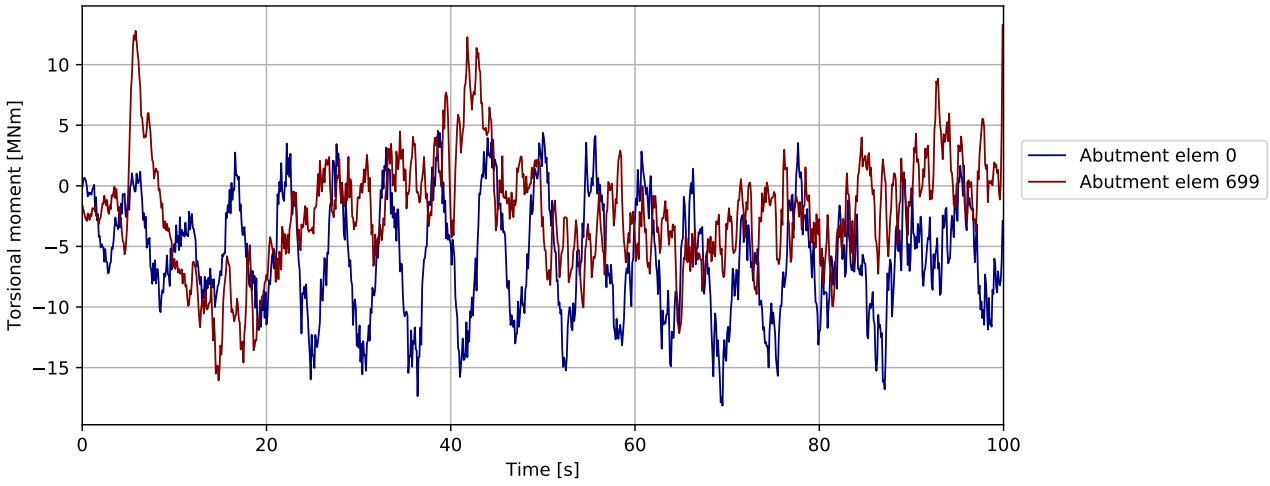

Figure 3.272: P A30 0deg - bridgegirder @abutments: Torsional moment [MNm]

Note : Compressive spring force is negative

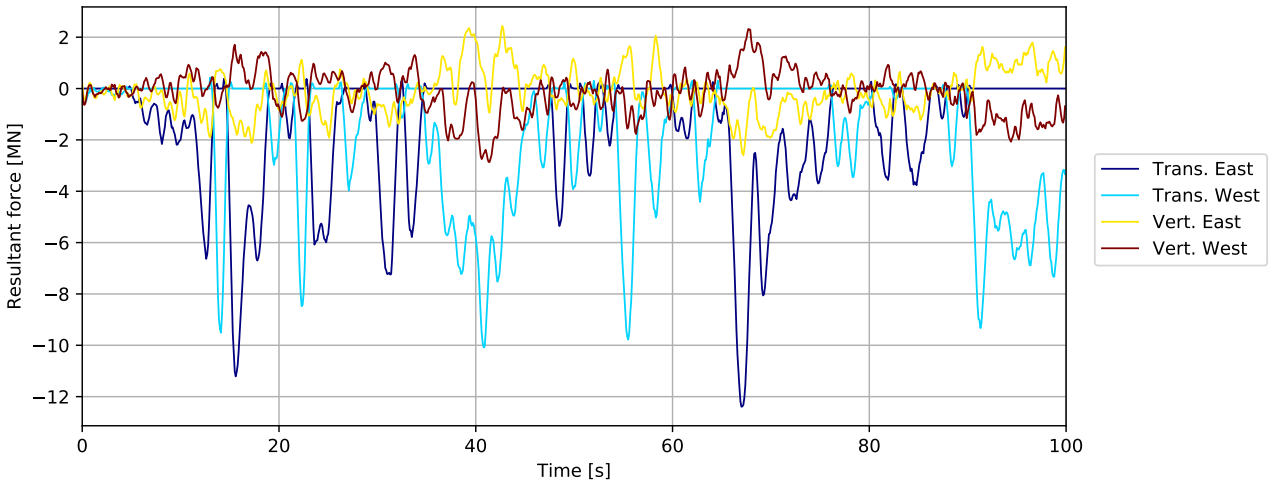

Figure 3.273: P A30 0deg - bridgegirder supports in tower: Resultant force [MN]

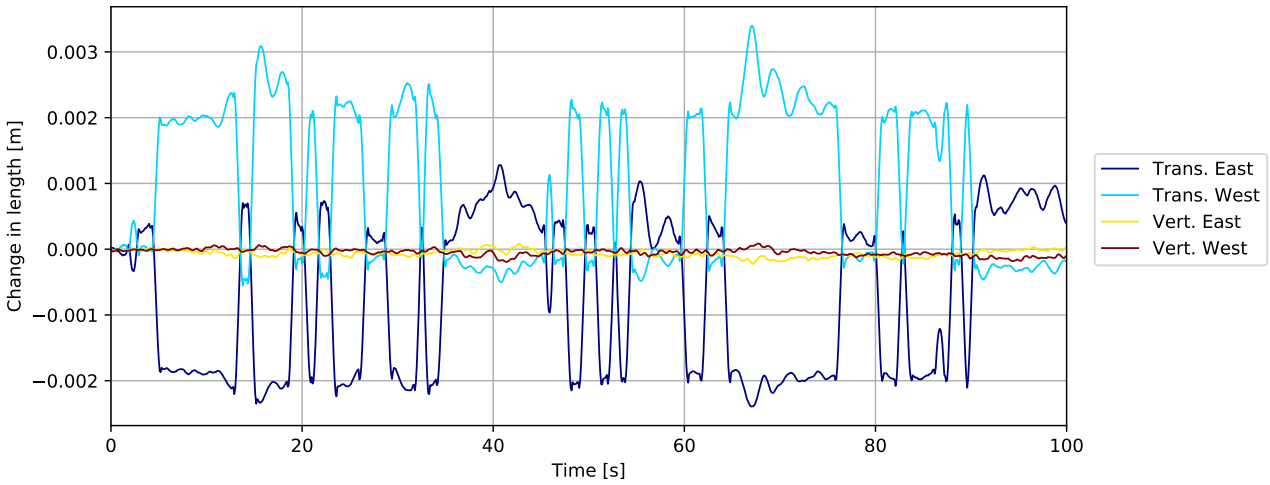

Figure 3.274: P A30 0deg - bridgegirder supports in tower: Change in length [m]

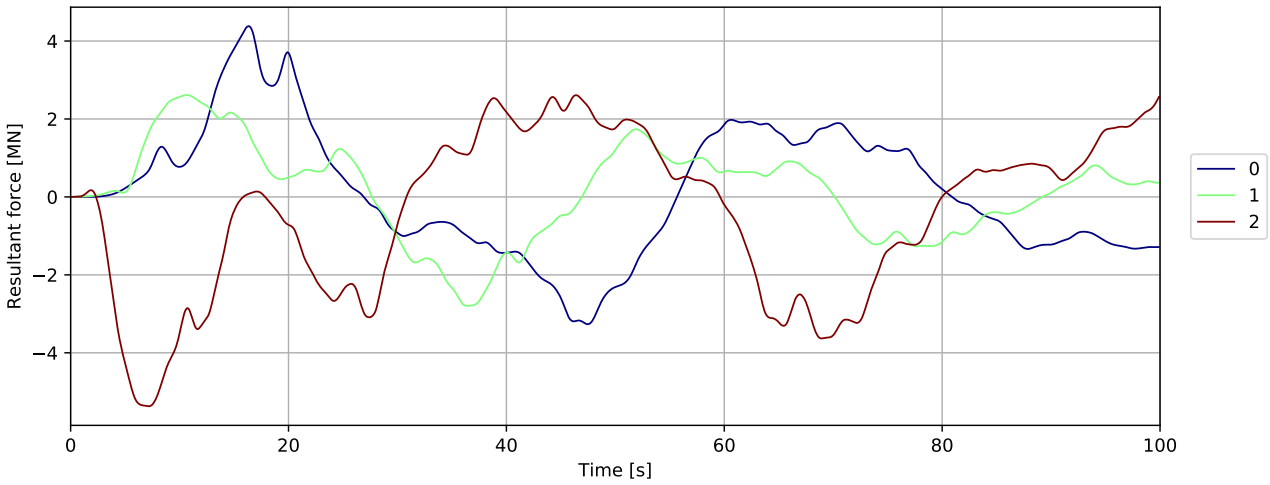

Figure 3.275: Mooring force

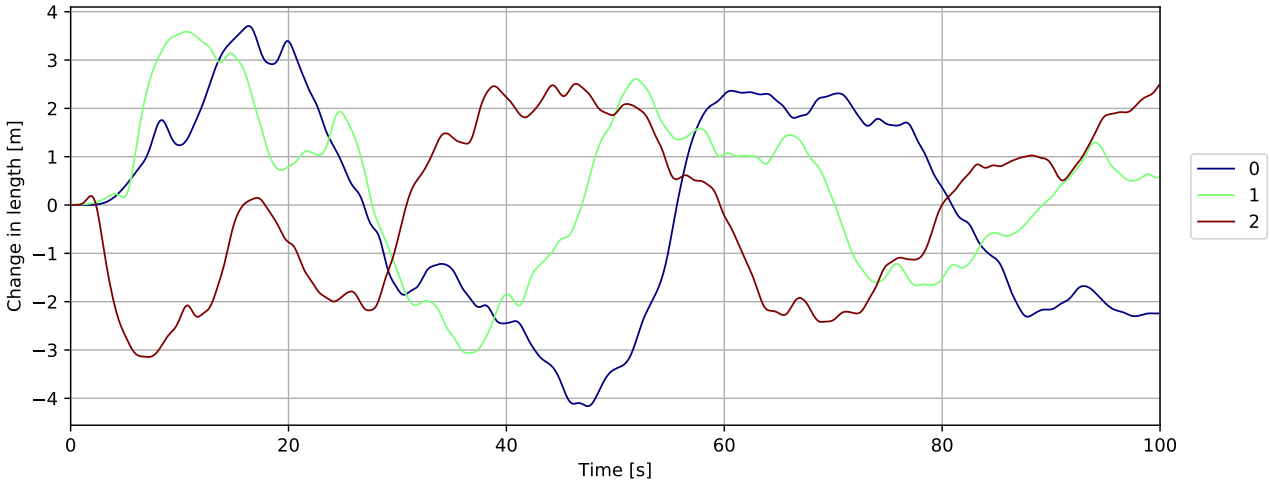

Figure 3.276: Mooring displacement

3.7 PontoonA38 0deg

3.7.1 Overall response

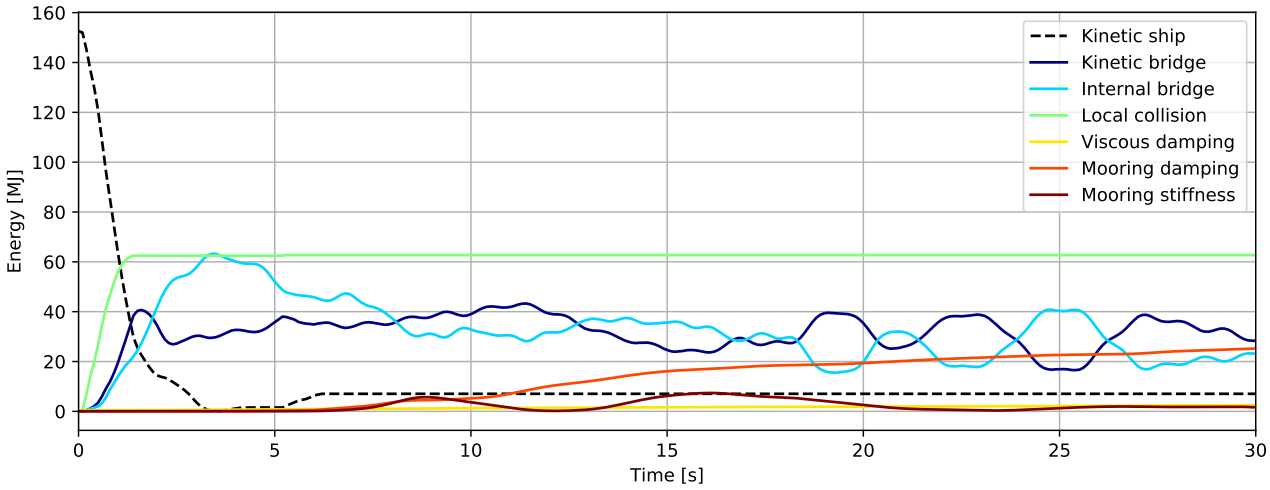

Figure 3.277: Energy [MJ] - initial phase

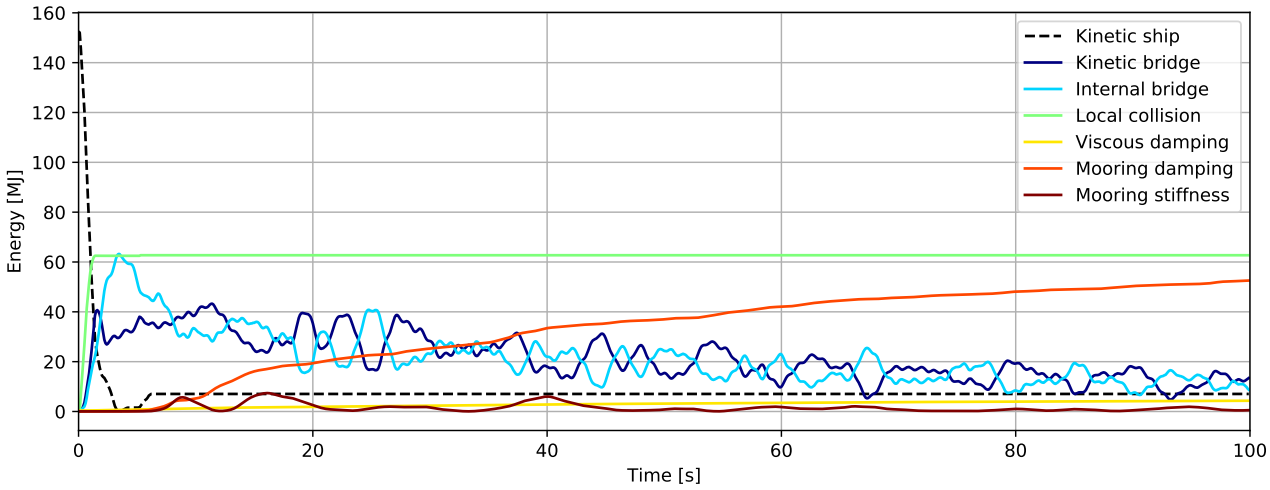

Figure 3.278: Energy [MJ]

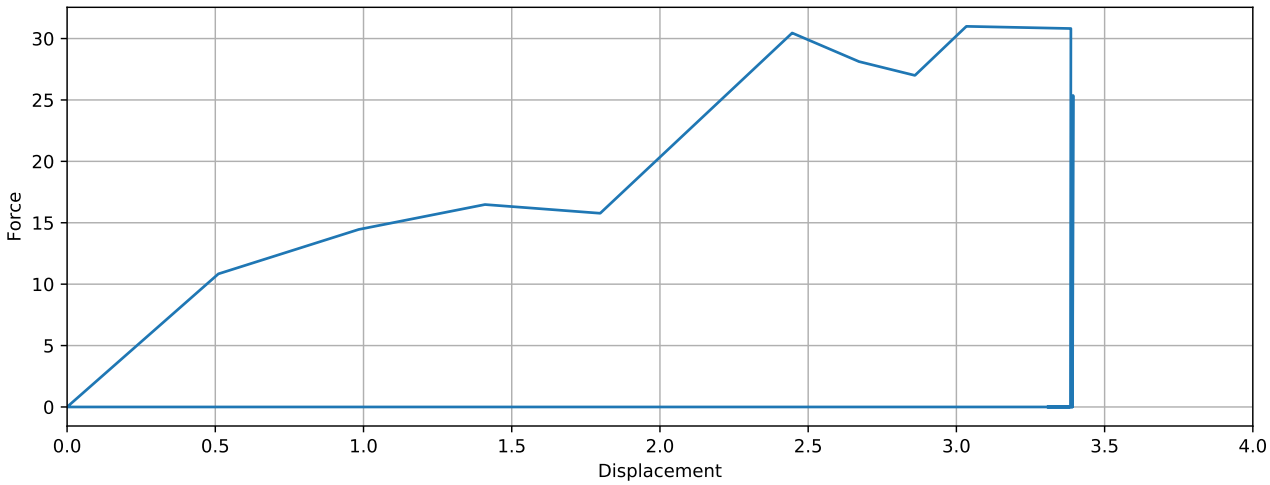

Figure 3.279: Simulated local collision force-displacement

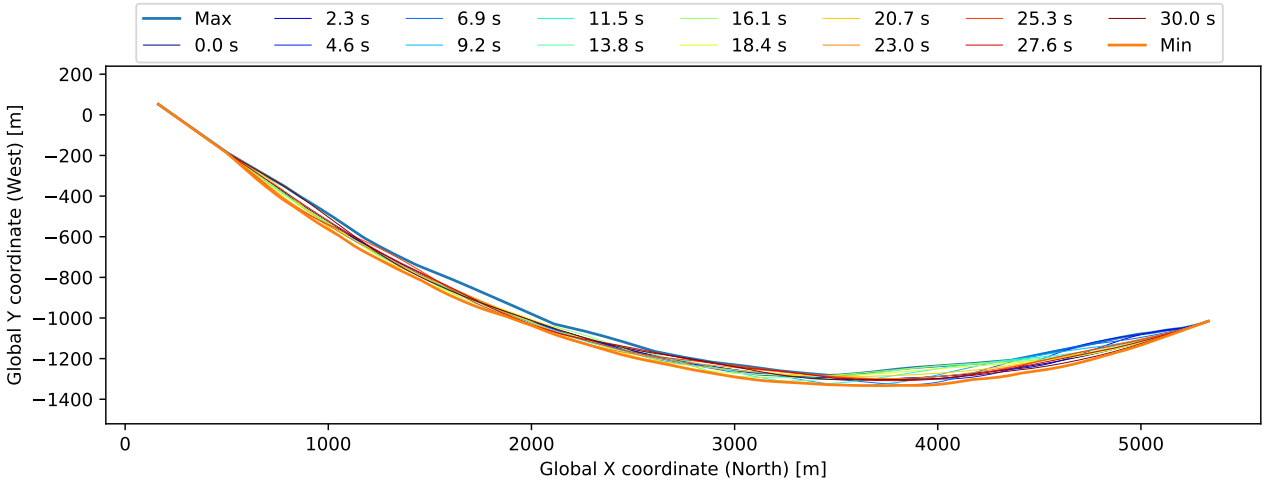

Figure 3.280: Bridgegirder deflection (10x displacment scaling)

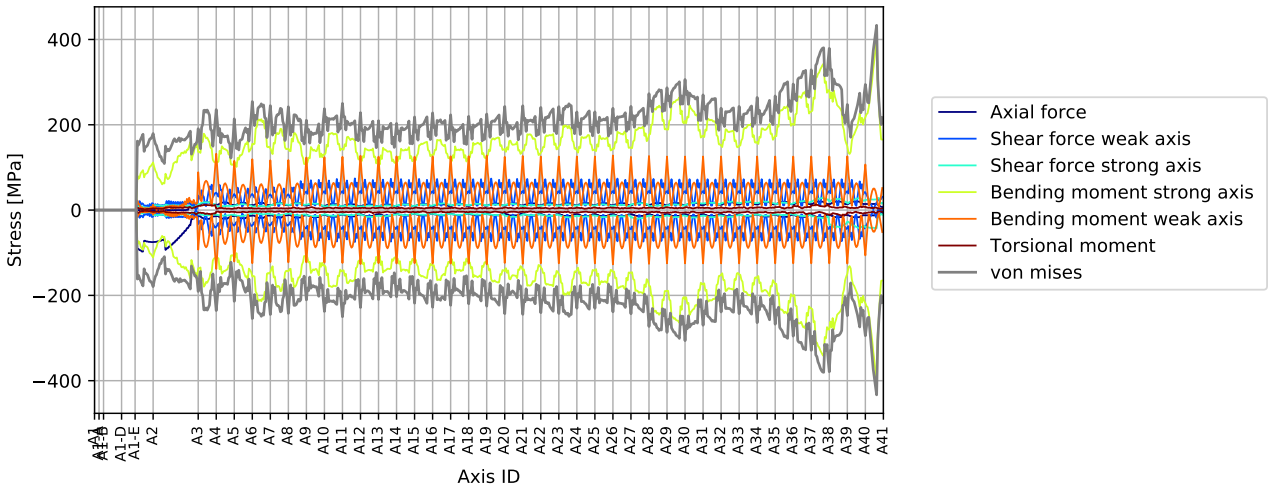

Figure 3.281: Stress envelope from all force components

3.7.2 Envelope plots

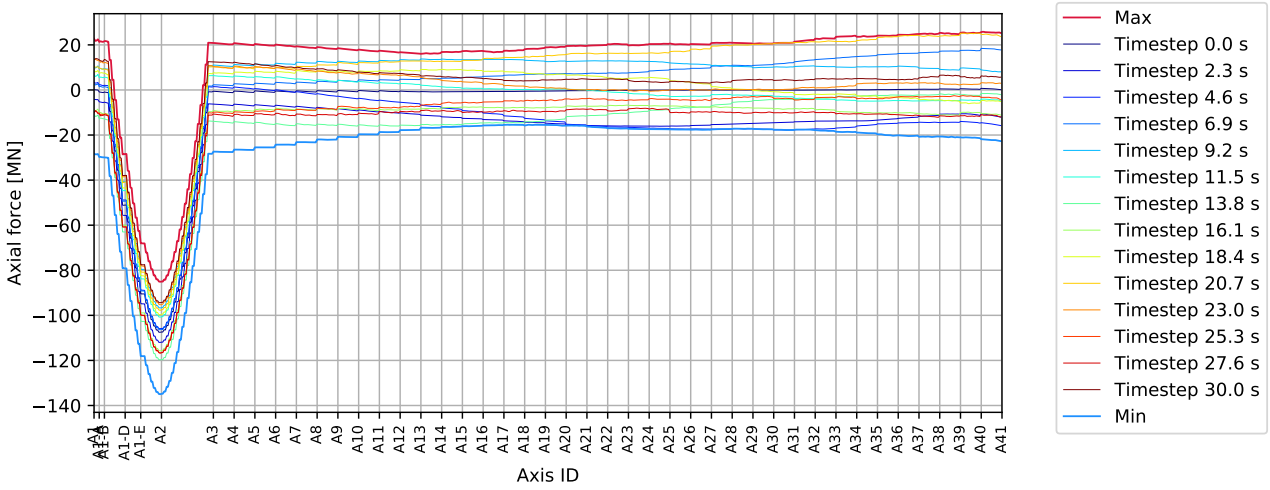

Figure 3.282: P A38 0deg - bridgegirder : Axial force [MN]

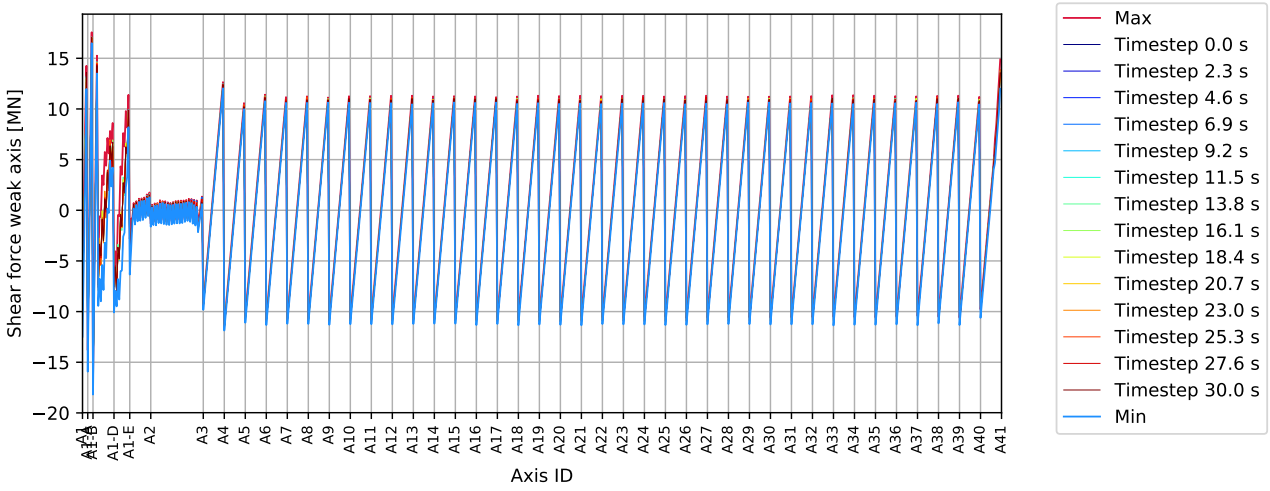

Figure 3.283: P A38 0deg - bridgegirder : Shear force weak axis [MN]

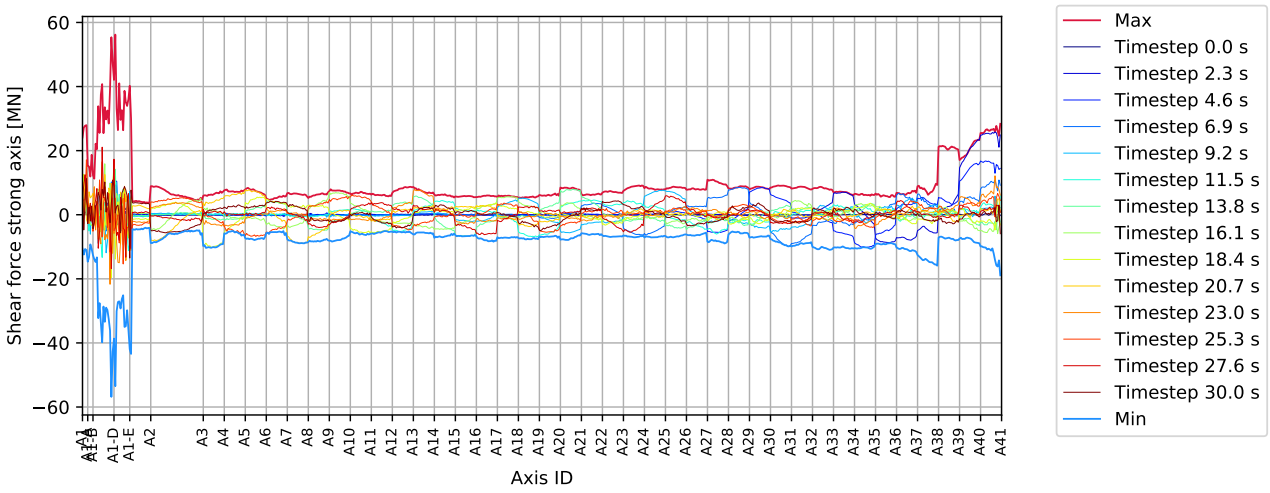

Figure 3.284: P A38 0deg - bridgegirder : Shear force strong axis [MN]

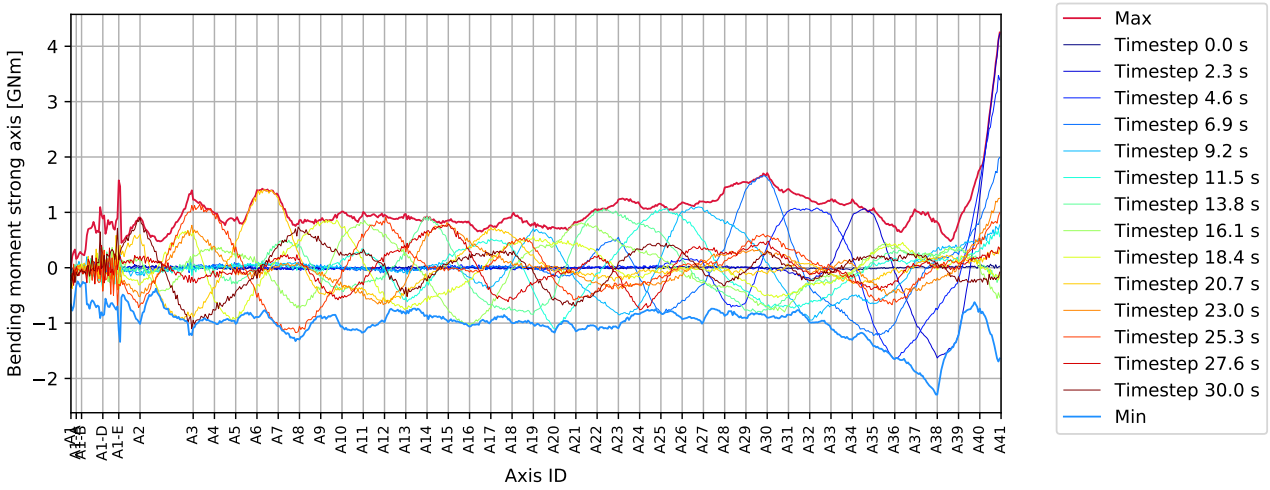

Figure 3.285: P A38 0deg - bridgegirder : Bending moment strong axis [GNm]

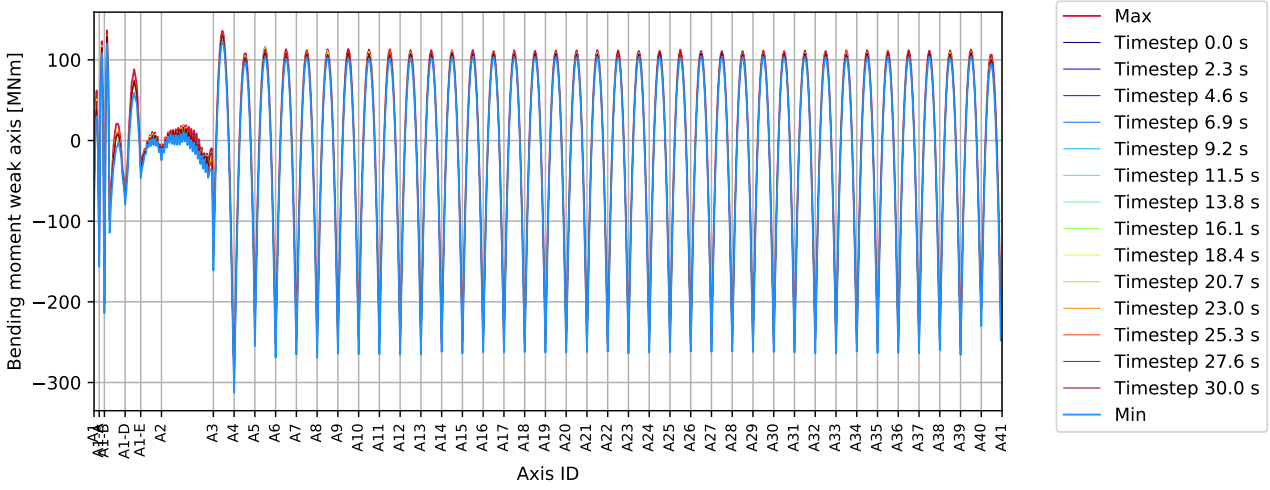

Figure 3.286: P A38 0deg - bridgegirder : Bending moment weak axis [MNm]

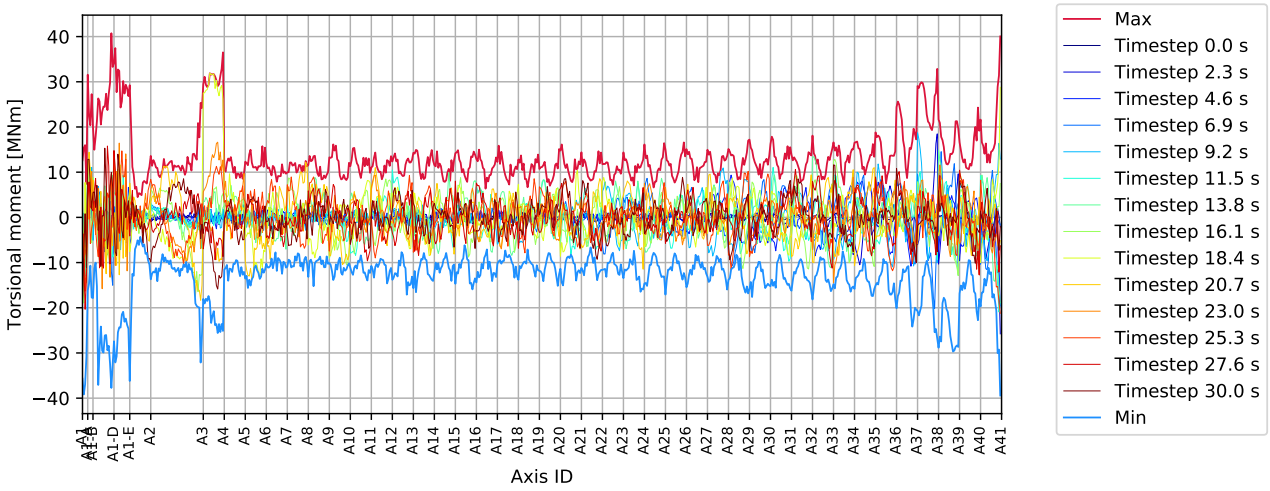

Figure 3.287: P A38 0deg - bridgegirder : Torsional moment [MNm]

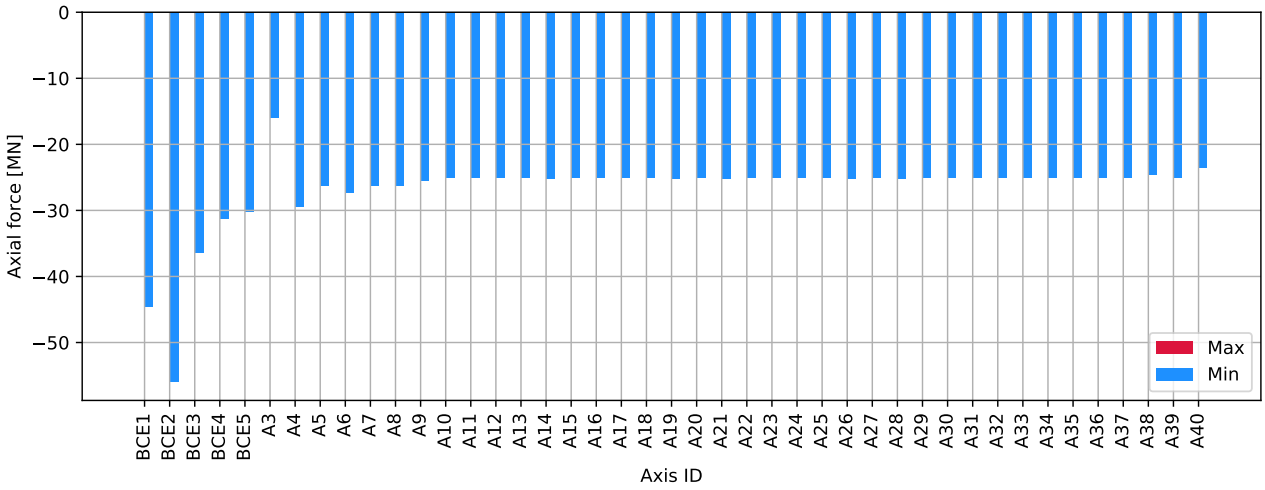

Figure 3.288: P A38 0deg - columns bottom : Axial force [MN]

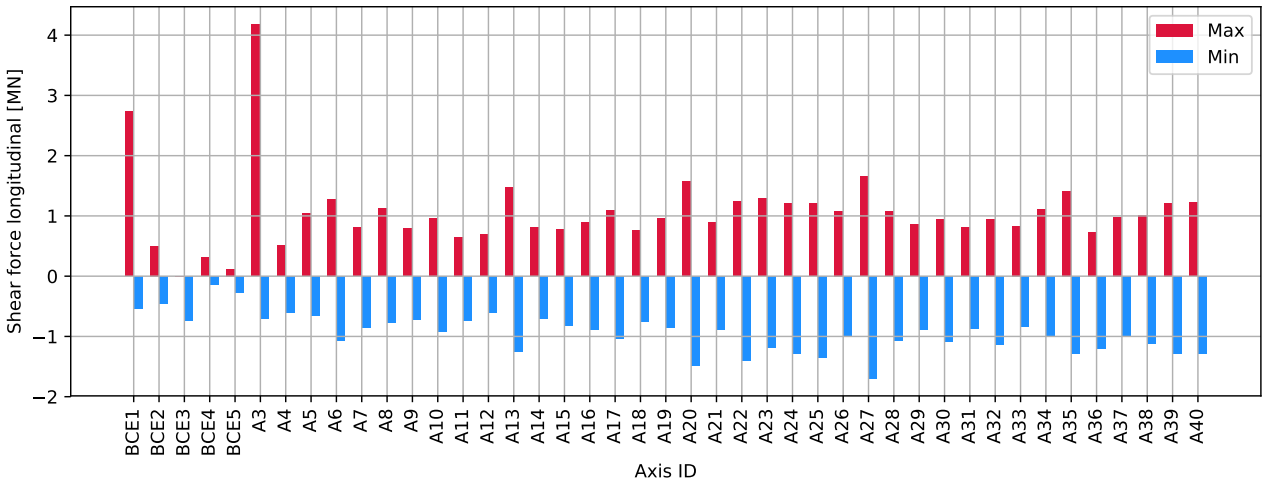

Figure 3.289: P A38 0deg - columns bottom : Shear force longitudinal [MN]

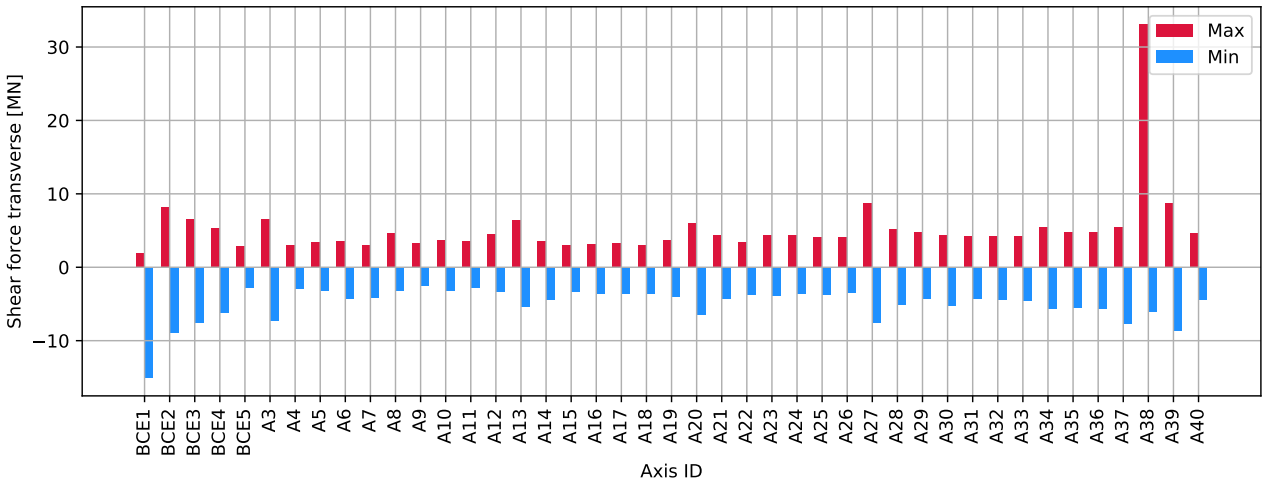

Figure 3.290: P A38 0deg - columns bottom : Shear force transverse [MN]

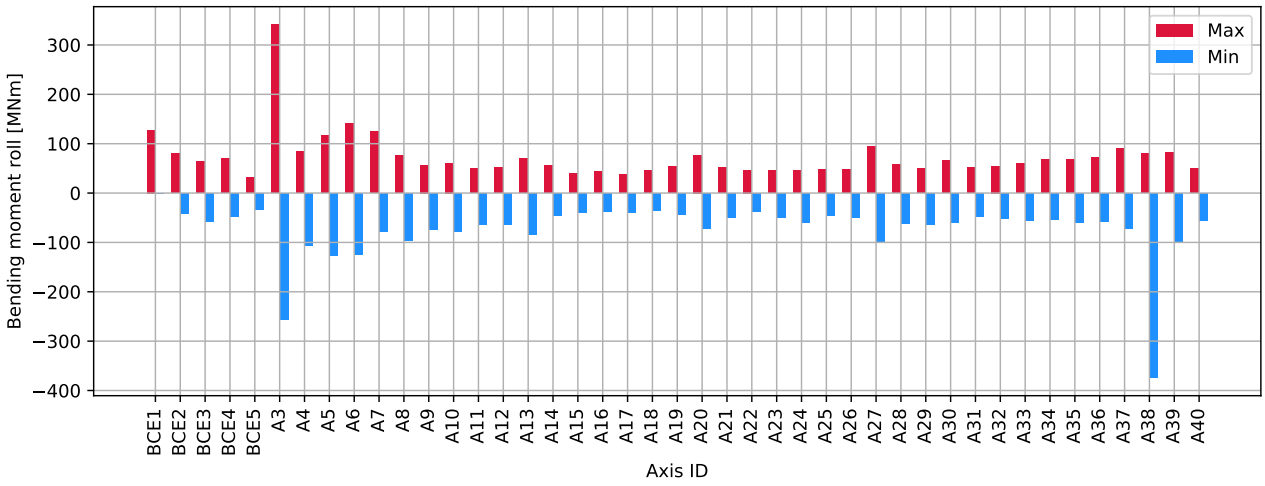

Figure 3.291: P A38 0deg - columns bottom : Bending moment roll [MNm]

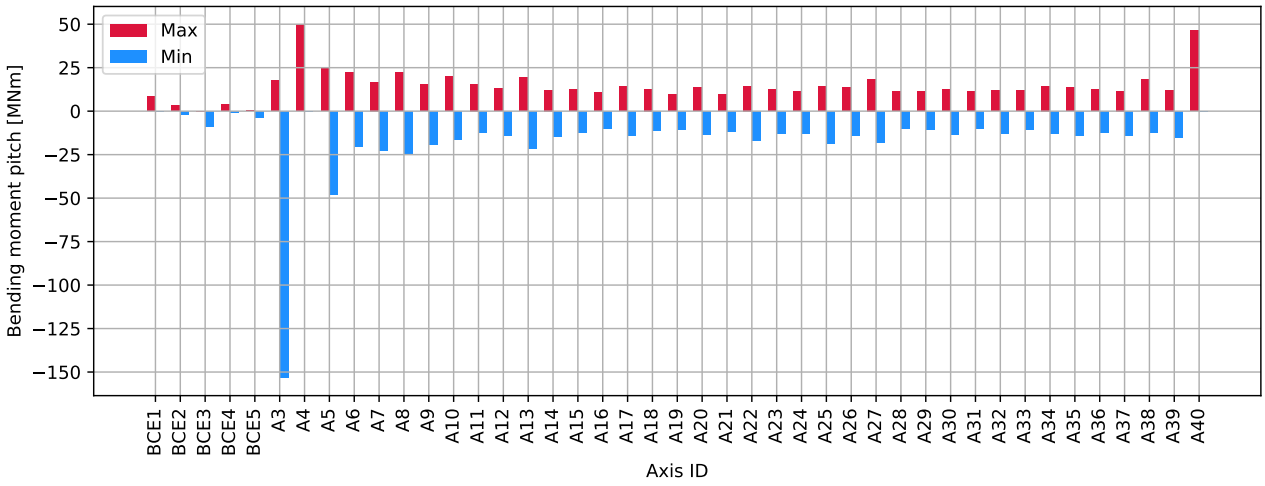

Figure 3.292: P A38 0deg - columns bottom : Bending moment pitch [MNm]

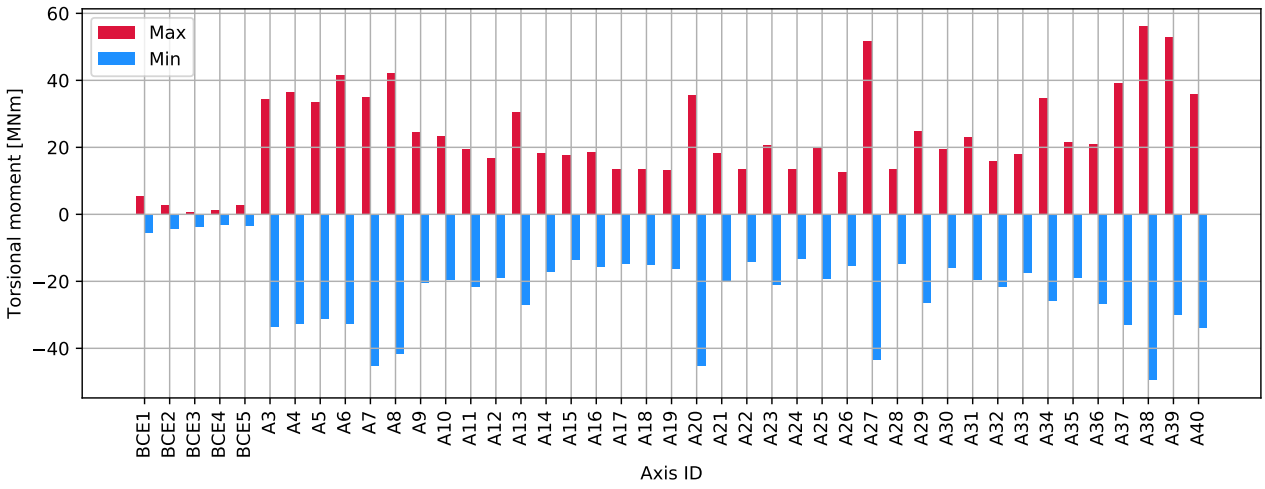

Figure 3.293: P A38 0deg - columns bottom : Torsional moment [MNm]

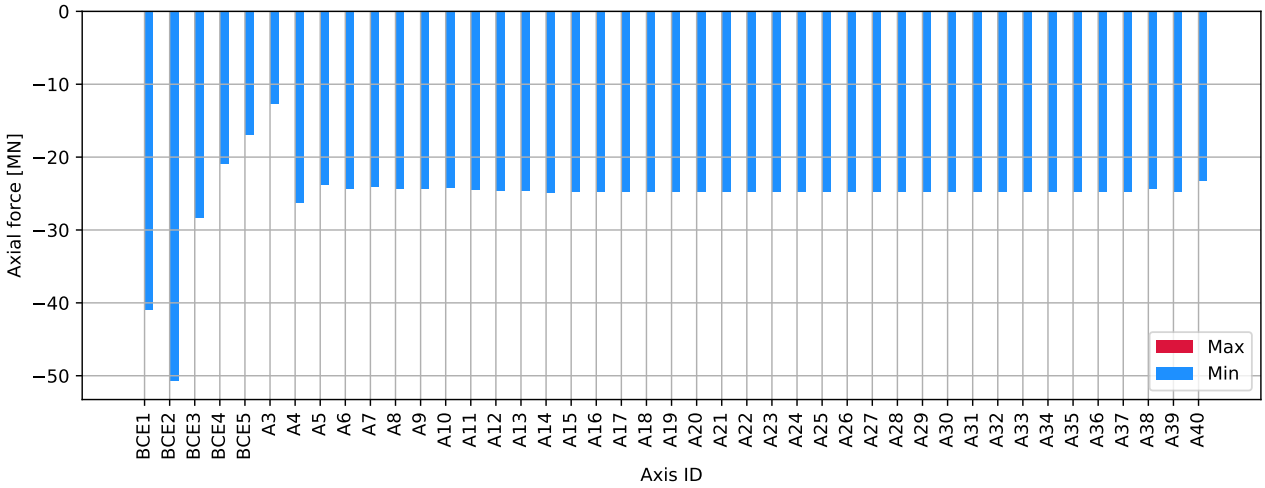

Figure 3.294: P A38 0deg - columns top : Axial force [MN]

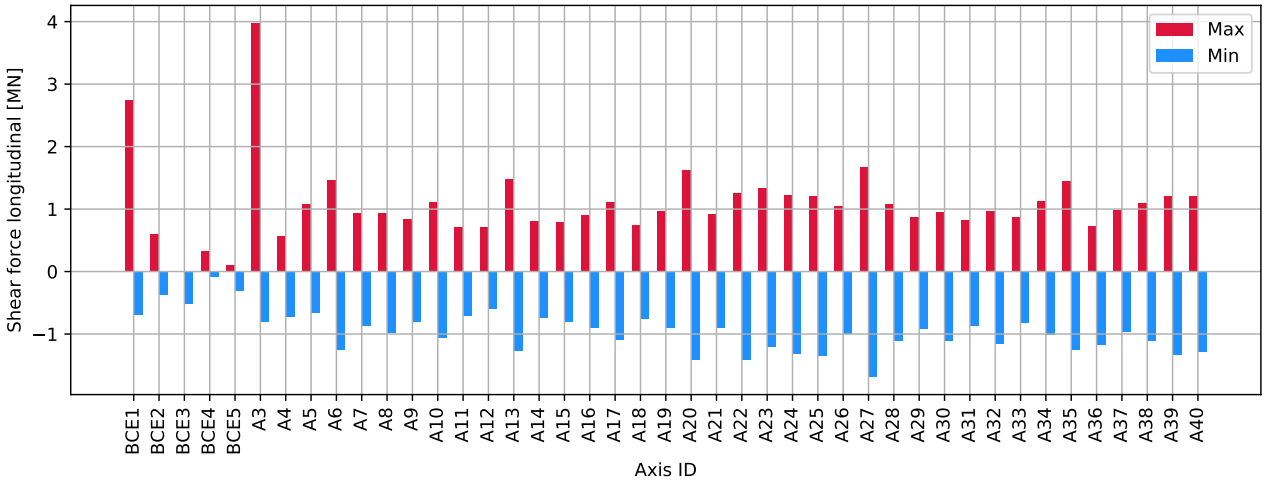

Figure 3.295: P A38 0deg - columns top : Shear force longitudinal [MN]

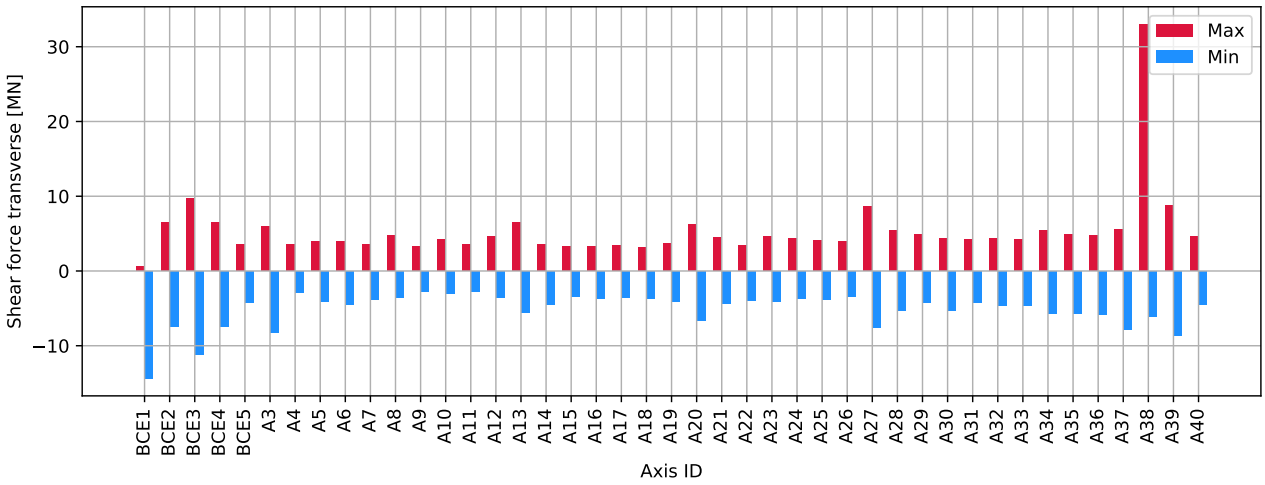

Figure 3.296: P A38 0deg - columns top : Shear force transverse [MN]

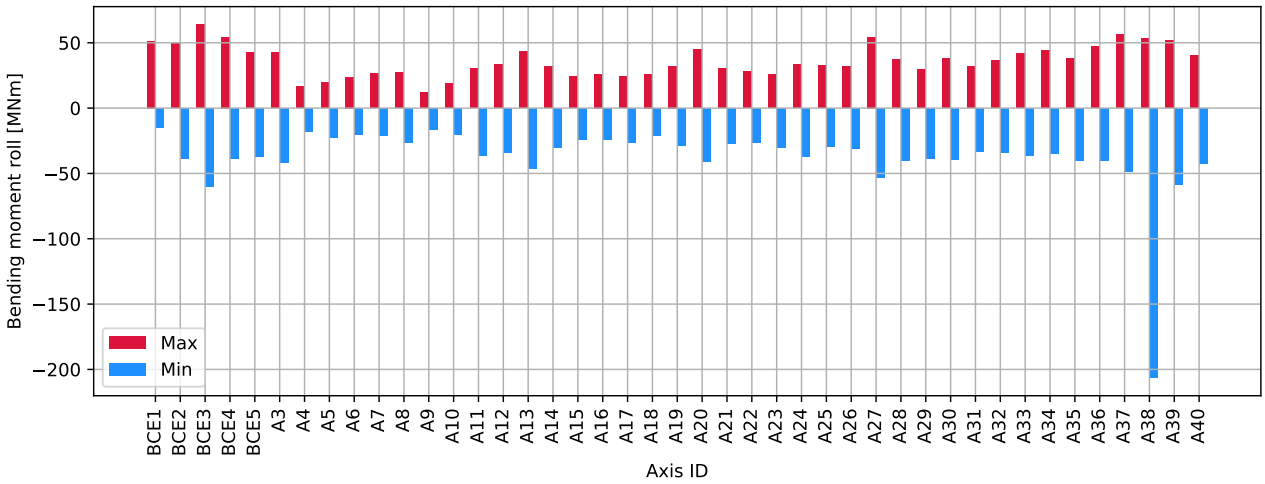

Figure 3.297: P A38 0deg - columns top : Bending moment roll [MNm]

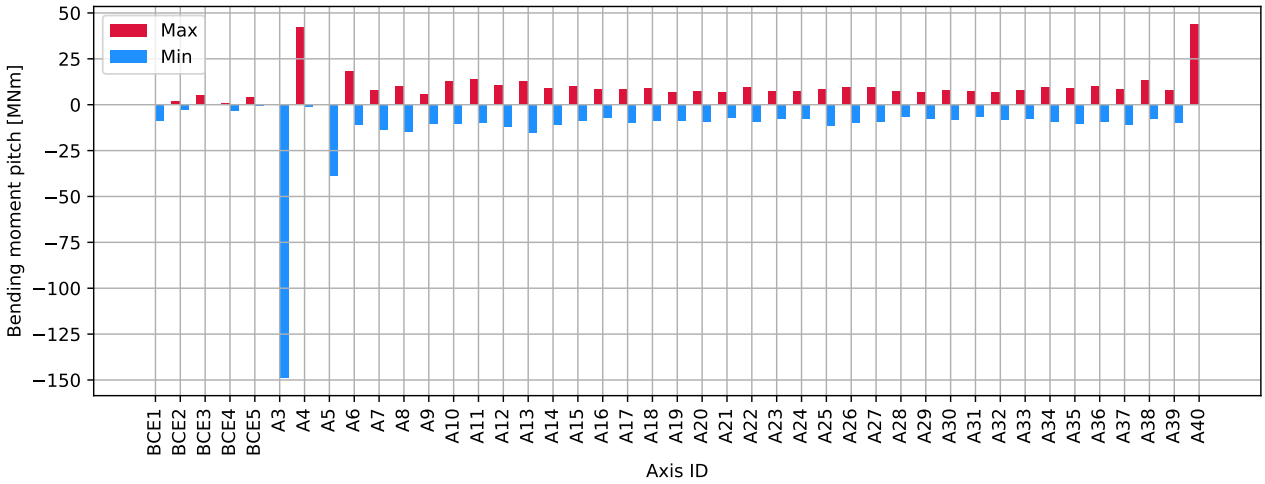

Figure 3.298: P A38 0deg - columns top : Bending moment pitch [MNm]

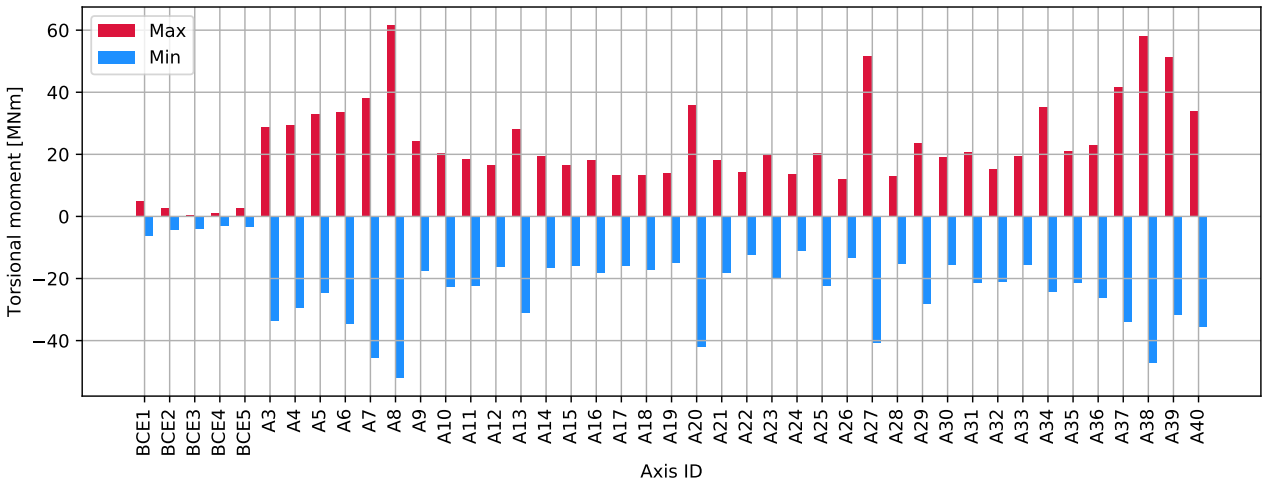

Figure 3.299: P A38 0deg - columns top : Torsional moment [MNm]

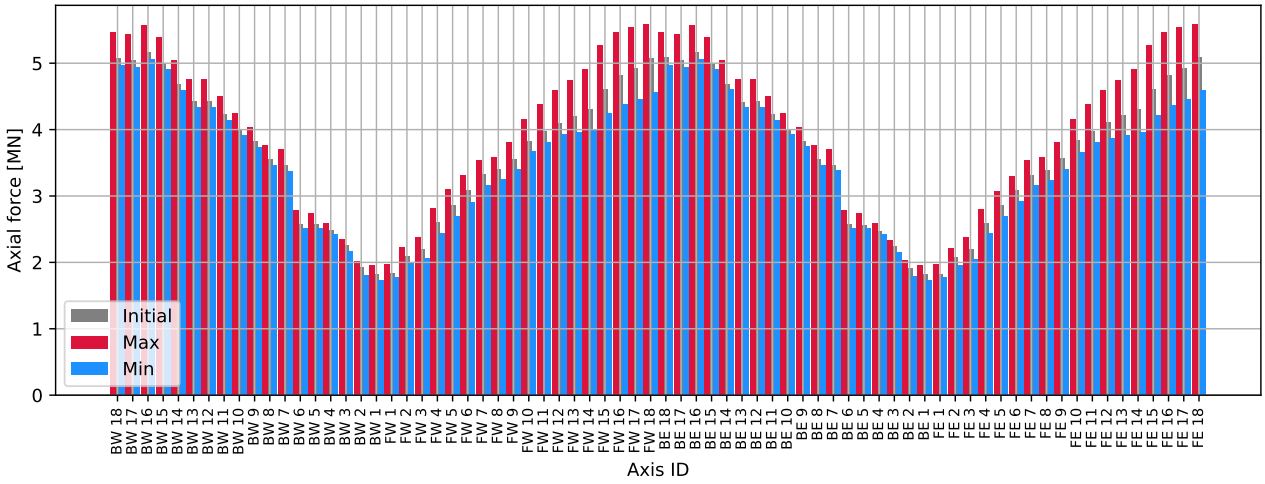

Figure 3.300: P A38 0deg - cables : Axial force [MN]

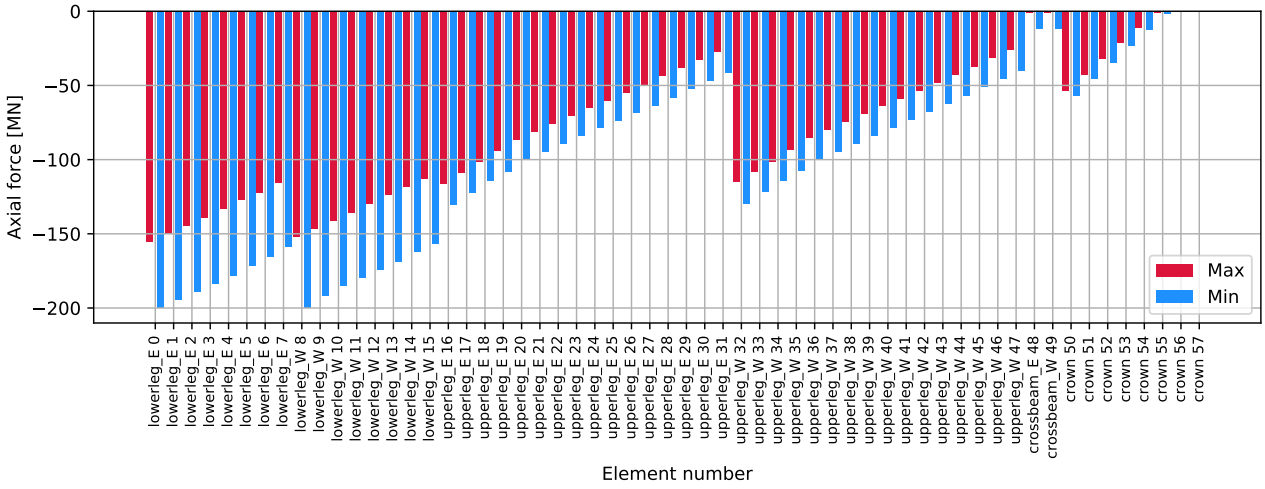

Figure 3.301: P A38 0deg - tower: Axial force [MN]

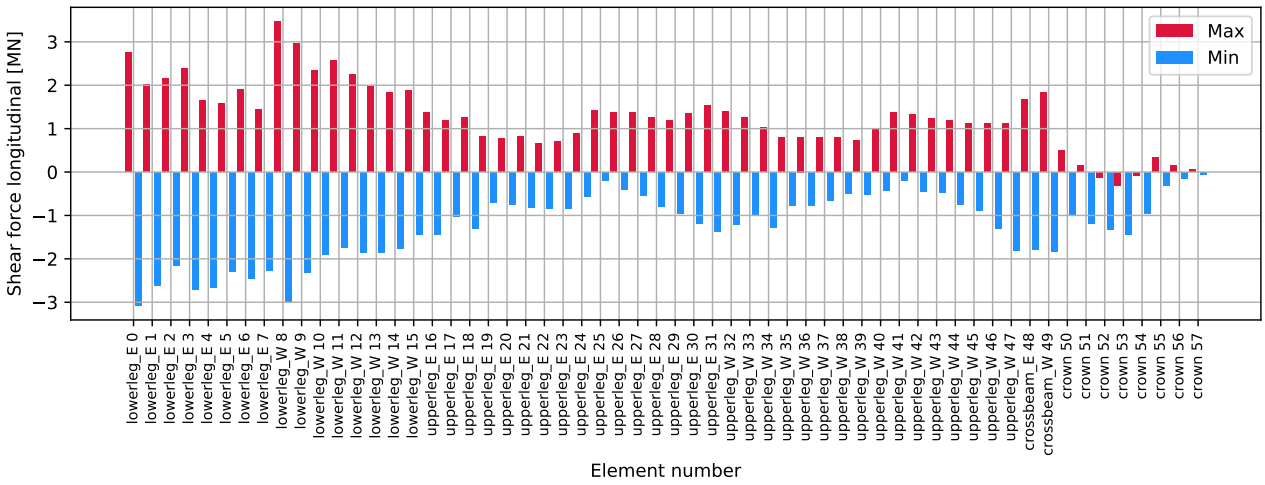

Figure 3.302: P A38 0deg - tower: Shear force longitudinal [MN]

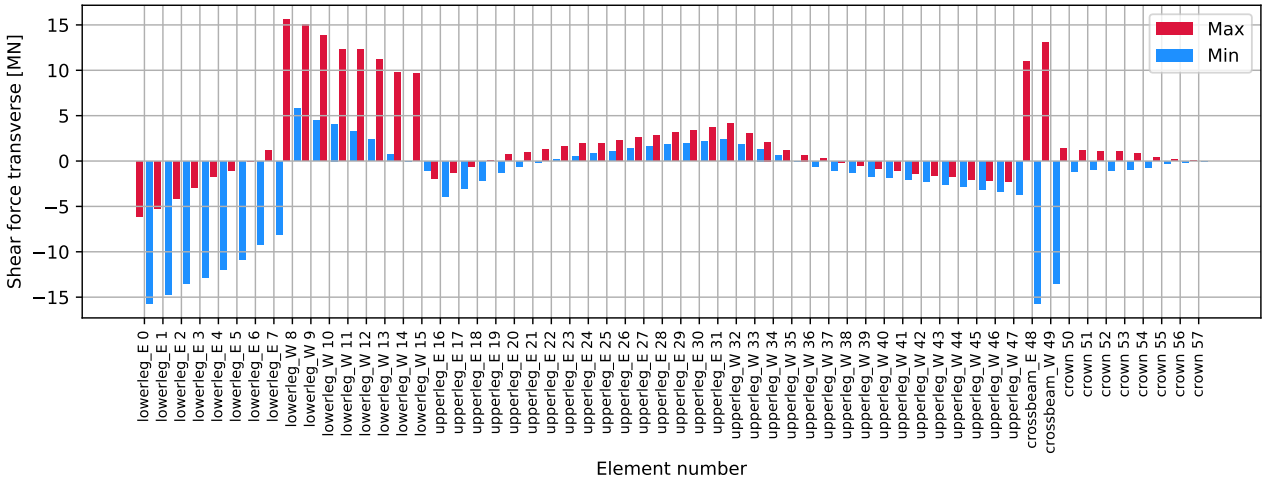

Figure 3.303: P A38 0deg - tower: Shear force transverse [MN]

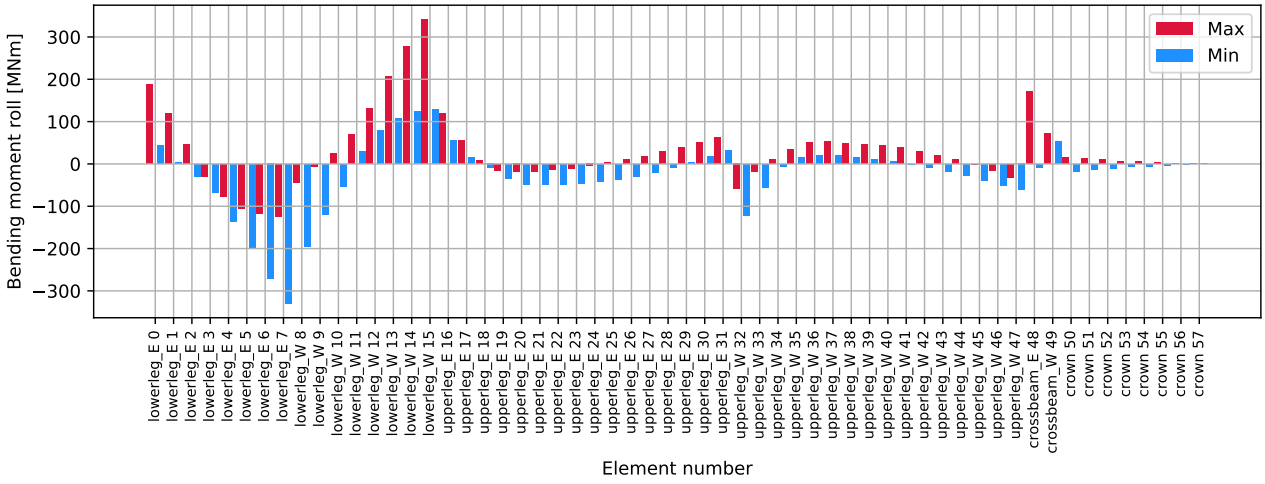

Figure 3.304: P A38 0deg - tower: Bending moment roll [MNm]

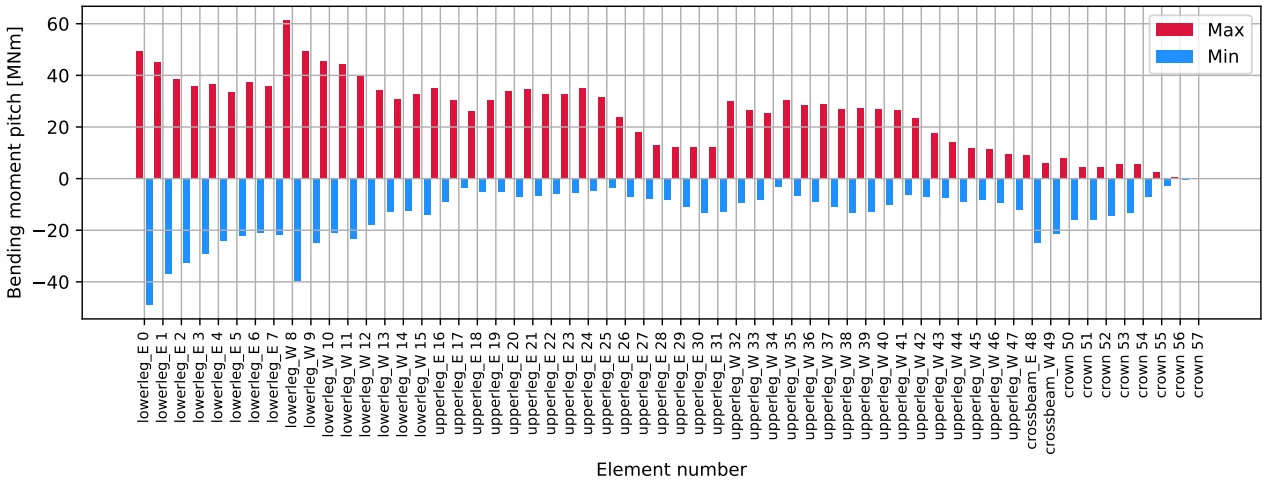

Figure 3.305: P A38 0deg - tower: Bending moment pitch [MNm]

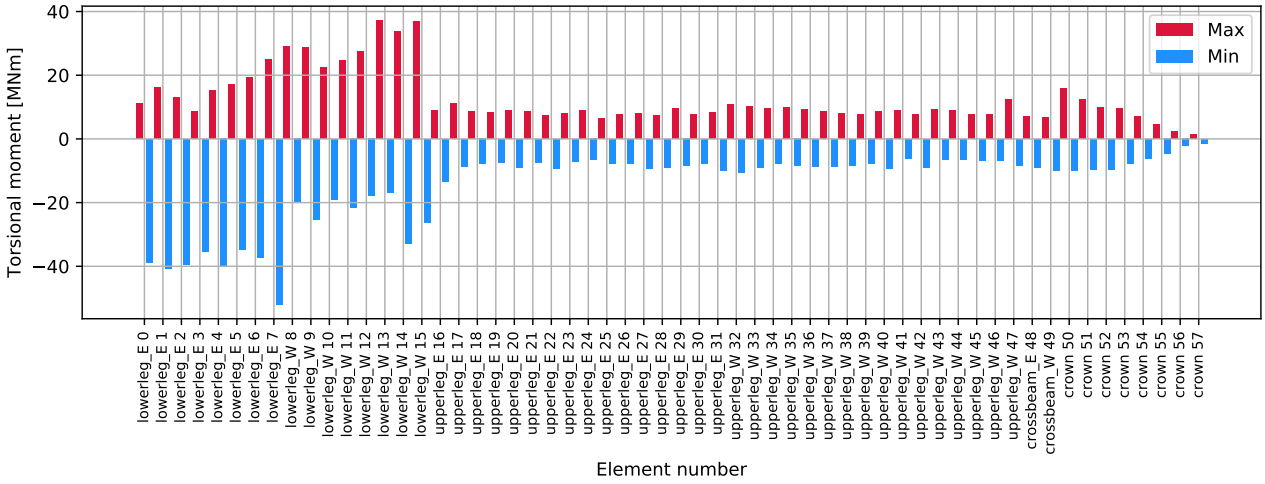

Figure 3.306: P A38 0deg - tower: Torsional moment [MNm]

3.7.3 Time series

Note : Time series are filtered using a Saviotzky-Golay filter for increased readability of the time history plots. Hence, maximum values that occur due to a rapid vibration are not shown in the plots. For maximum values, refer to the tabulated data.
All elements are numbered from South to North, bottom to top

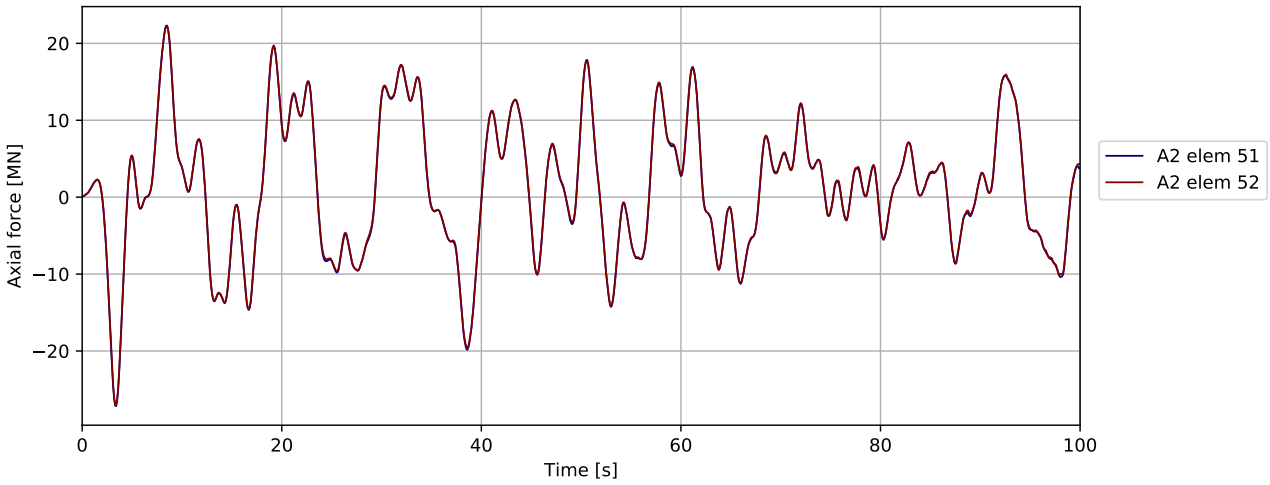

Figure 3.307: P A38 0deg - bridgegirder @ pylon: Axial force [MN]

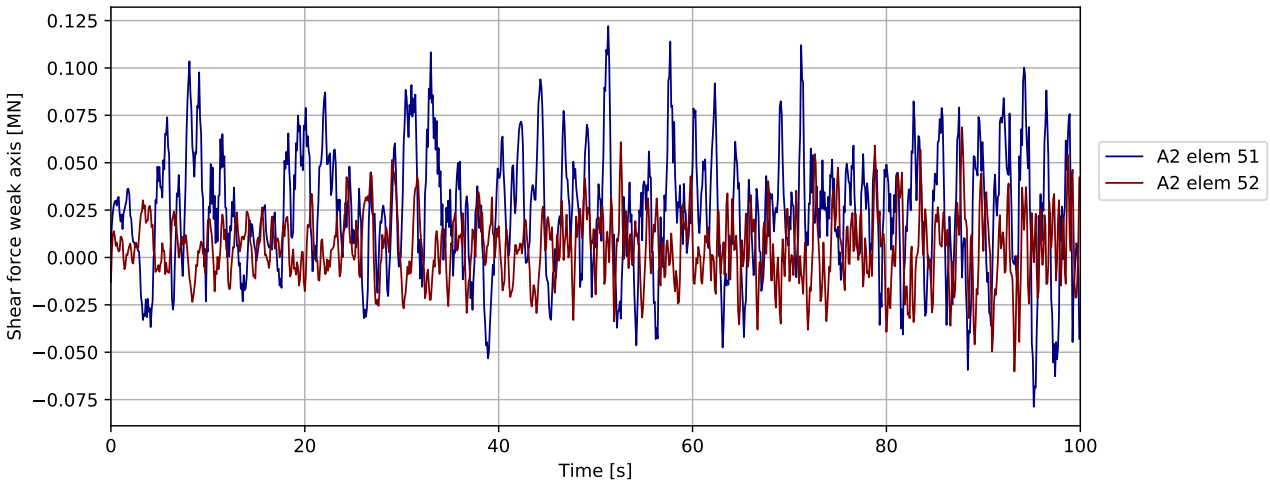

Figure 3.308: P A38 0deg - bridgegirder @ pylon: Shear force weak axis [MN]

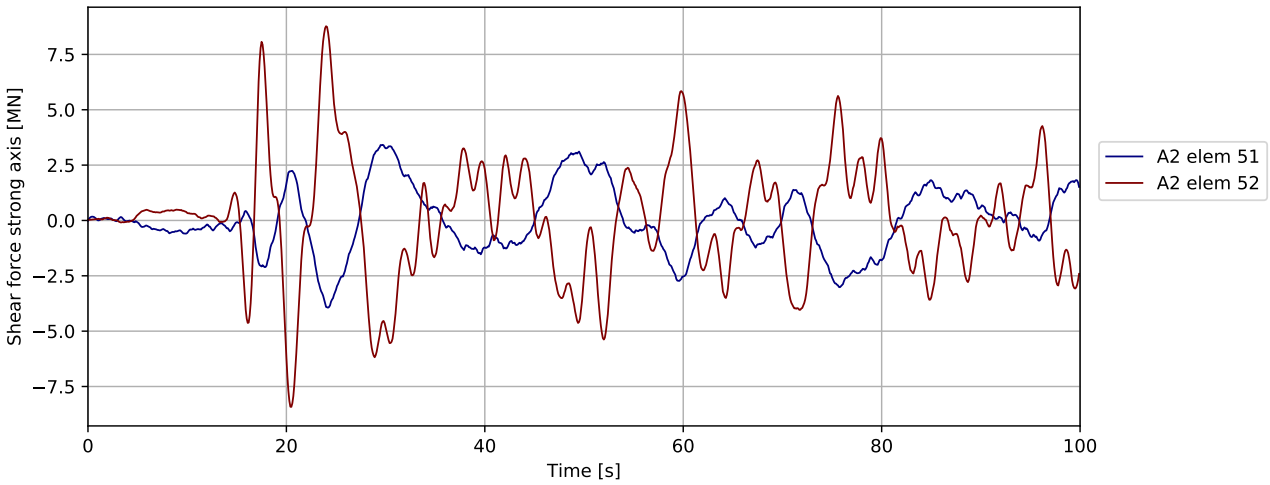

Figure 3.309: P A38 0deg - bridgegirder @ pylon: Shear force strong axis [MN]

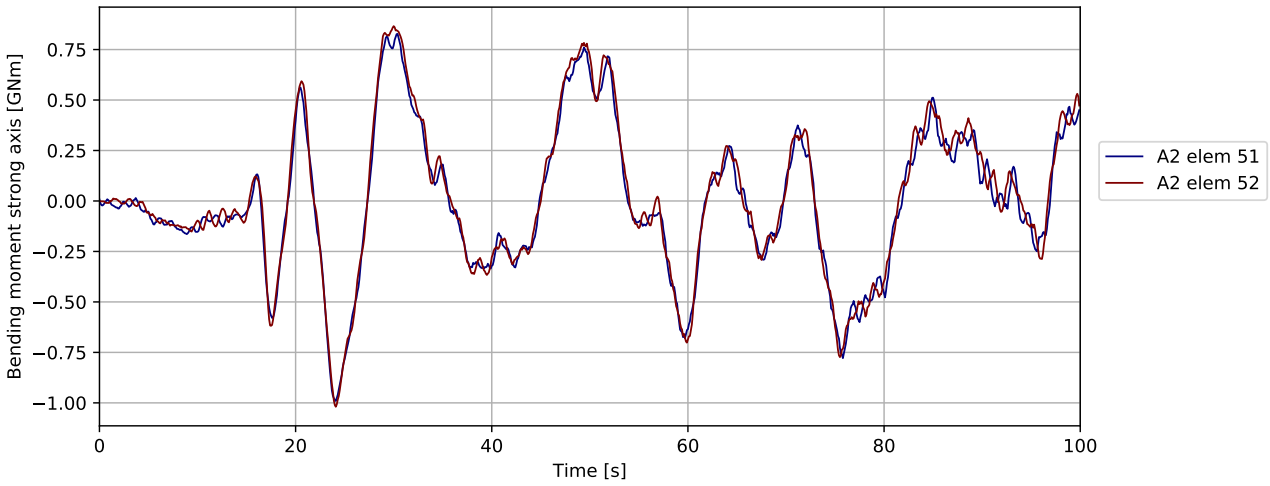

Figure 3.310: P A38 0deg - bridgegirder @ pylon: Bending moment strong axis [GNm]

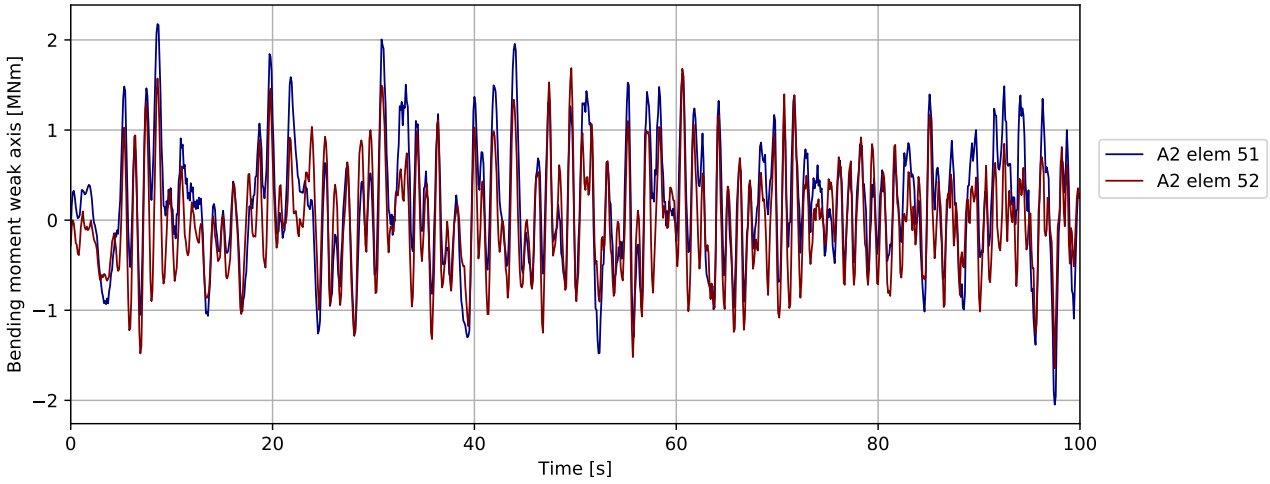

Figure 3.311: P A38 0deg - bridgegirder @ pylon: Bending moment weak axis [MNm]

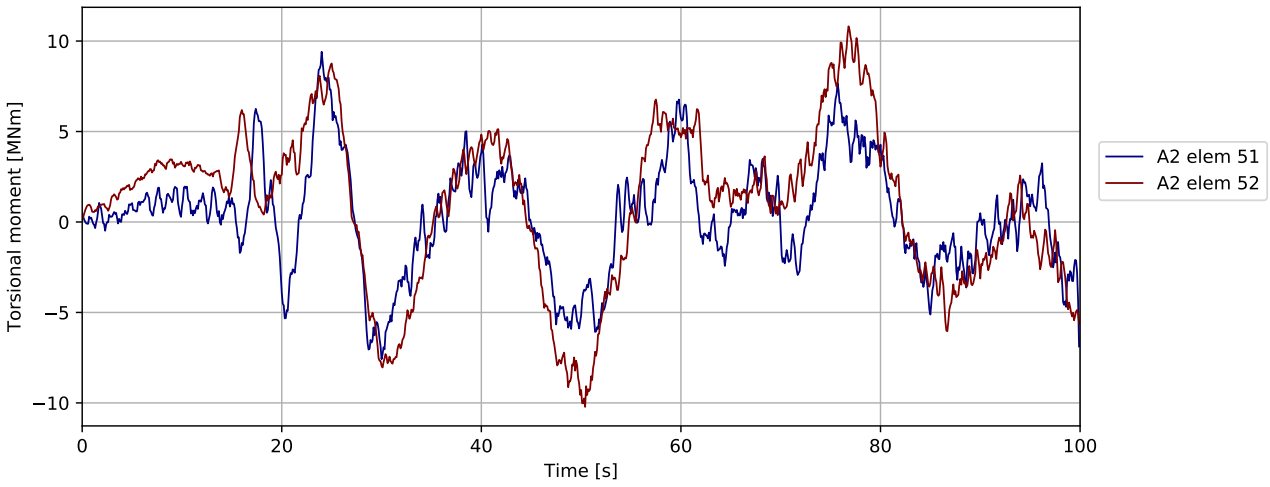

Figure 3.312: P A38 0deg - bridgegirder @ pylon: Torsional moment [MNm]

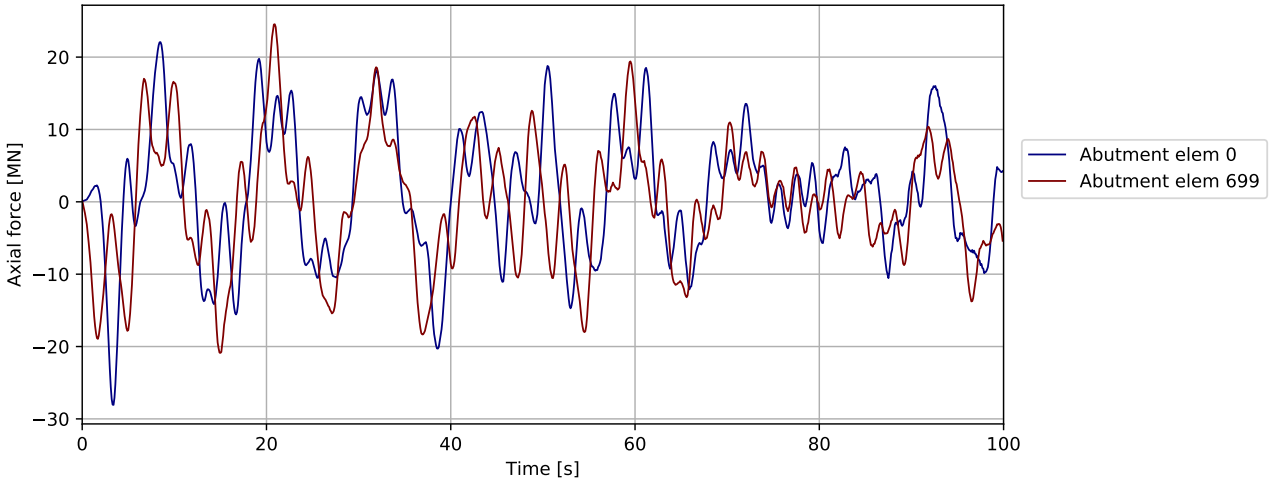

Figure 3.313: P A38 0deg - bridgegirder @abutments: Axial force [MN]

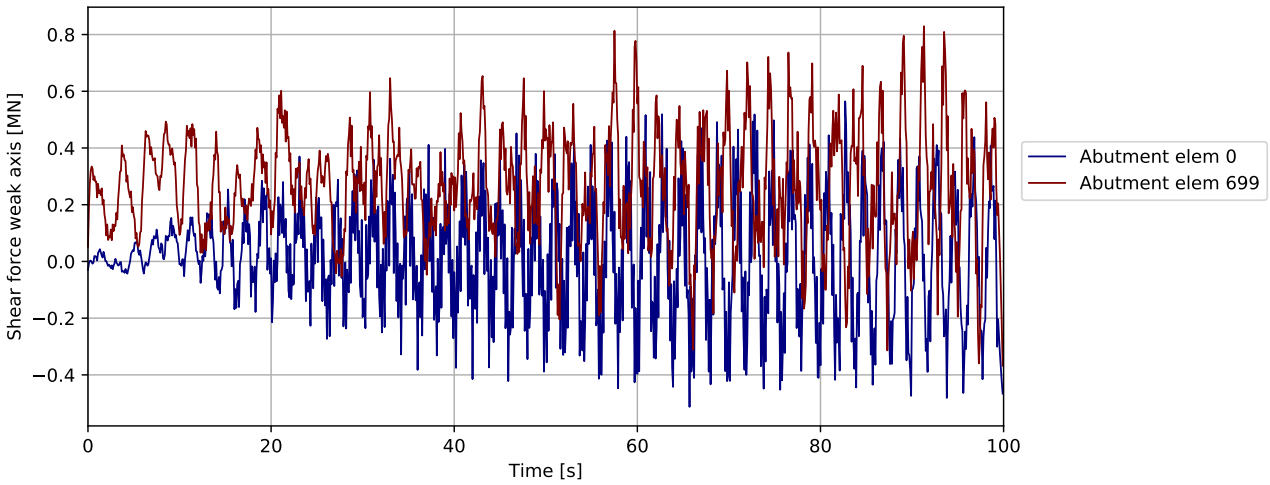

Figure 3.314: P A38 0deg - bridgegirder @abutments: Shear force weak axis [MN]

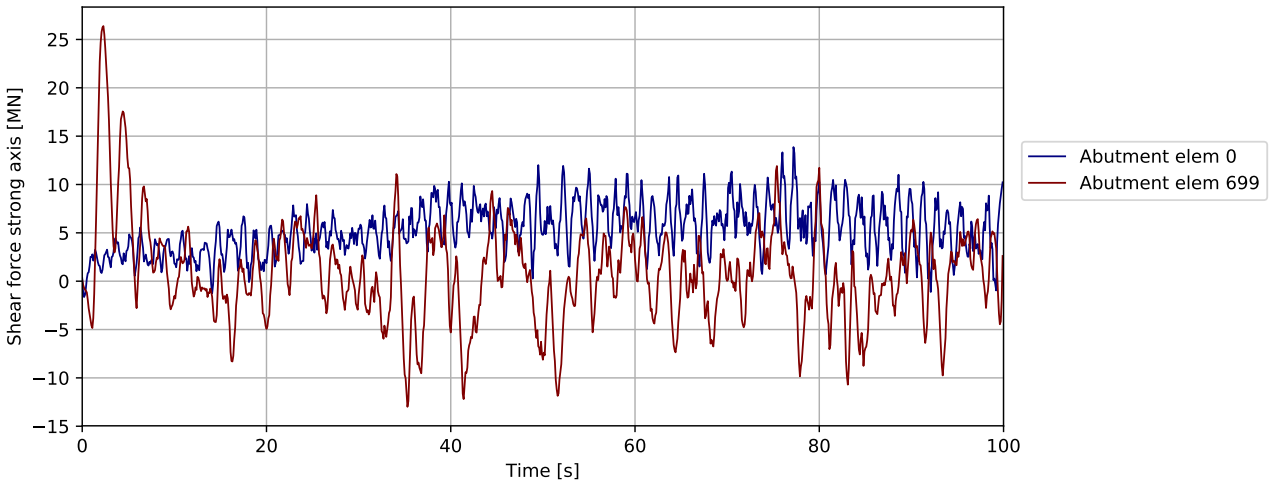

Figure 3.315: P A38 0deg - bridgegirder @abutments: Shear force strong axis [MN]

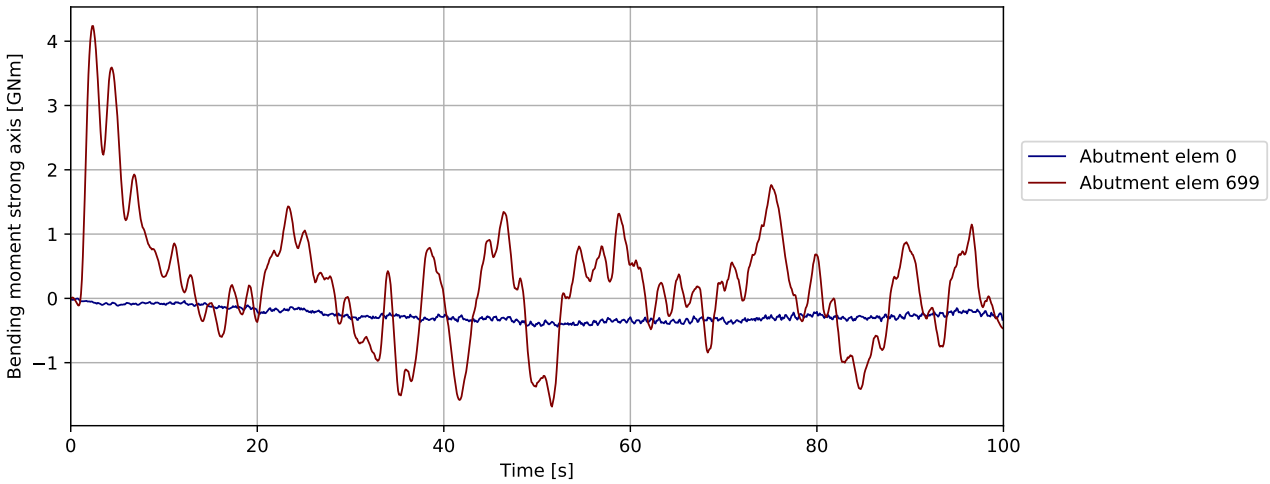

Figure 3.316: P A38 0deg - bridgegirder @abutments: Bending moment strong axis [GNm]

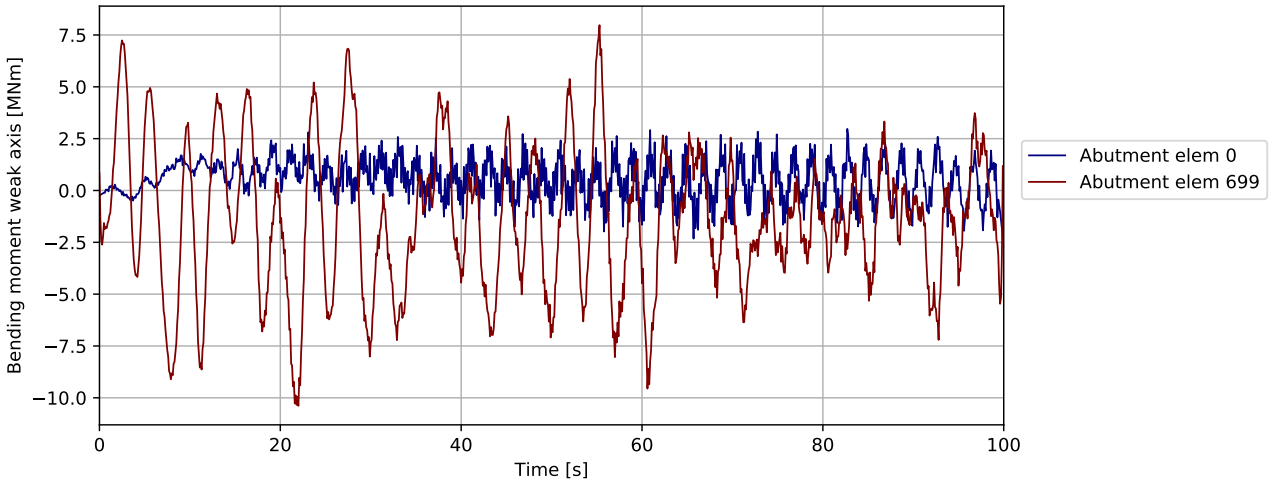

Figure 3.317: P A38 0deg - bridgegirder @abutments: Bending moment weak axis [MNm]

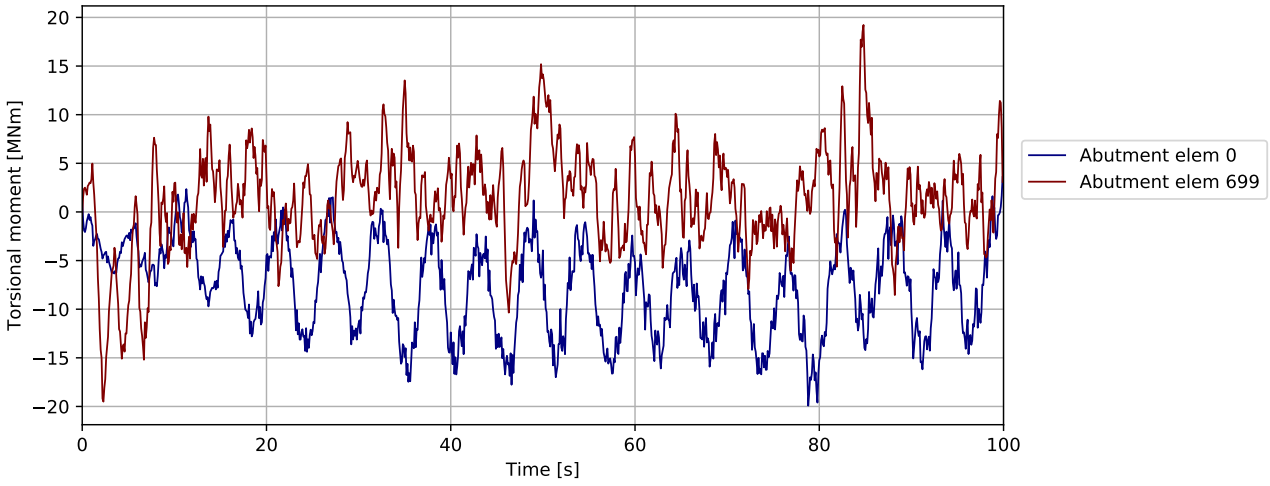

Figure 3.318: P A38 0deg - bridgegirder @abutments: Torsional moment [MNm]

Note : Compressive spring force is negative

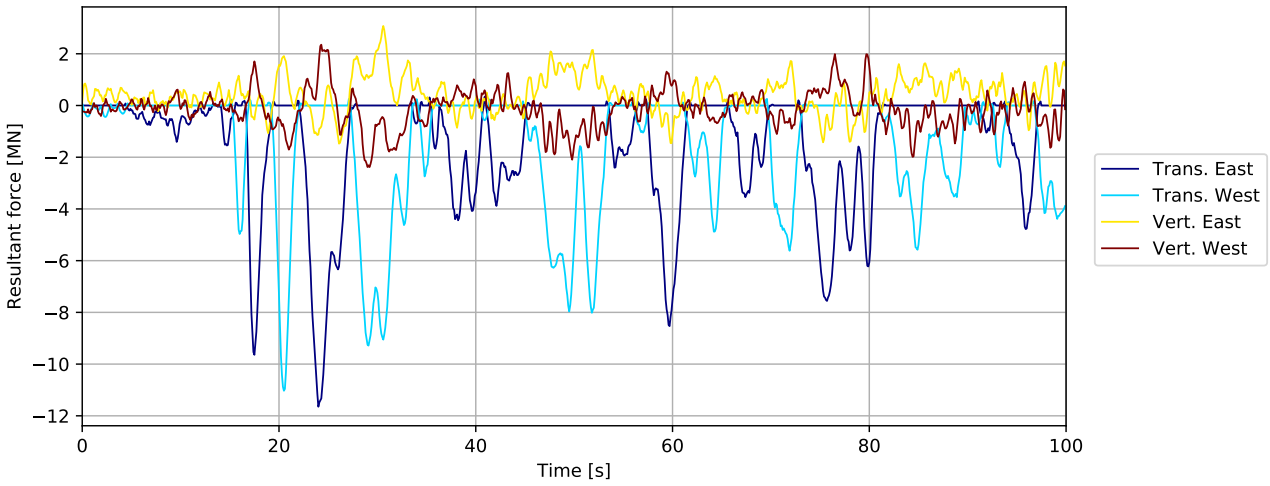

Figure 3.319: P A38 0deg - bridgegirder supports in tower: Resultant force [MN]

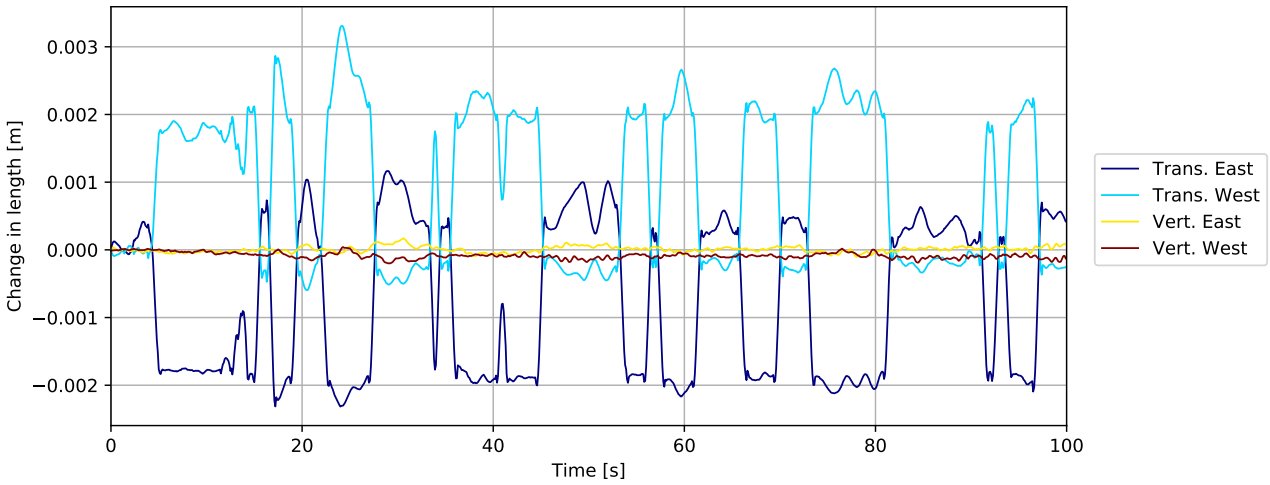

Figure 3.320: P A38 0deg - bridgegirder supports in tower: Change in length [m]

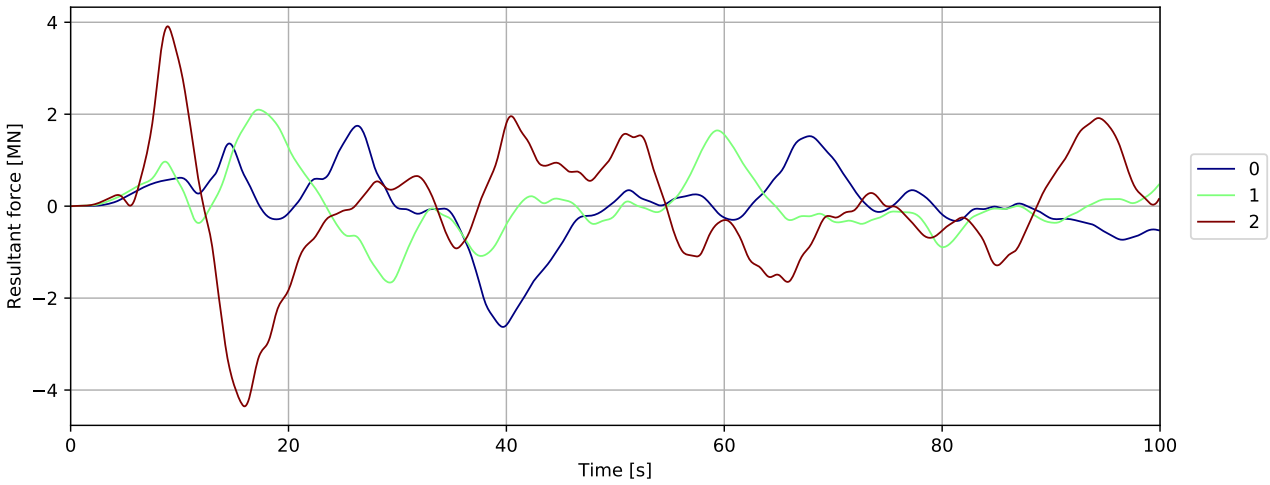

Figure 3.321: Mooring force

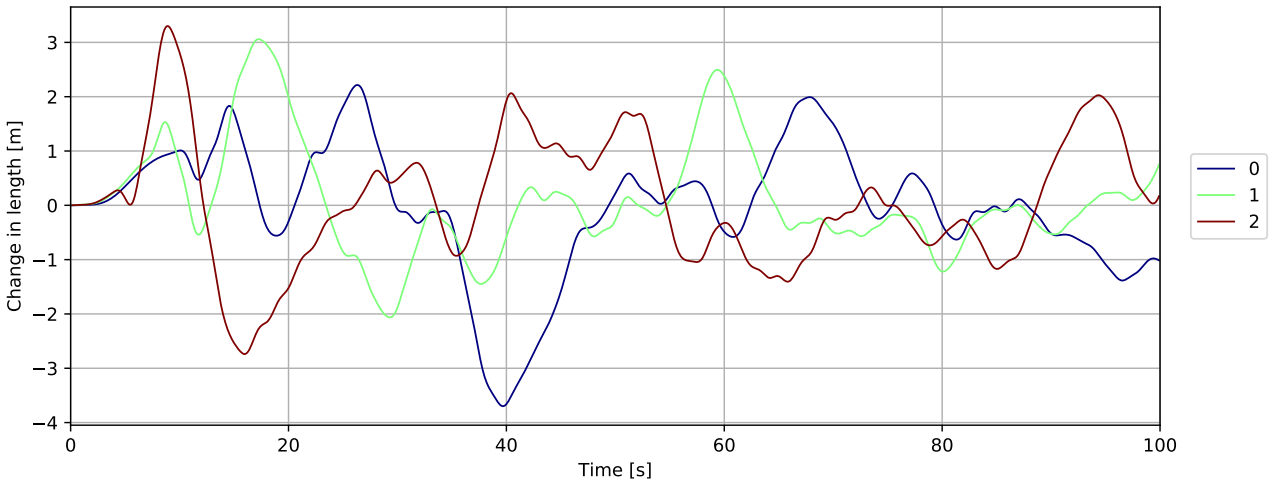

Figure 3.322: Mooring displacement

3.8 PontoonA39 0deg

3.8.1 Overall response

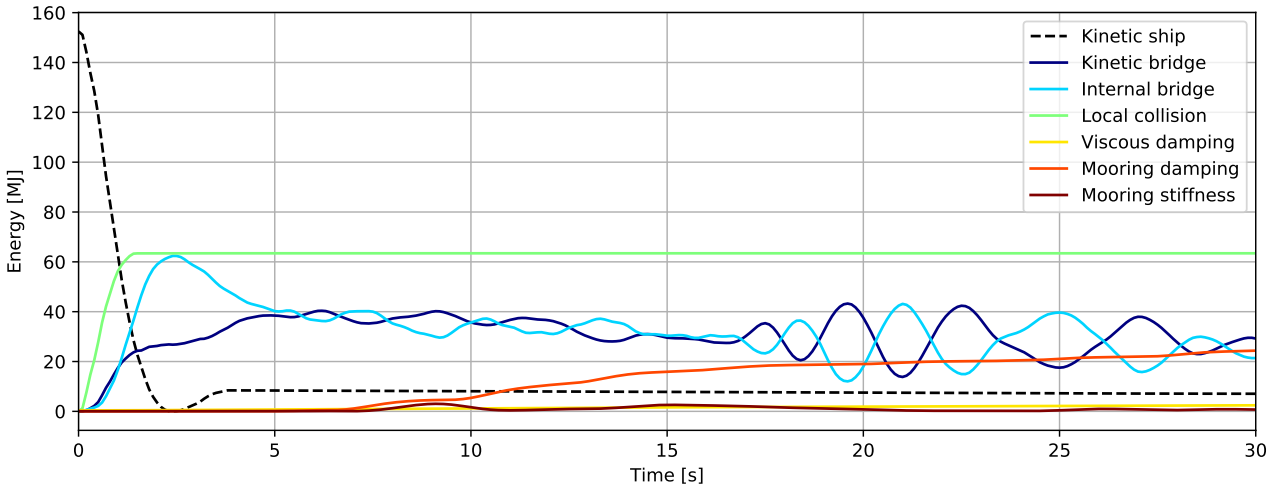

Figure 3.323: Energy [MJ] - initial phase

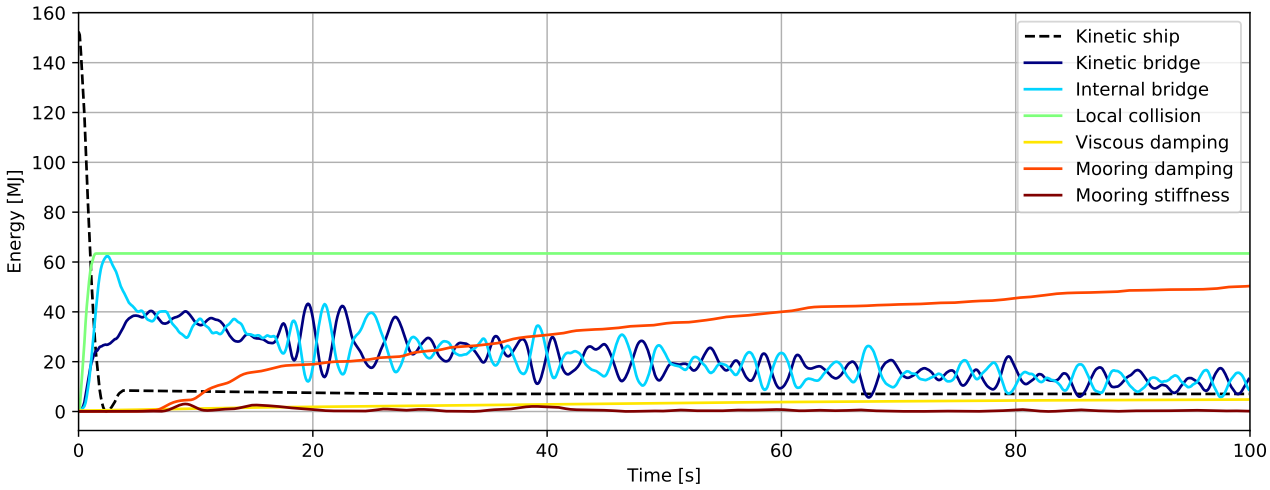

Figure 3.324: Energy [MJ]

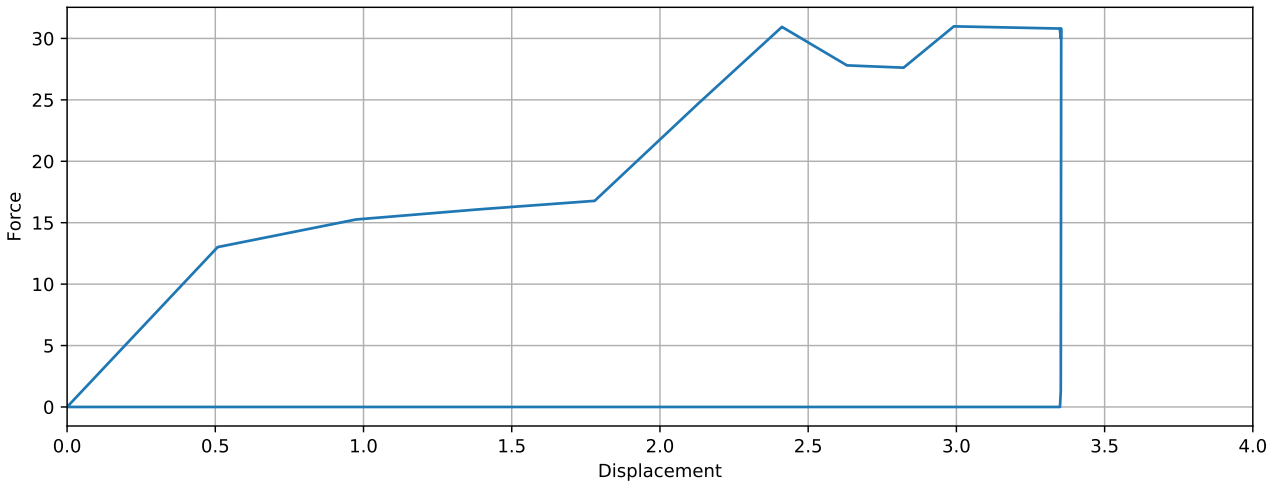

Figure 3.325: Simulated local collision force-displacement

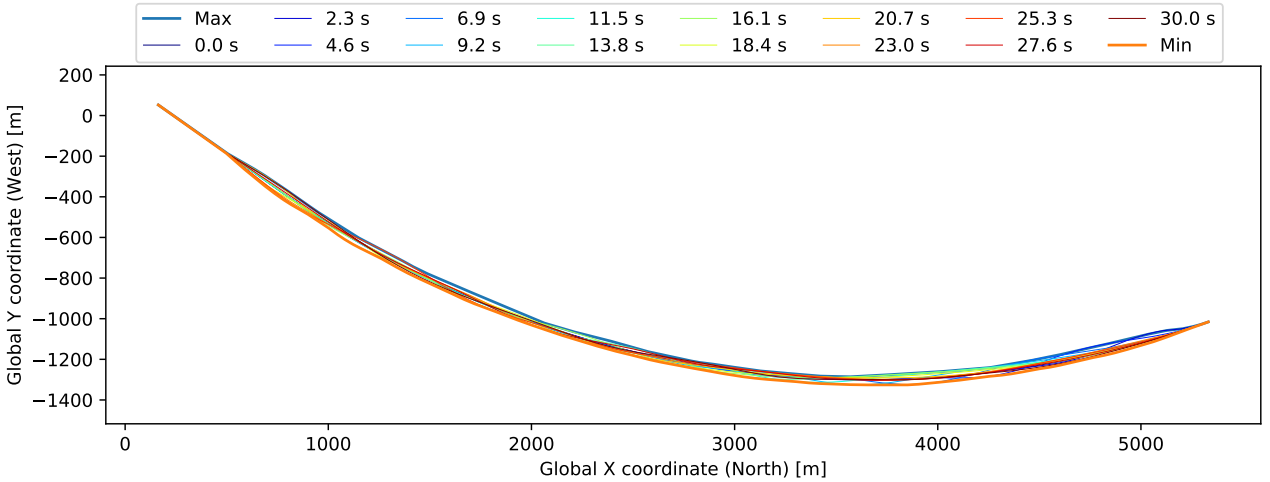

Figure 3.326: Bridgegirder deflection (10x displacment scaling)

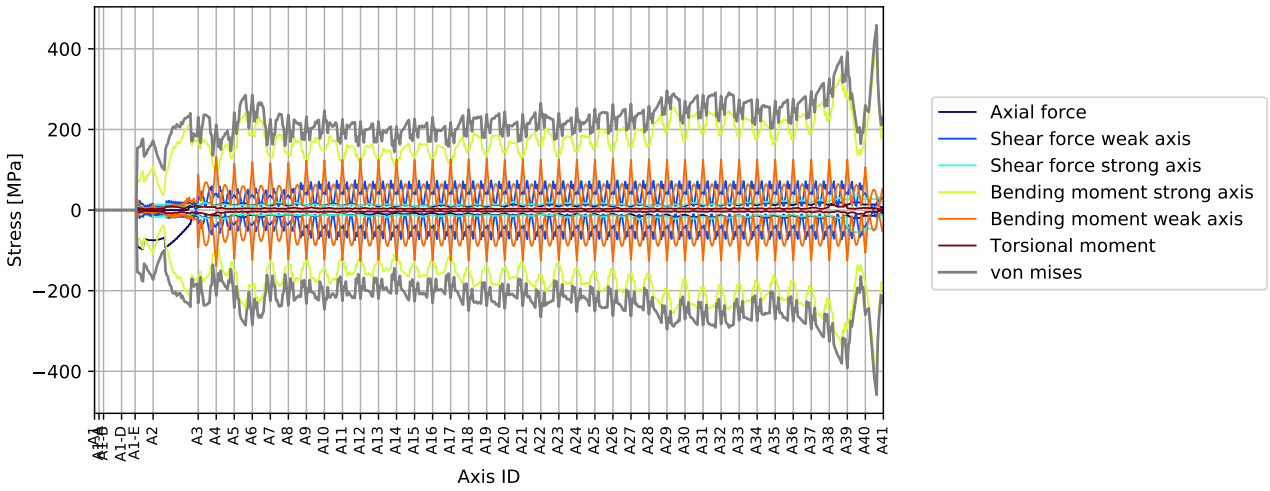

Figure 3.327: Stress envelope from all force components

3.8.2 Envelope plots

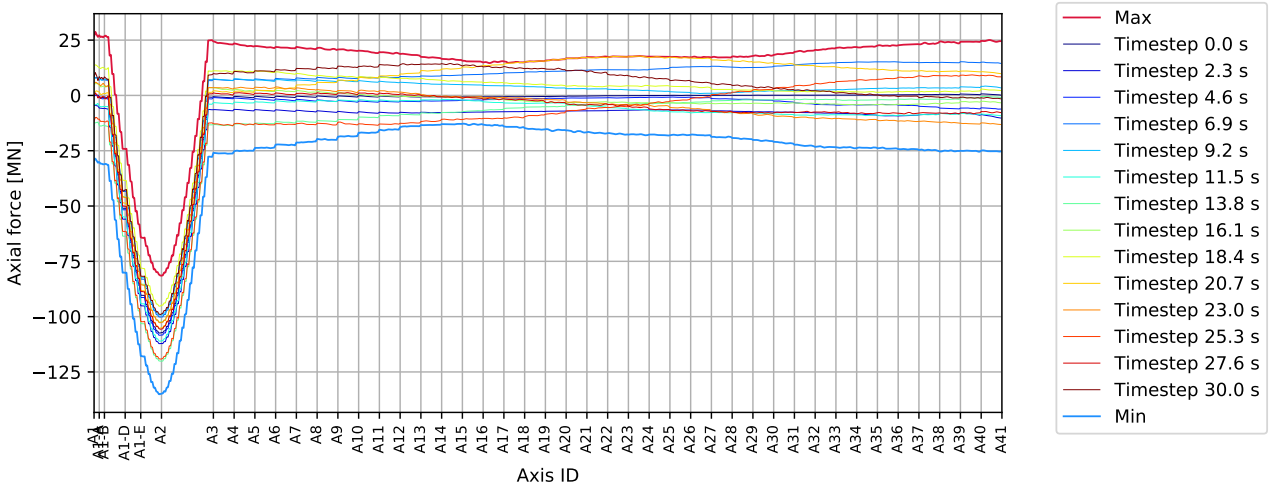

Figure 3.328: P A39 0deg - bridgegirder : Axial force [MN]

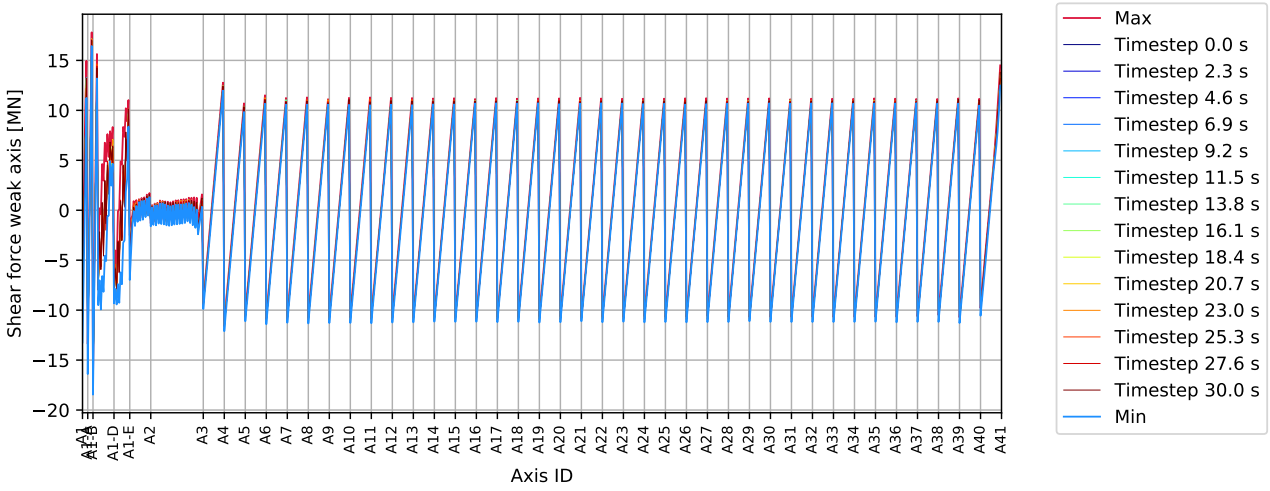

Figure 3.329: P A39 0deg - bridgegirder : Shear force weak axis [MN]

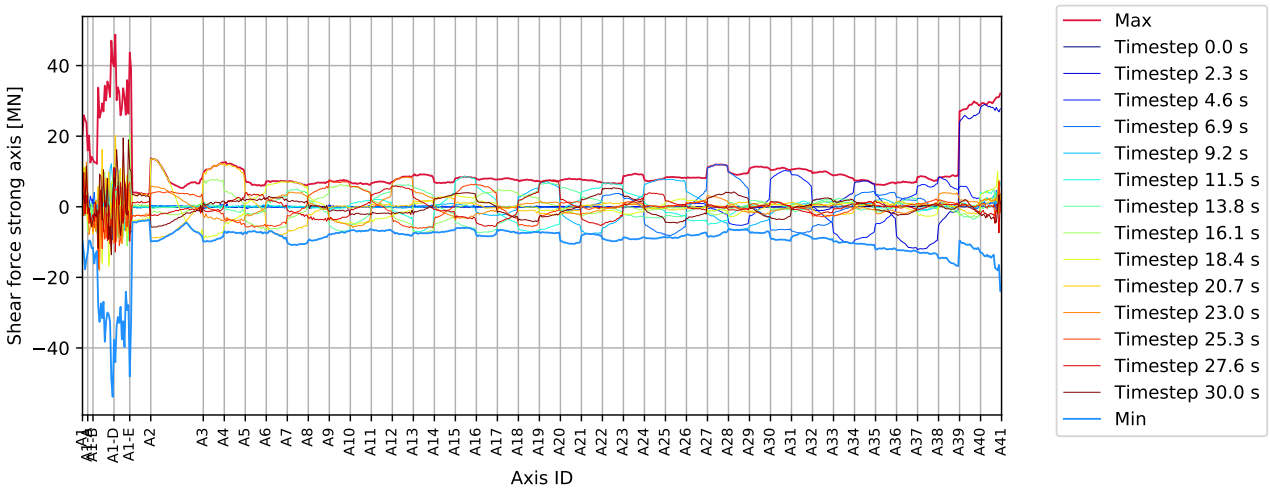

Figure 3.330: P A39 0deg - bridgegirder : Shear force strong axis [MN]

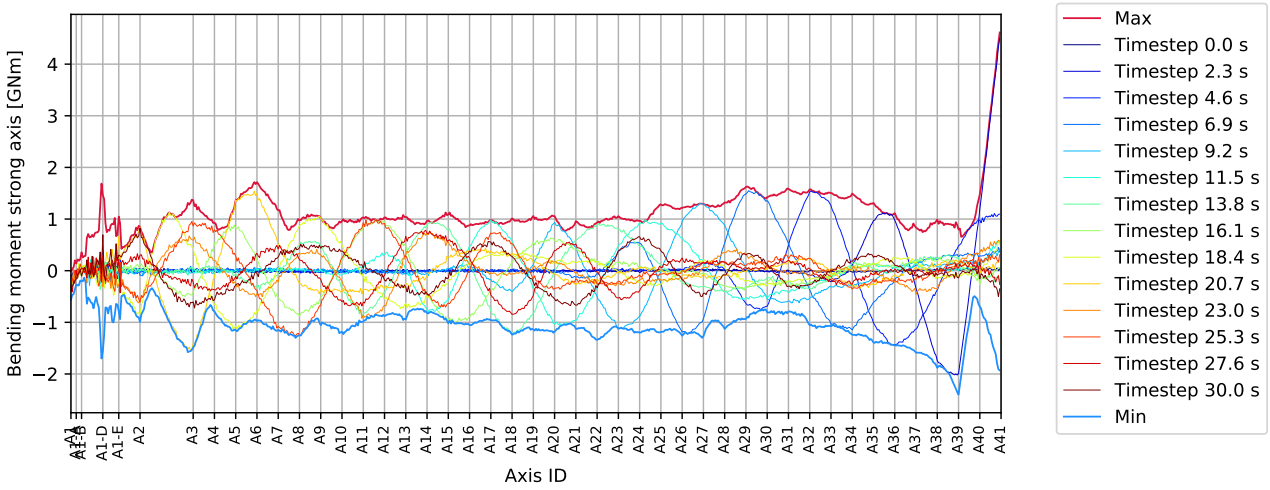

Figure 3.331: P A39 0deg - bridgegirder : Bending moment strong axis [GNm]

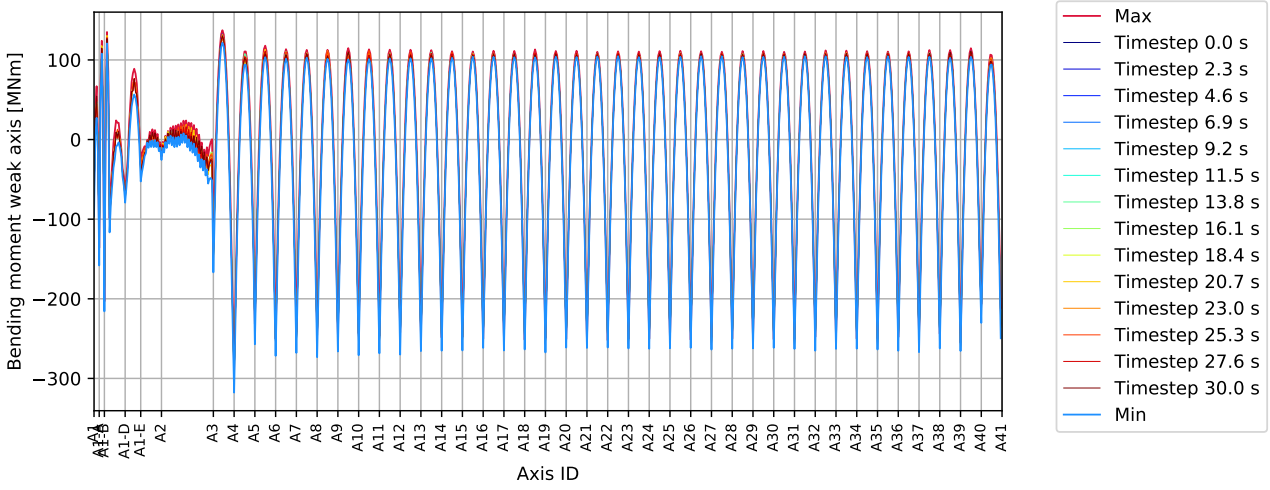

Figure 3.332: P A39 0deg - bridgegirder : Bending moment weak axis [MNm]

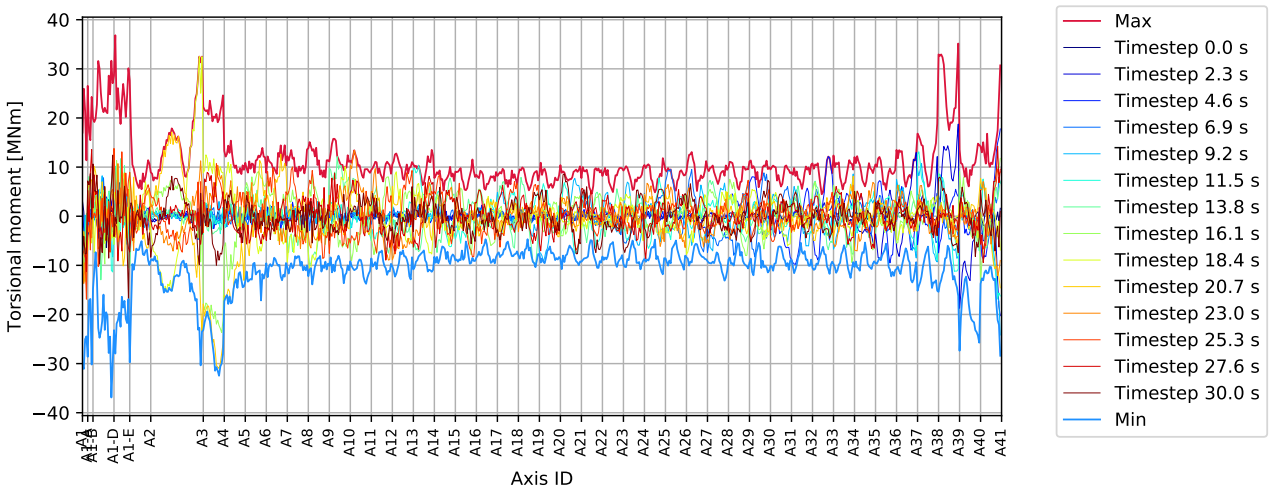

Figure 3.333: P A39 0deg - bridgegirder : Torsional moment [MNm]

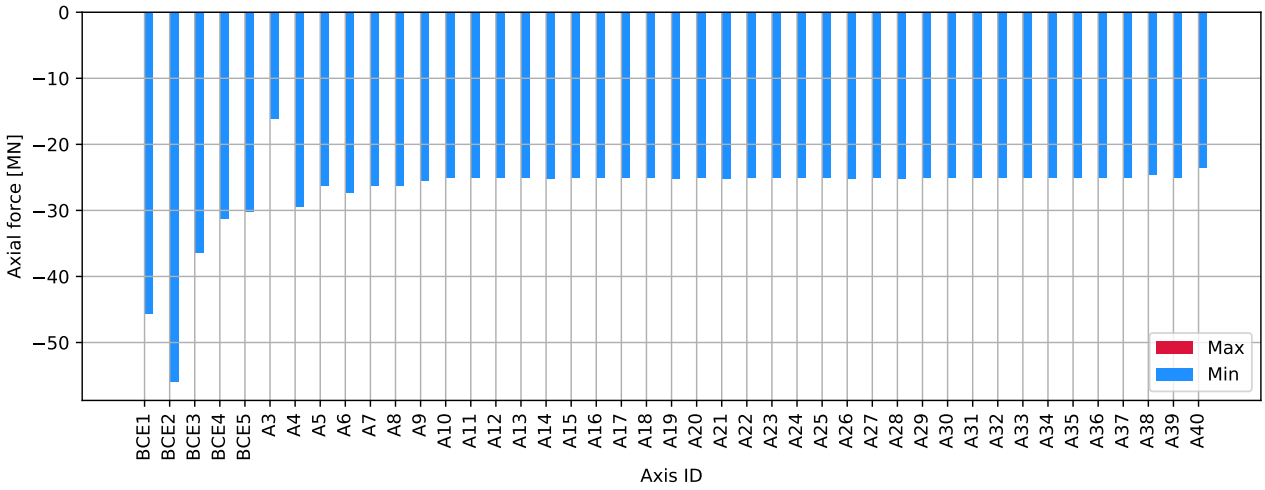

Figure 3.334: P A39 0deg - columns bottom : Axial force [MN]

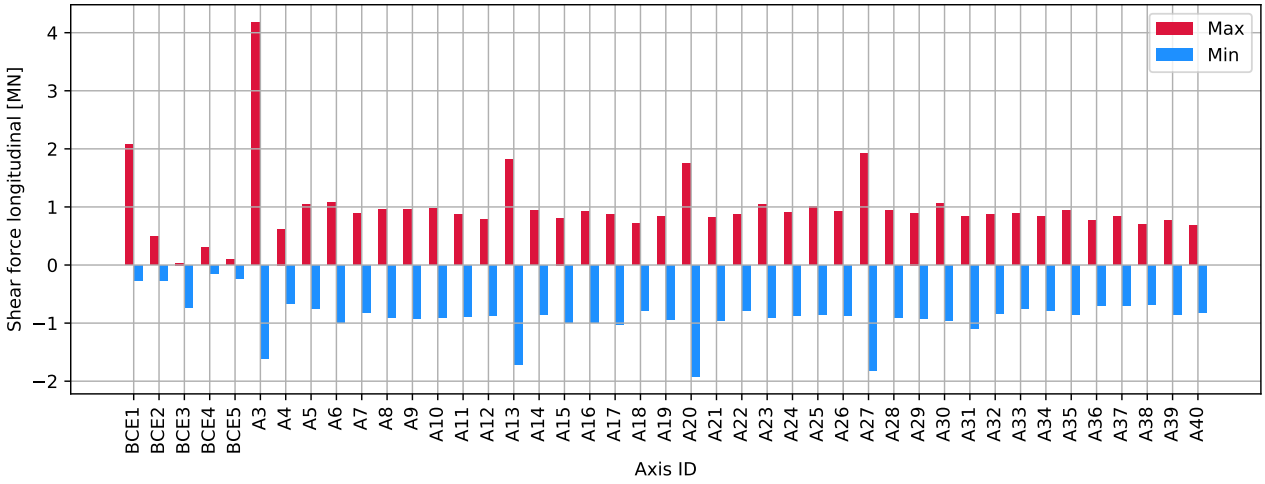

Figure 3.335: P A39 0deg - columns bottom : Shear force longitudinal [MN]

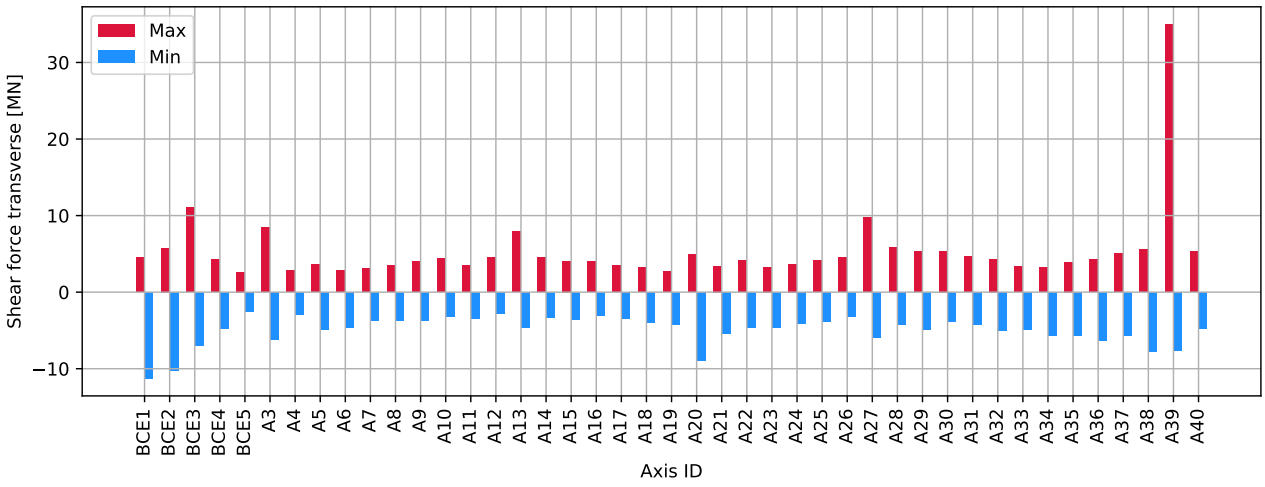

Figure 3.336: P A39 0deg - columns bottom : Shear force transverse [MN]

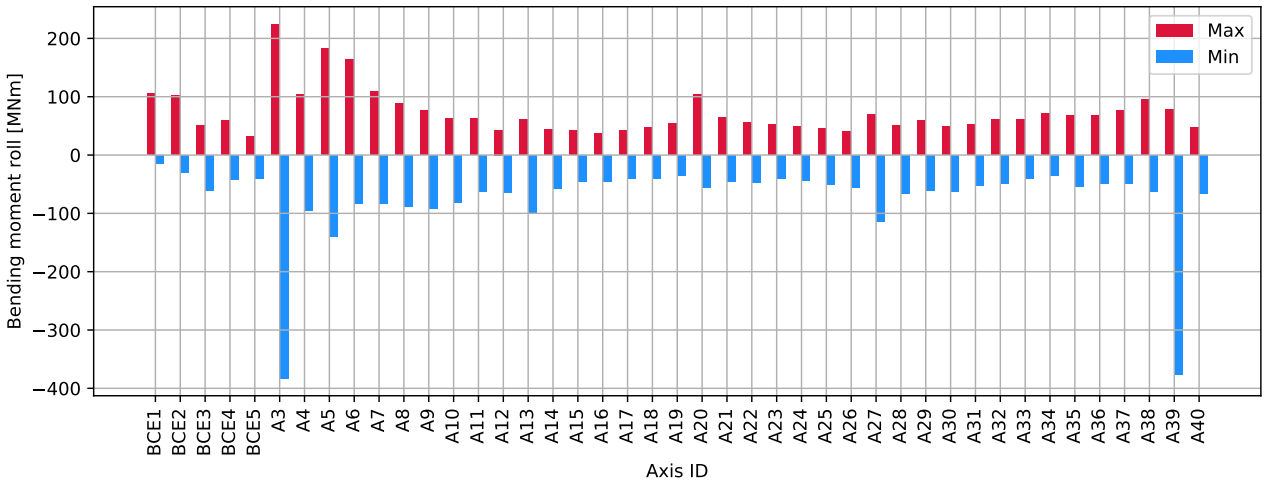

Figure 3.337: P A39 0deg - columns bottom : Bending moment roll [MNm]

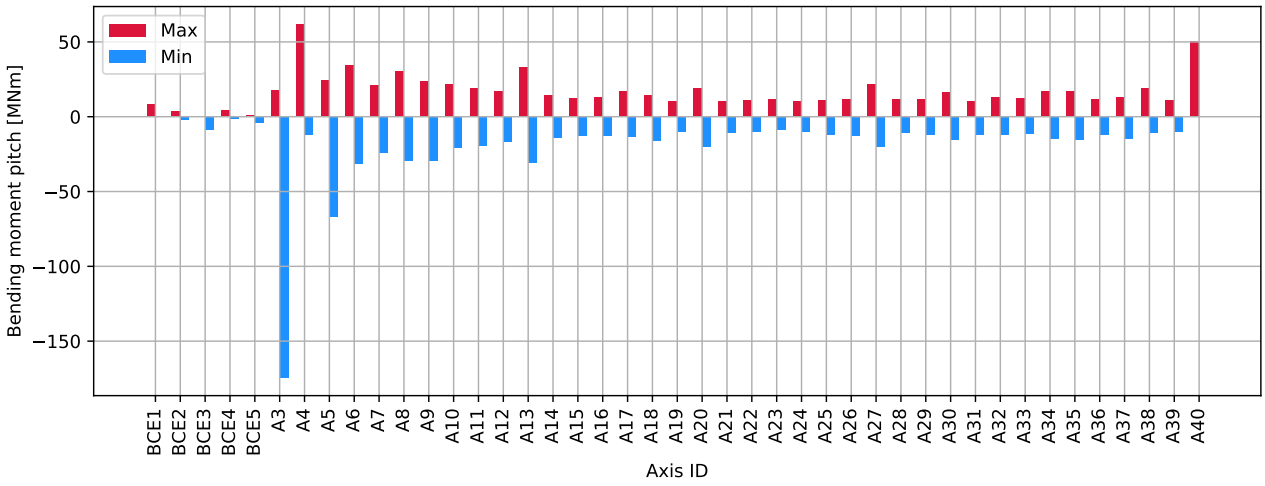

Figure 3.338: P A39 0deg - columns bottom : Bending moment pitch [MNm]

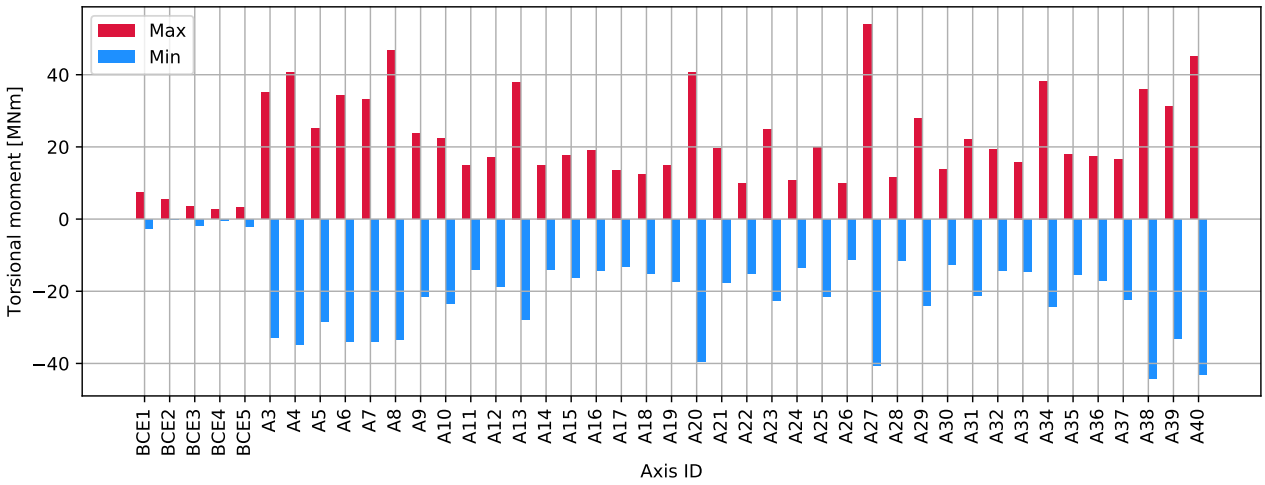

Figure 3.339: P A39 0deg - columns bottom : Torsional moment [MNm]

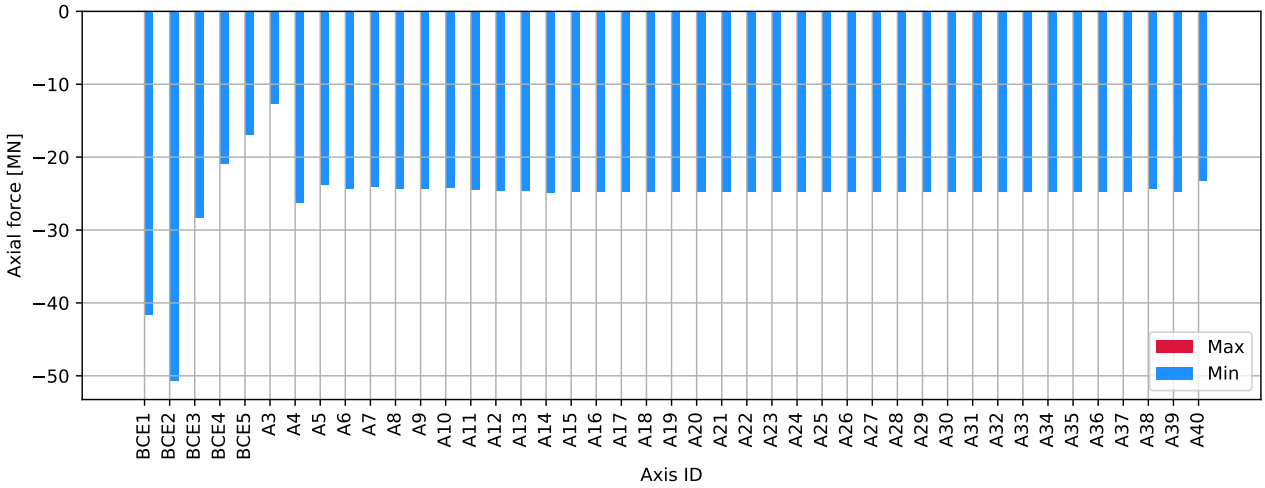

Figure 3.340: P A39 0deg - columns top : Axial force [MN]

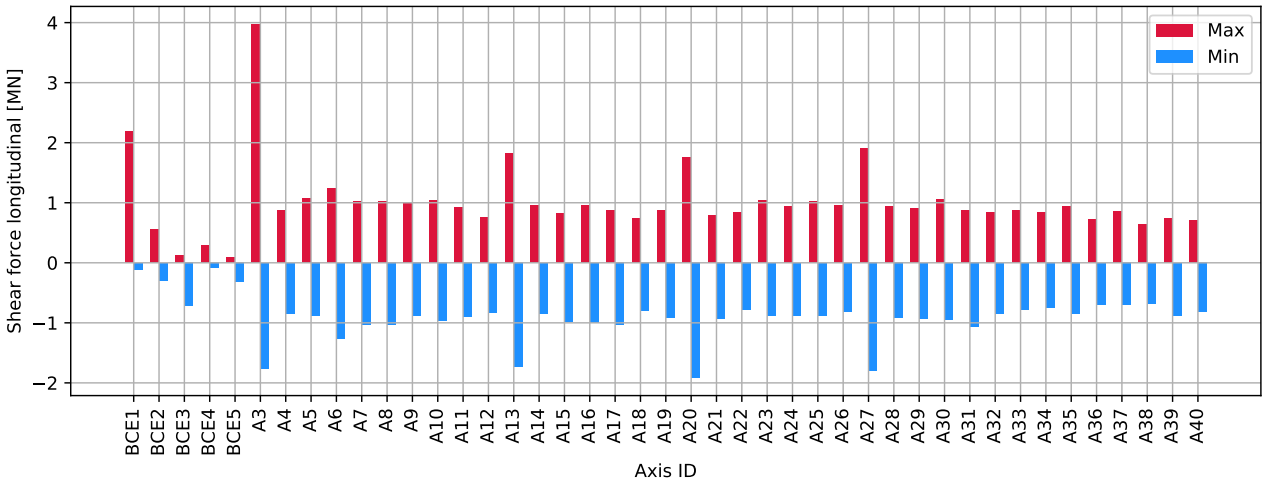

Figure 3.341: P A39 0deg - columns top : Shear force longitudinal [MN]

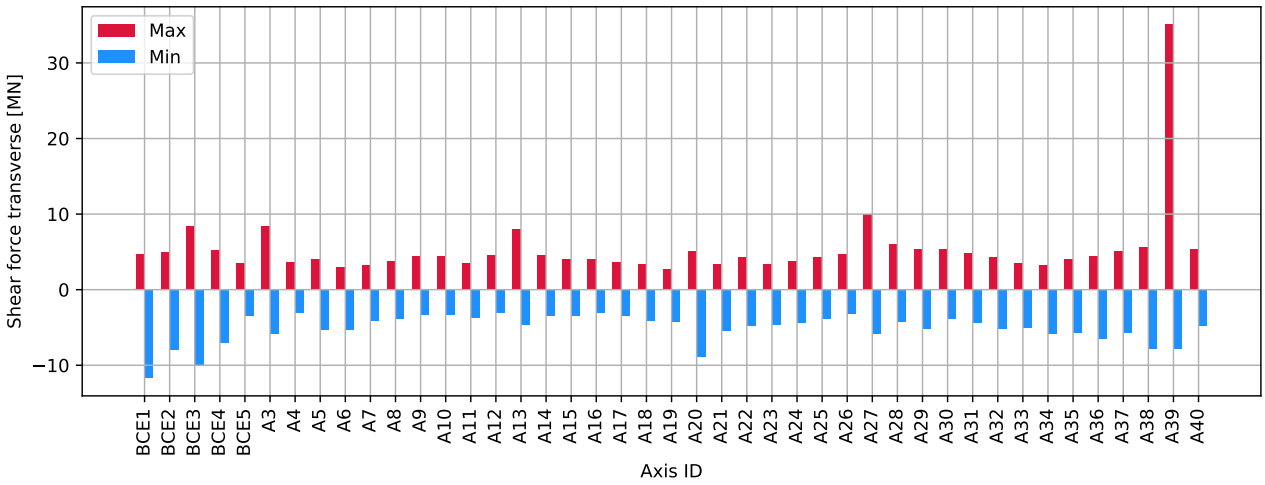

Figure 3.342: P A39 0deg - columns top : Shear force transverse [MN]

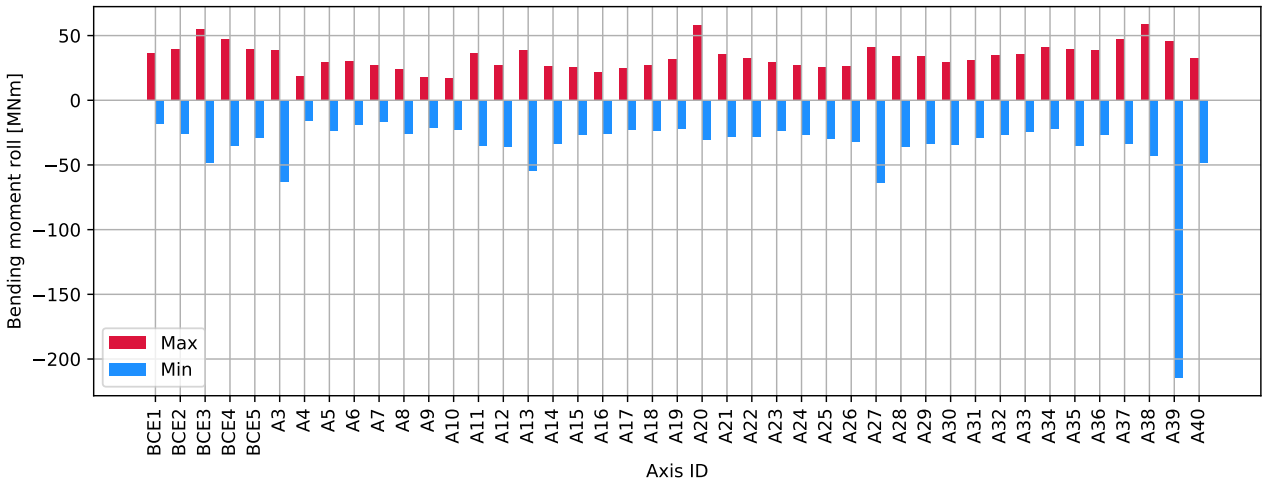

Figure 3.343: P A39 0deg - columns top : Bending moment roll [MNm]

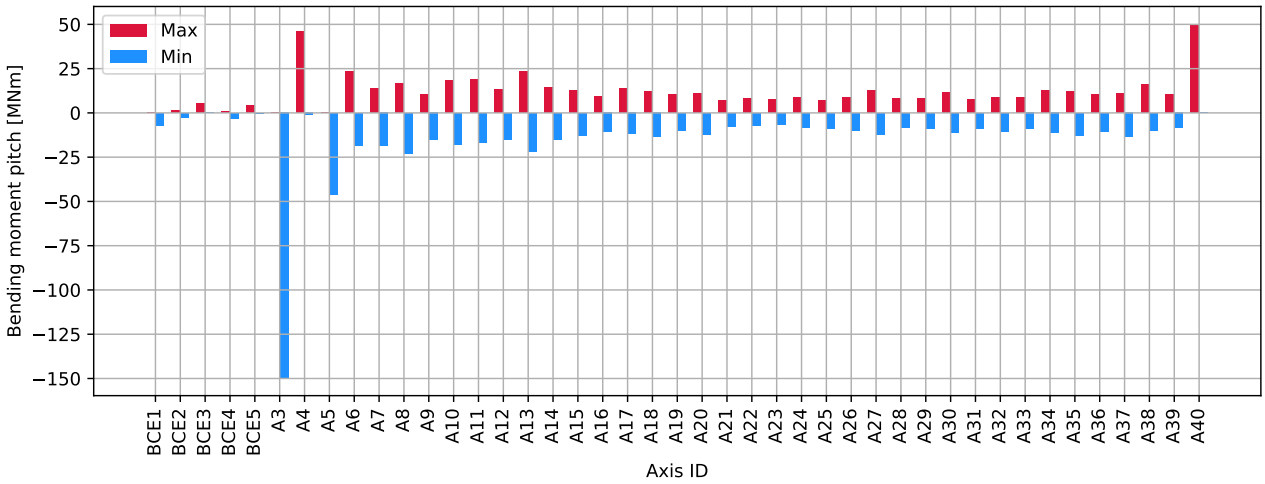

Figure 3.344: P A39 0deg - columns top : Bending moment pitch [MNm]

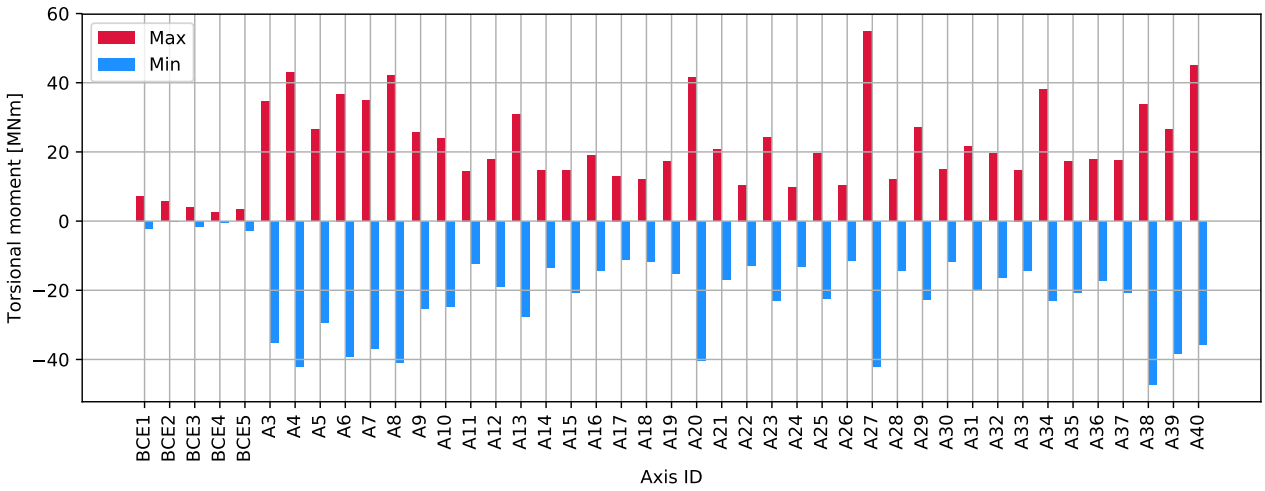

Figure 3.345: P A39 0deg - columns top : Torsional moment [MNm]

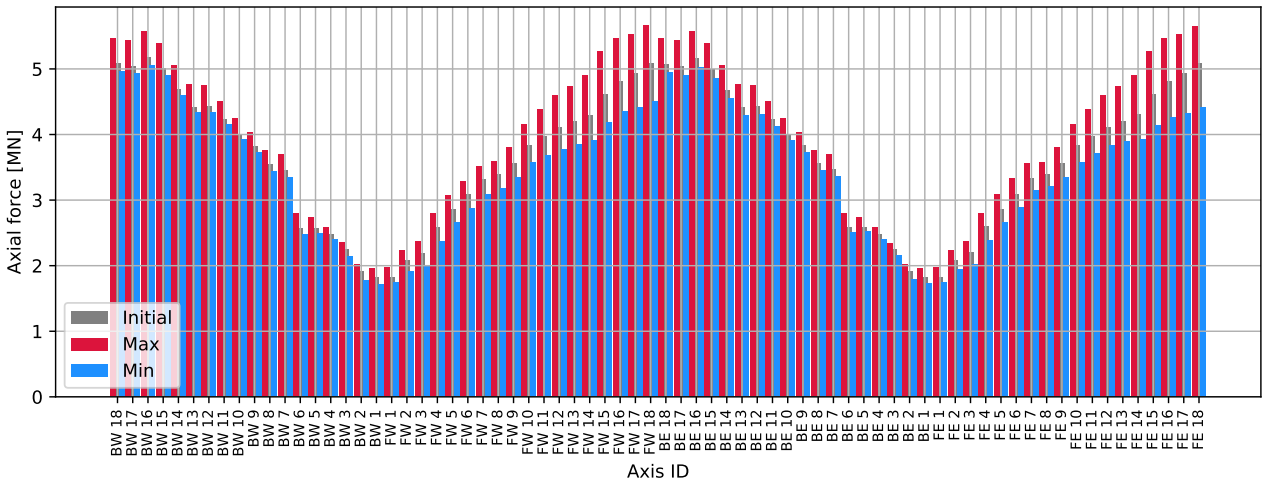

Figure 3.346: P A39 0deg - cables : Axial force [MN]

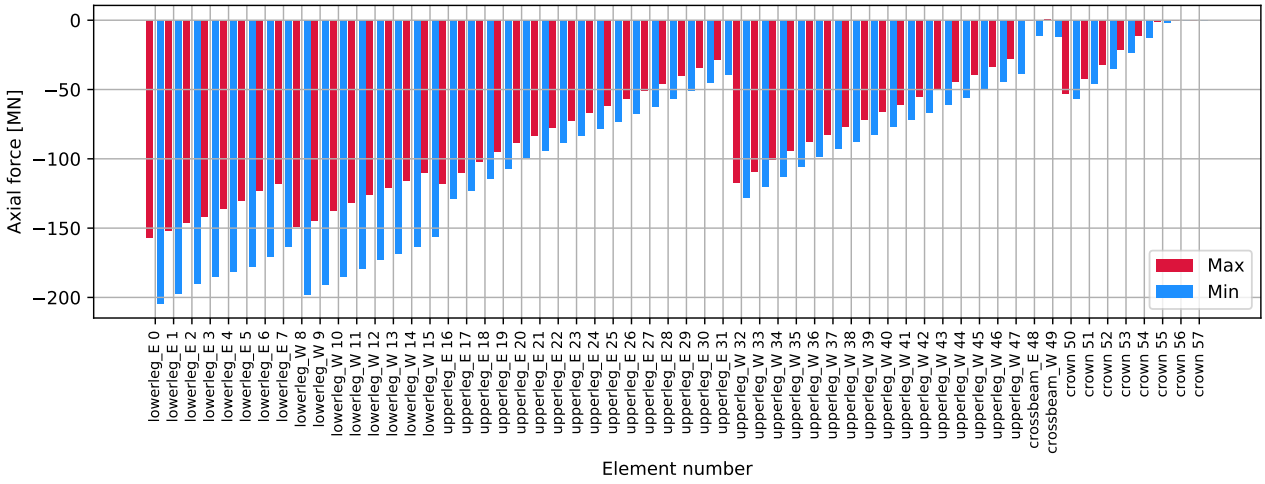

Figure 3.347: P A39 0deg - tower: Axial force [MN]

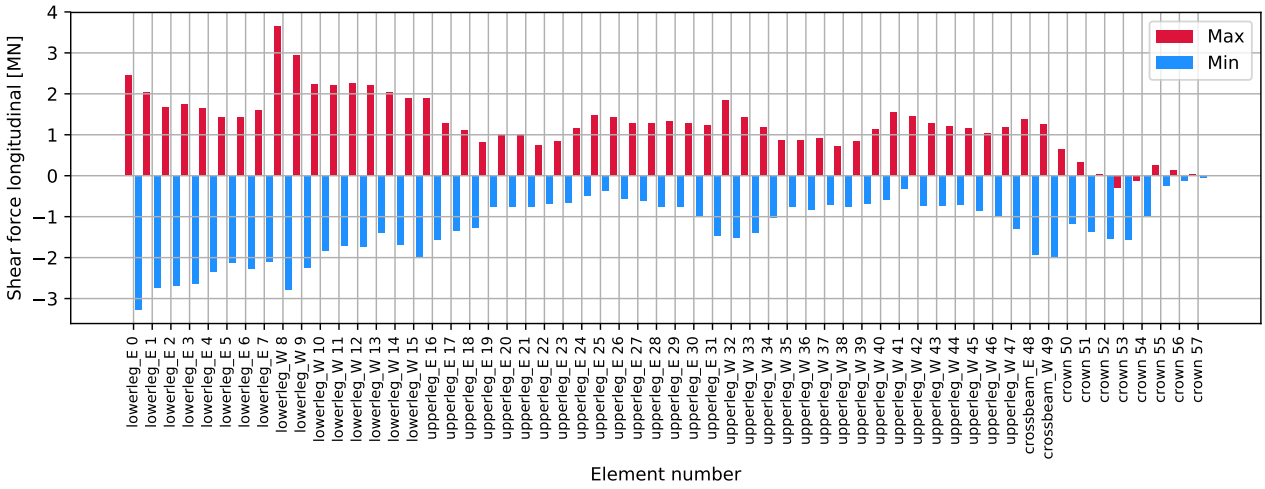

Figure 3.348: P A39 0deg - tower: Shear force longitudinal [MN]

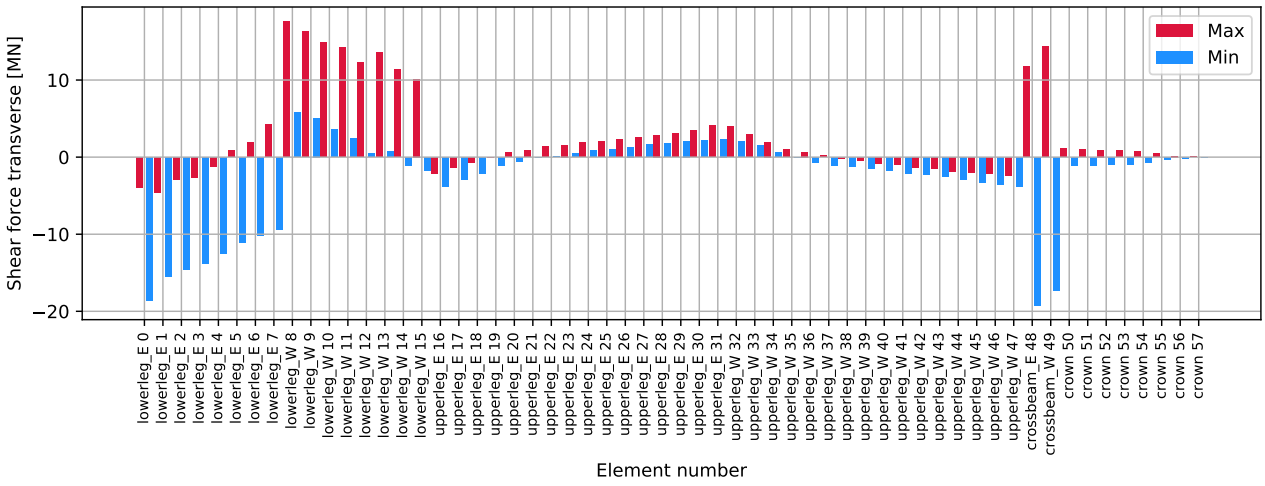

Figure 3.349: P A39 0deg - tower: Shear force transverse [MN]

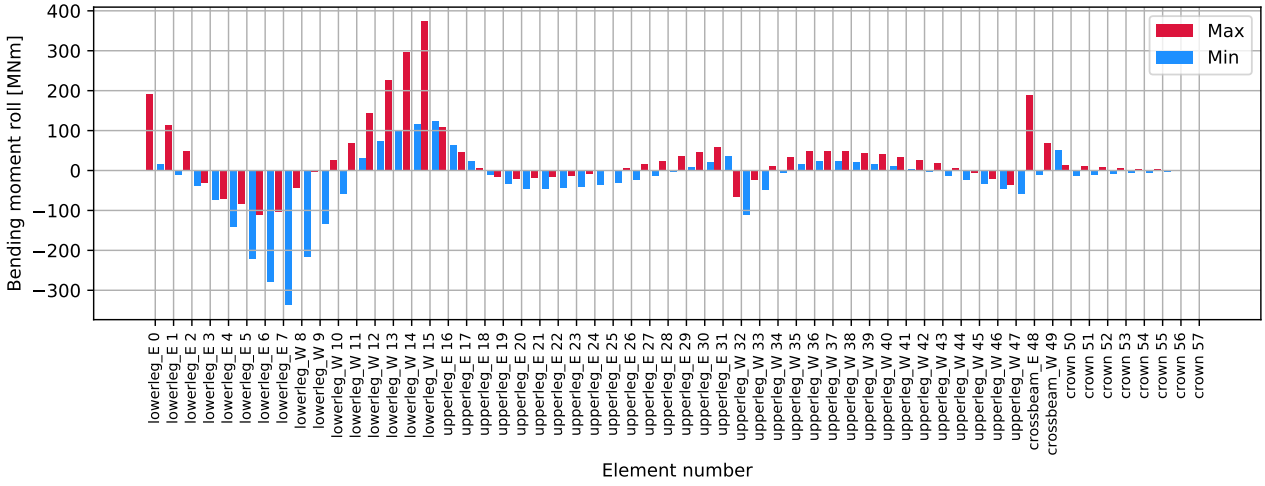

Figure 3.350: P A39 0deg - tower: Bending moment roll [MNm]

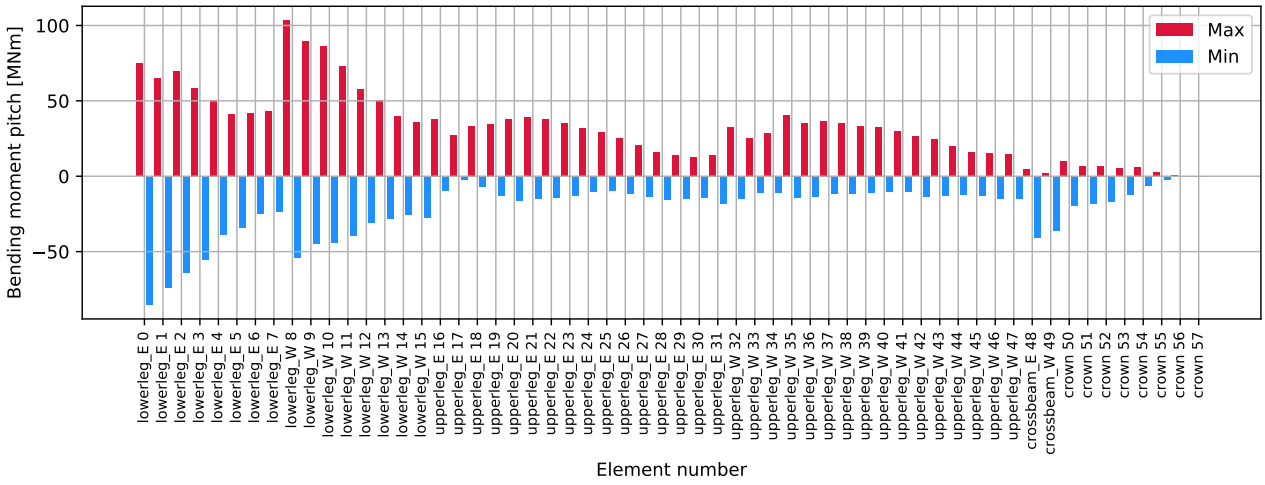

Figure 3.351: P A39 0deg - tower: Bending moment pitch [MNm]

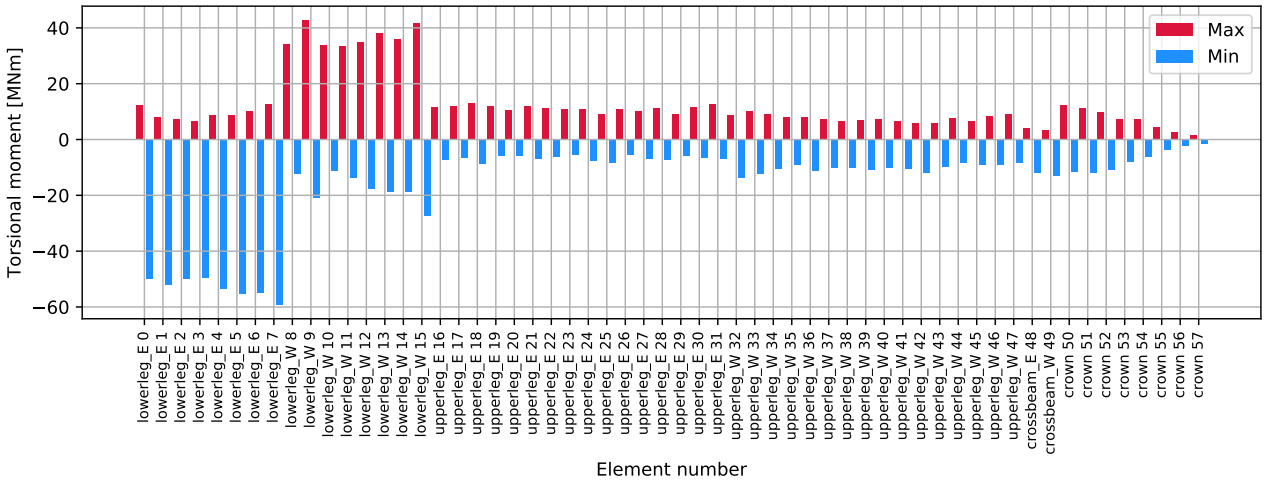

Figure 3.352: P A39 0deg - tower: Torsional moment [MNm]

3.8.3 Time series

Note : Time series are filtered using a Saviotzky-Golay filter for increased readability of the time history plots. Hence, maximum values that occur due to a rapid vibration are not shown in the plots. For maximum values, refer to the tabulated data.
All elements are numbered from South to North, bottom to top

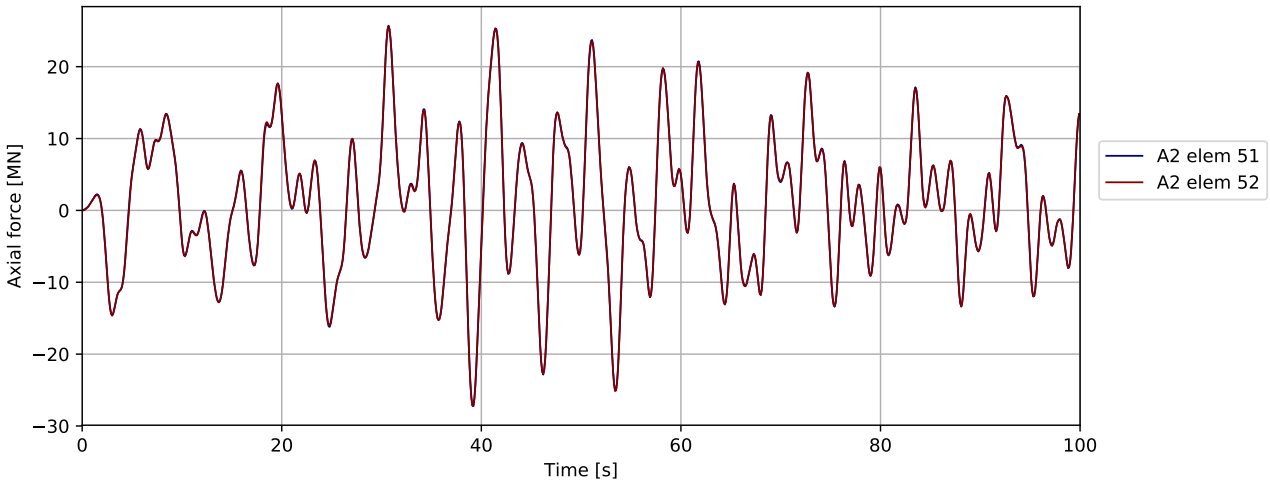

Figure 3.353: P A39 0deg - bridgegirder @ pylon: Axial force [MN]

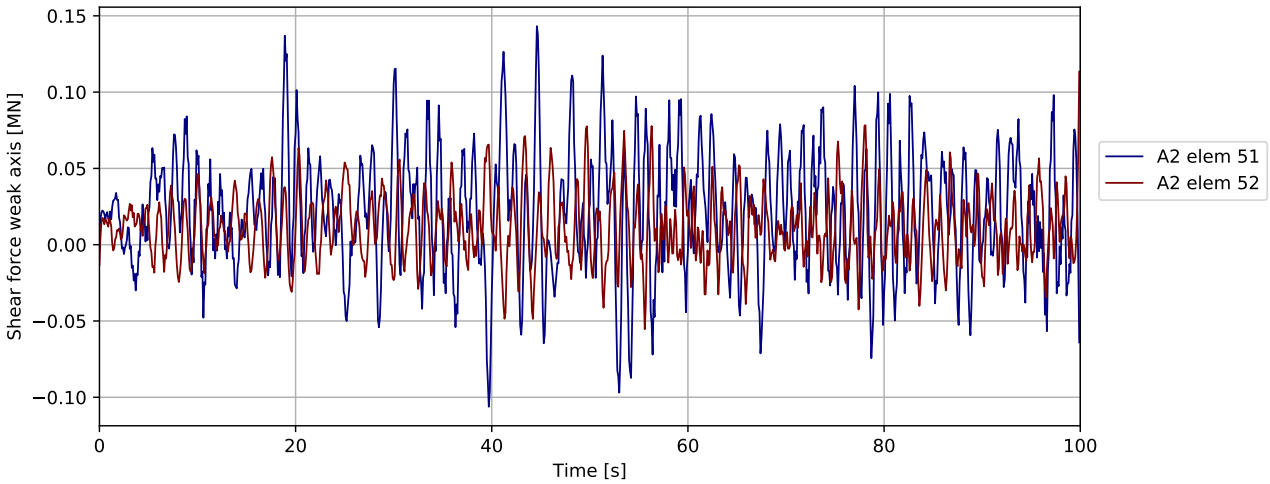

Figure 3.354: P A39 0deg - bridgegirder @ pylon: Shear force weak axis [MN]

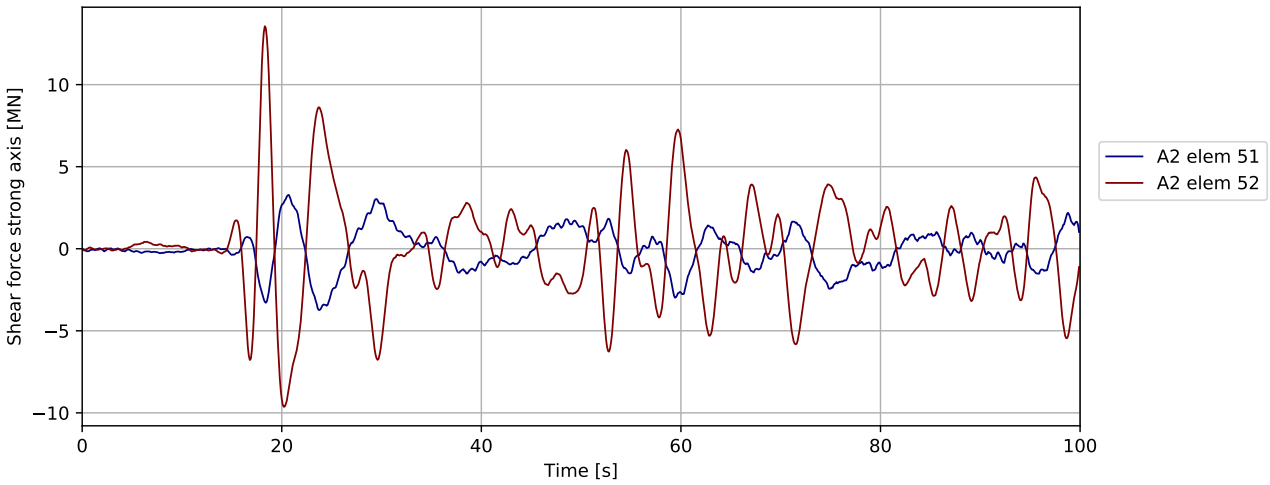

Figure 3.355: P A39 0deg - bridgegirder @ pylon: Shear force strong axis [MN]

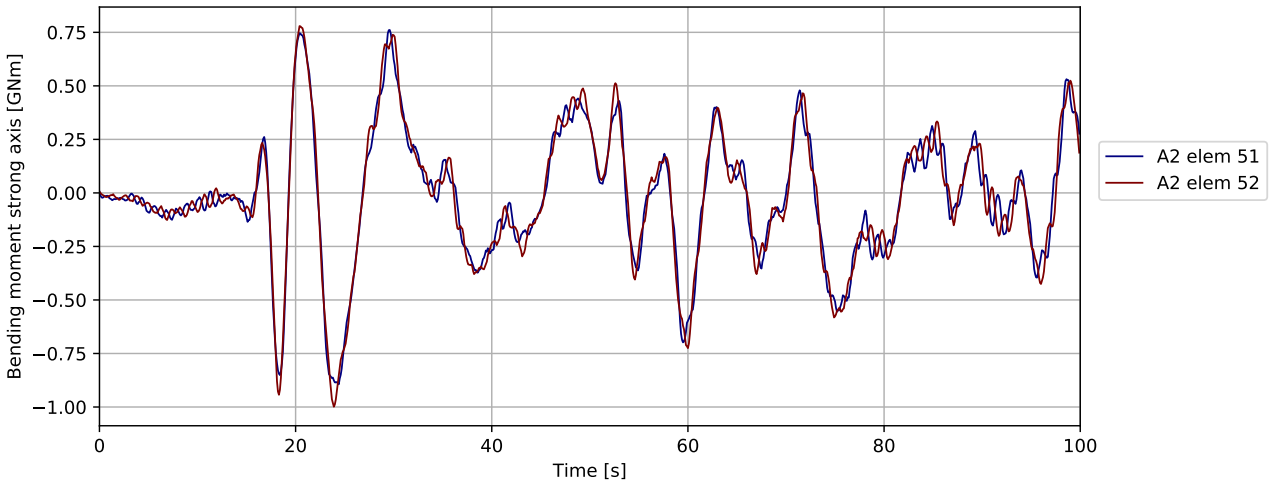

Figure 3.356: P A39 0deg - bridgegirder @ pylon: Bending moment strong axis [GNm]

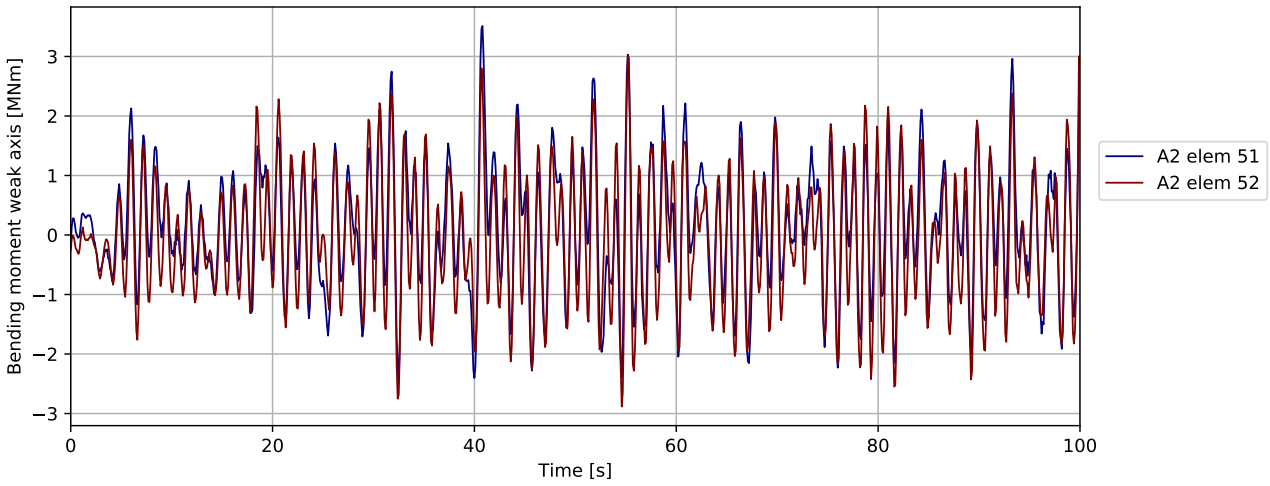

Figure 3.357: P A39 0deg - bridgegirder @ pylon: Bending moment weak axis [MNm]

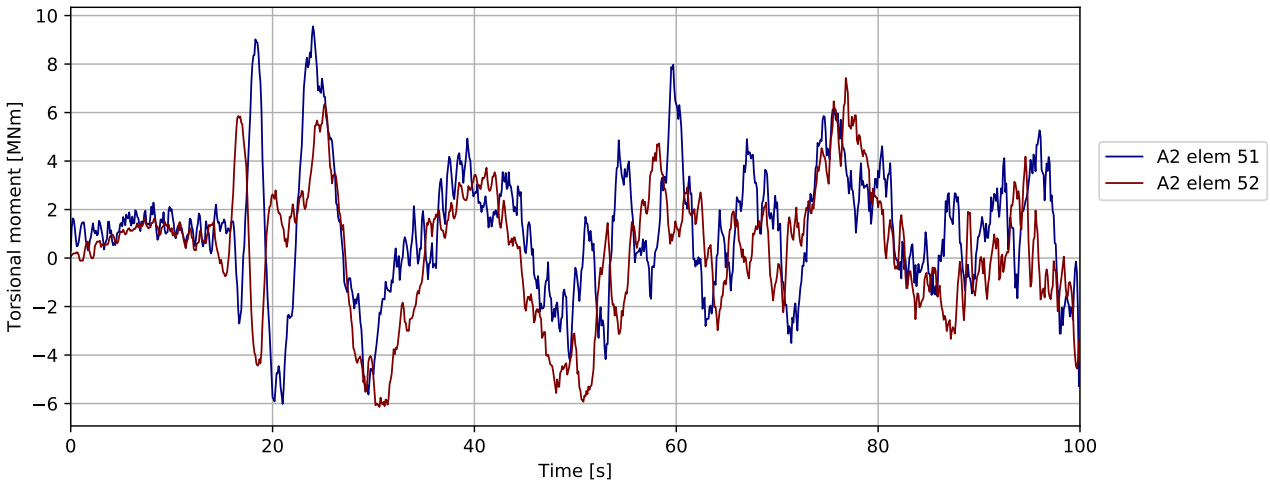

Figure 3.358: P A39 0deg - bridgegirder @ pylon: Torsional moment [MNm]

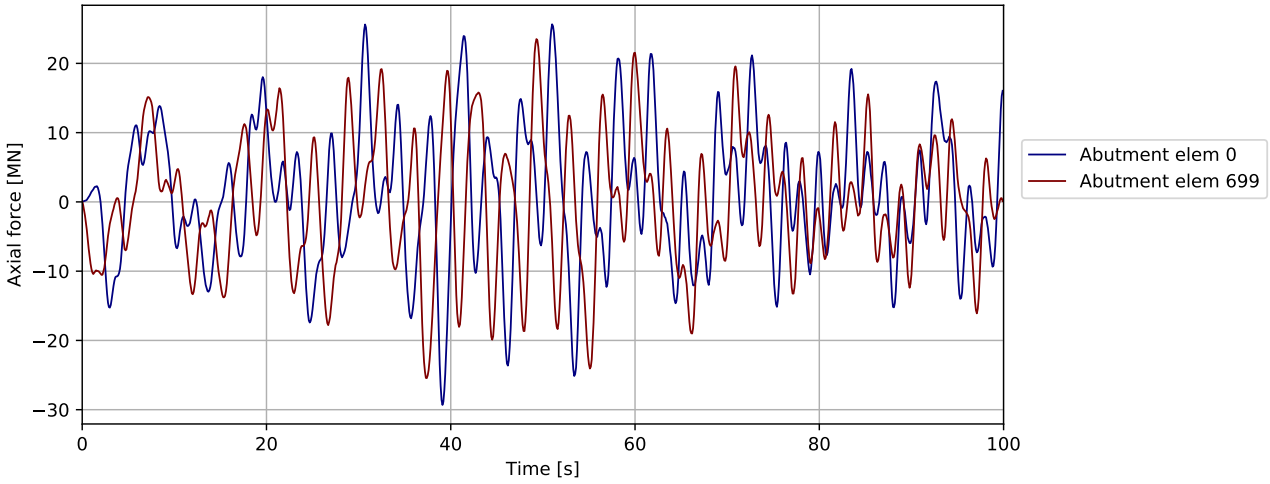

Figure 3.359: P A39 0deg - bridgegirder @abutments: Axial force [MN]

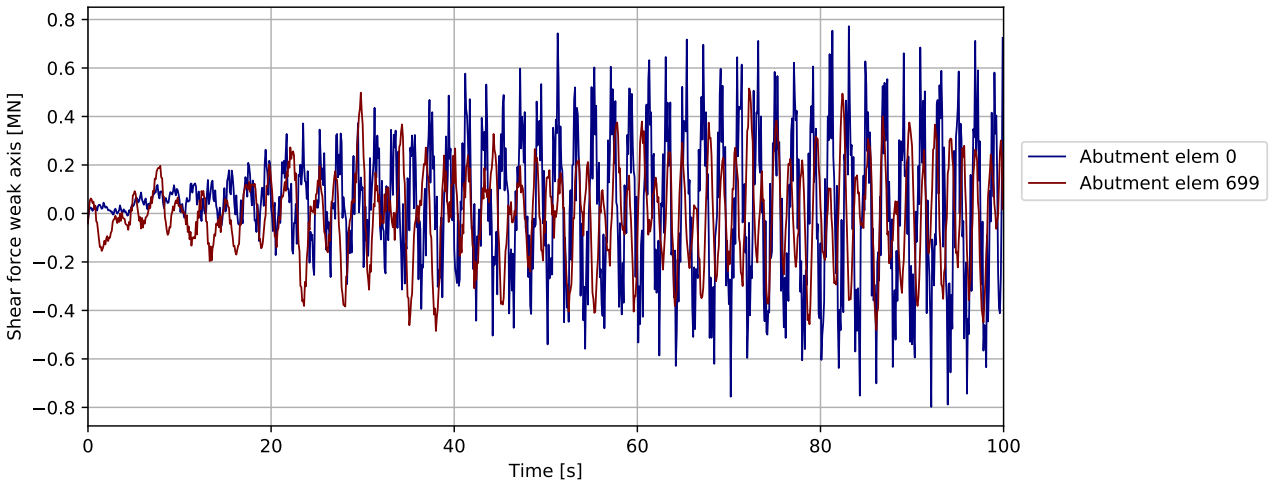

Figure 3.360: P A39 0deg - bridgegirder @abutments: Shear force weak axis [MN]

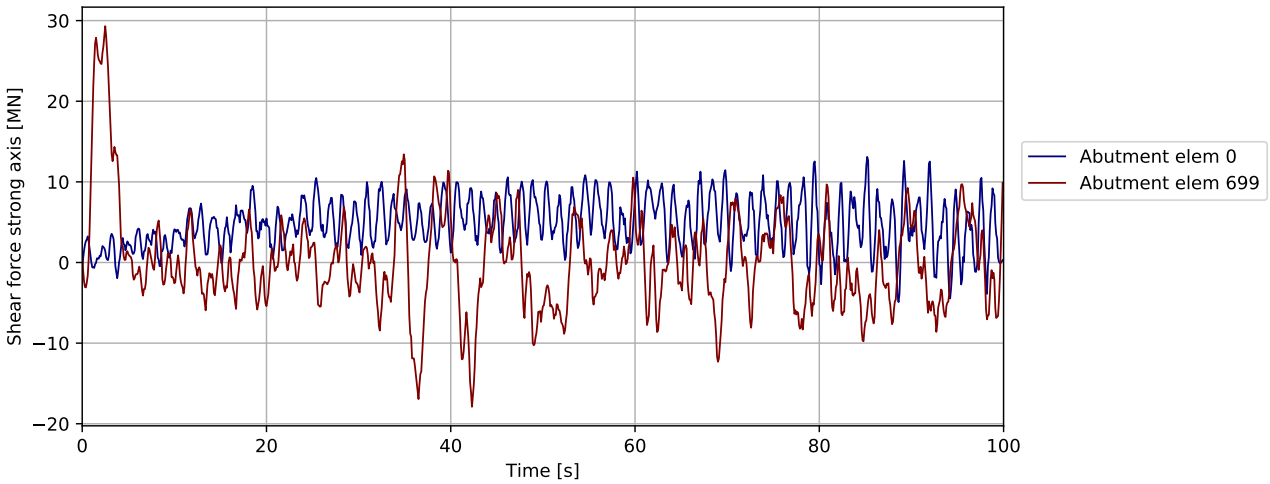

Figure 3.361: P A39 0deg - bridgegirder @abutments: Shear force strong axis [MN]

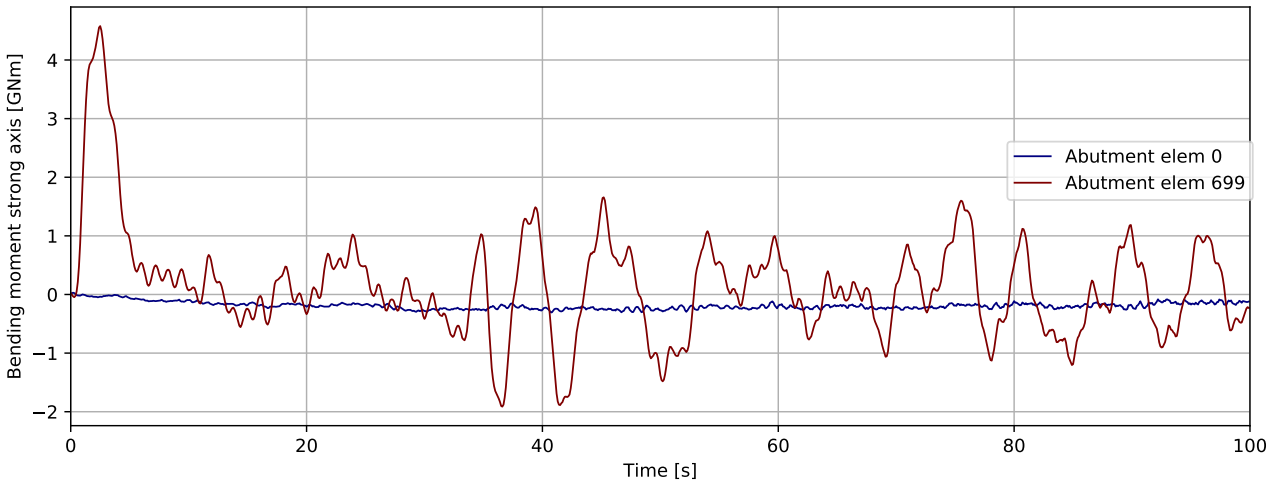

Figure 3.362: P A39 0deg - bridgegirder @abutments: Bending moment strong axis [GNm]

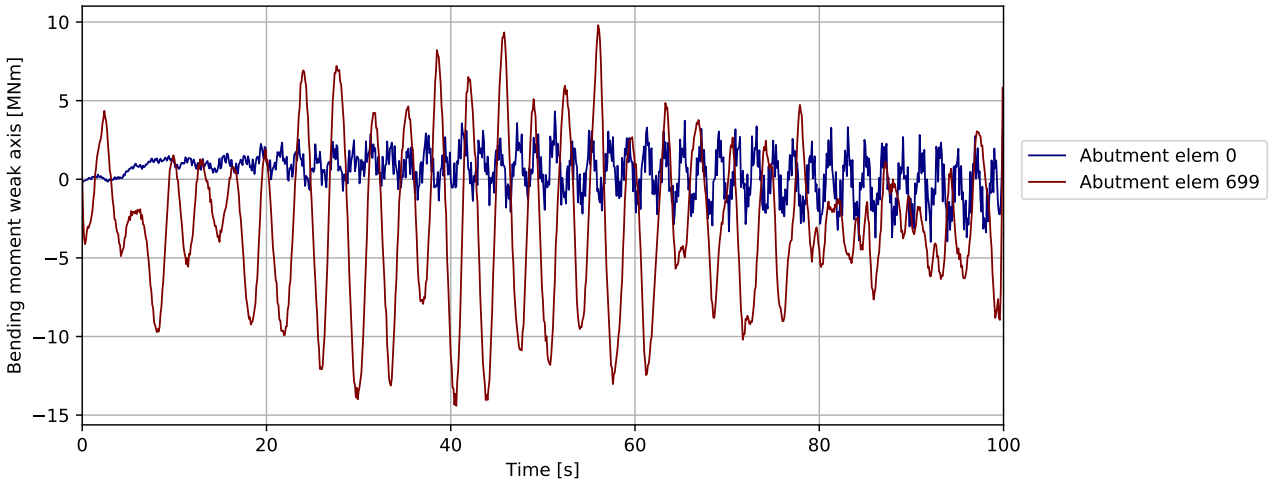

Figure 3.363: P A39 0deg - bridgegirder @abutments: Bending moment weak axis [MNm]

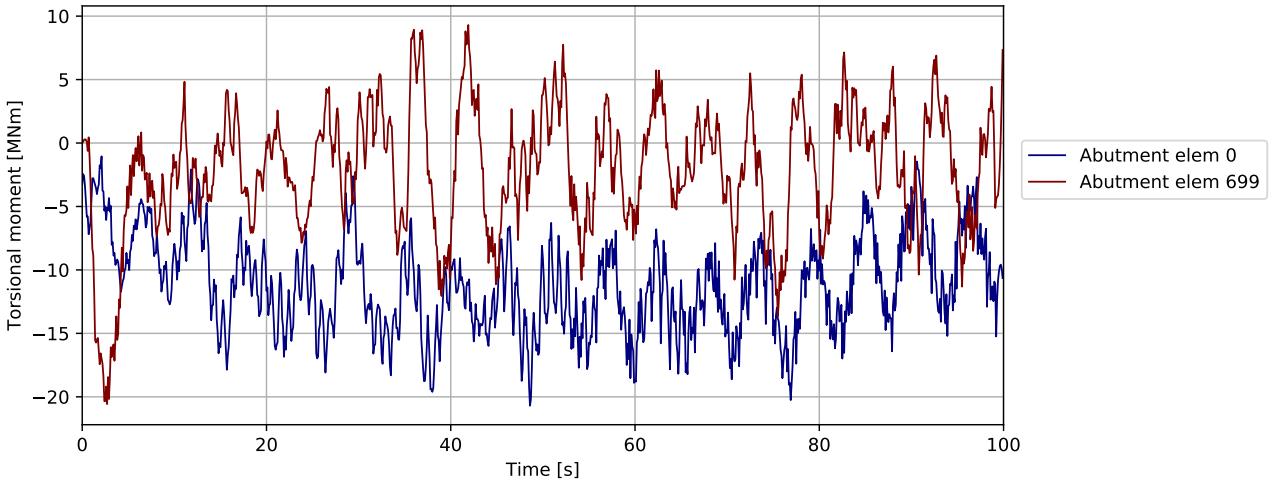

Figure 3.364: P A39 0deg - bridgegirder @abutments: Torsional moment [MNm]

Note : Compressive spring force is negative

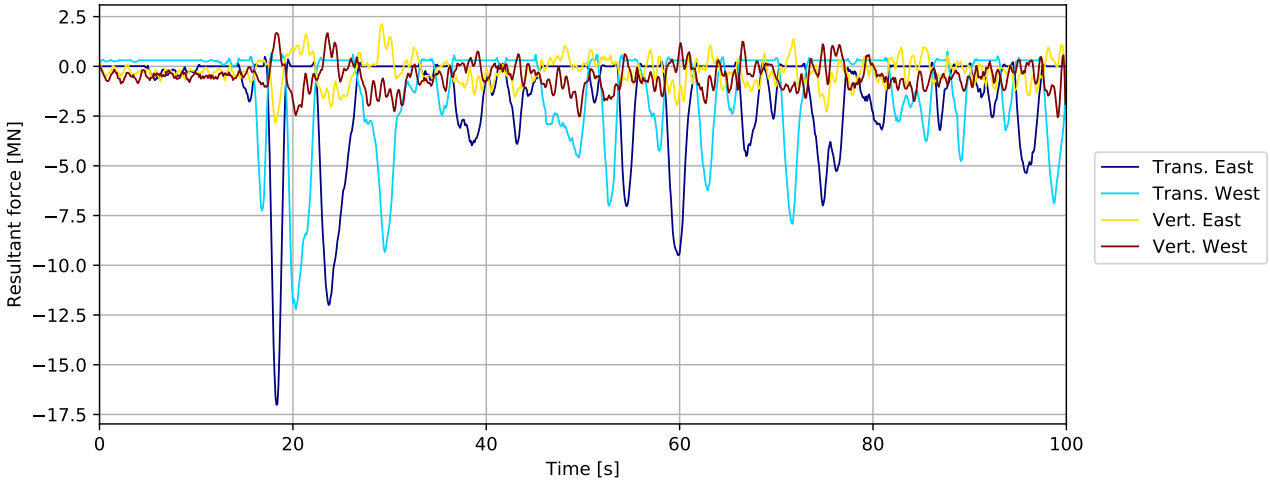

Figure 3.365: P A39 0deg - bridgegirder supports in tower: Resultant force [MN]

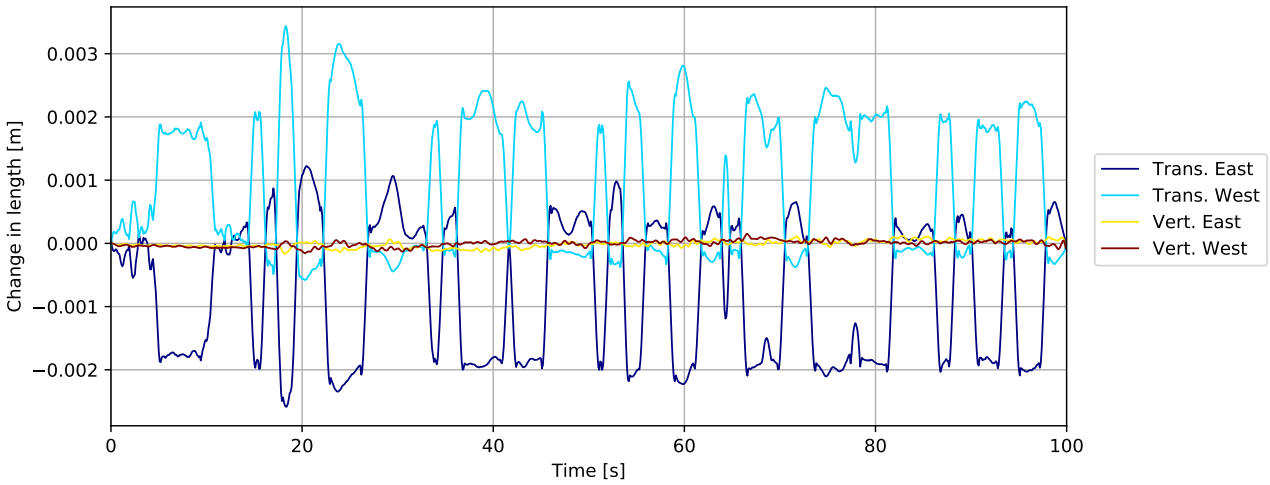

Figure 3.366: P A39 0deg - bridgegirder supports in tower: Change in length [m]

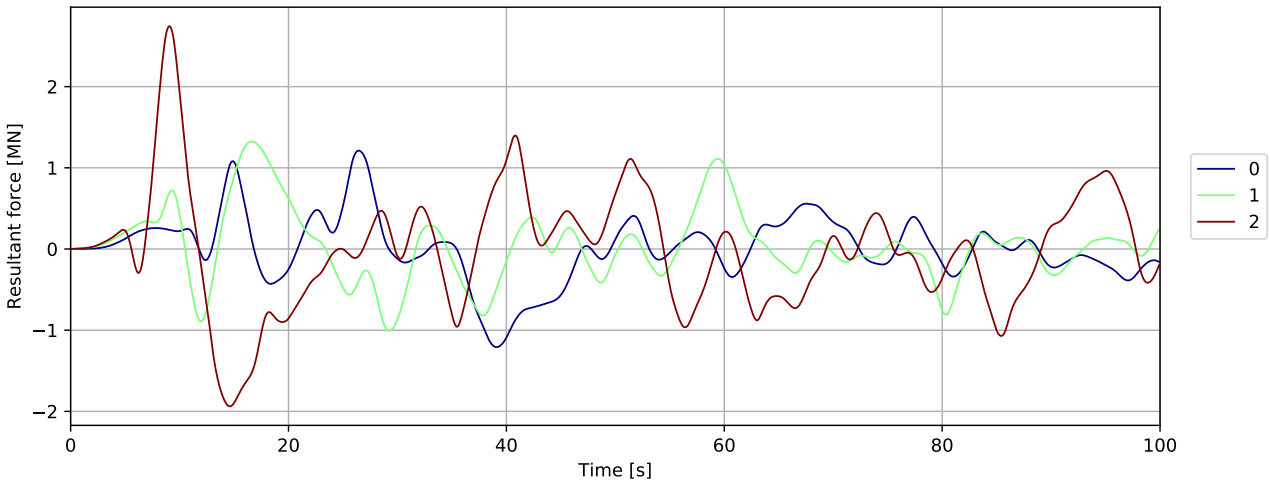

Figure 3.367: Mooring force

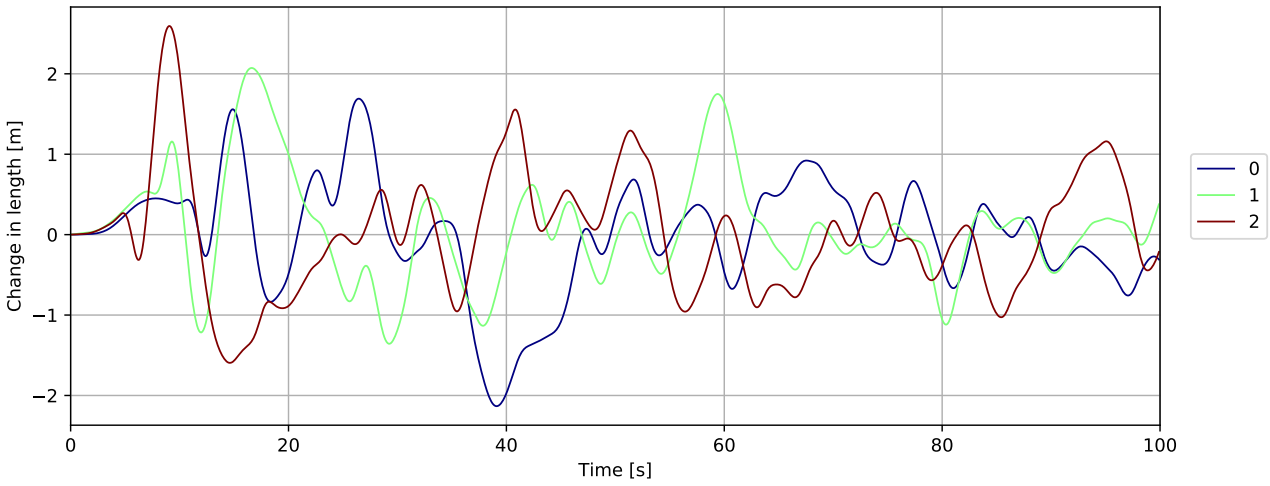

Figure 3.368: Mooring displacement

3.9 PontoonA40 0deg

3.9.1 Overall response

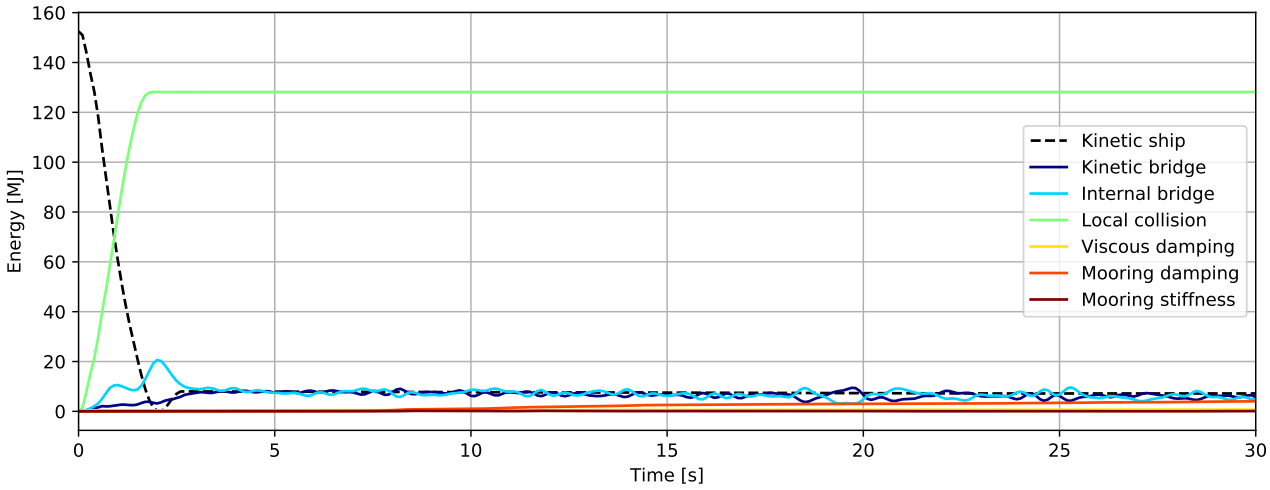

Figure 3.369: Energy [MJ] - initial phase

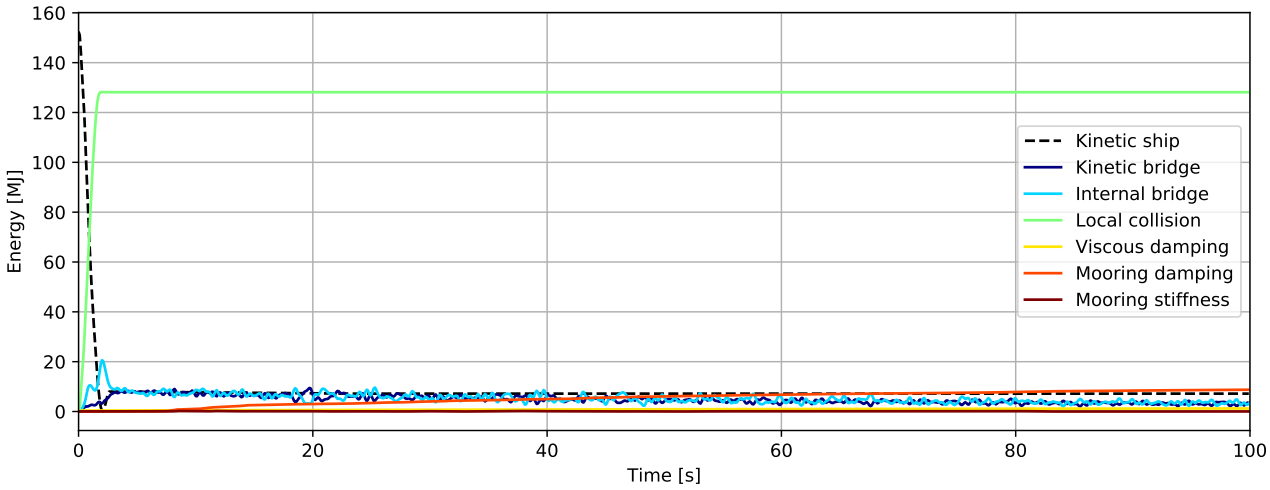

Figure 3.370: Energy [MJ]

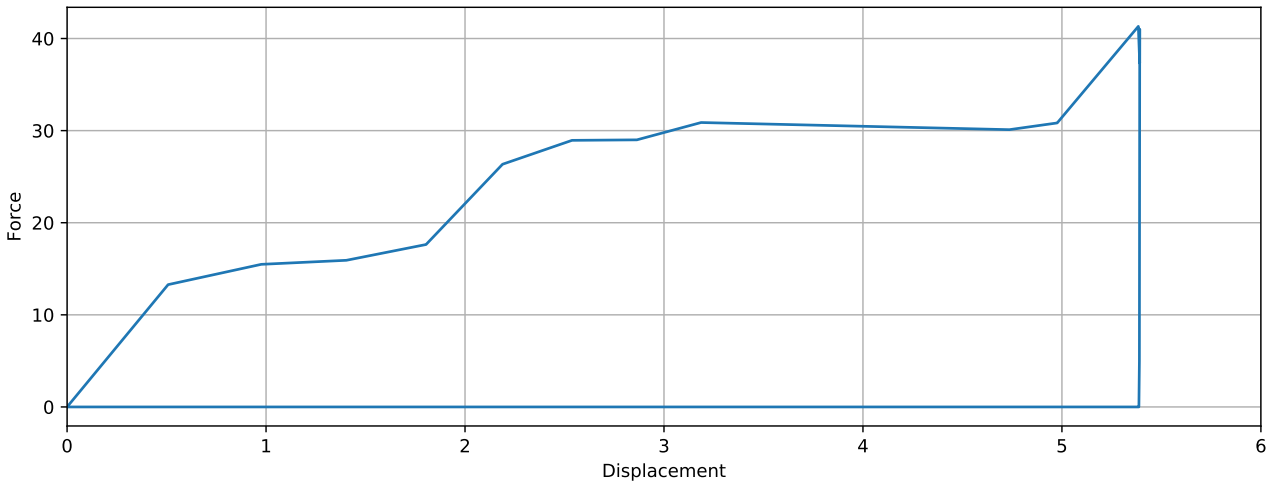

Figure 3.371: Simulated local collision force-displacement

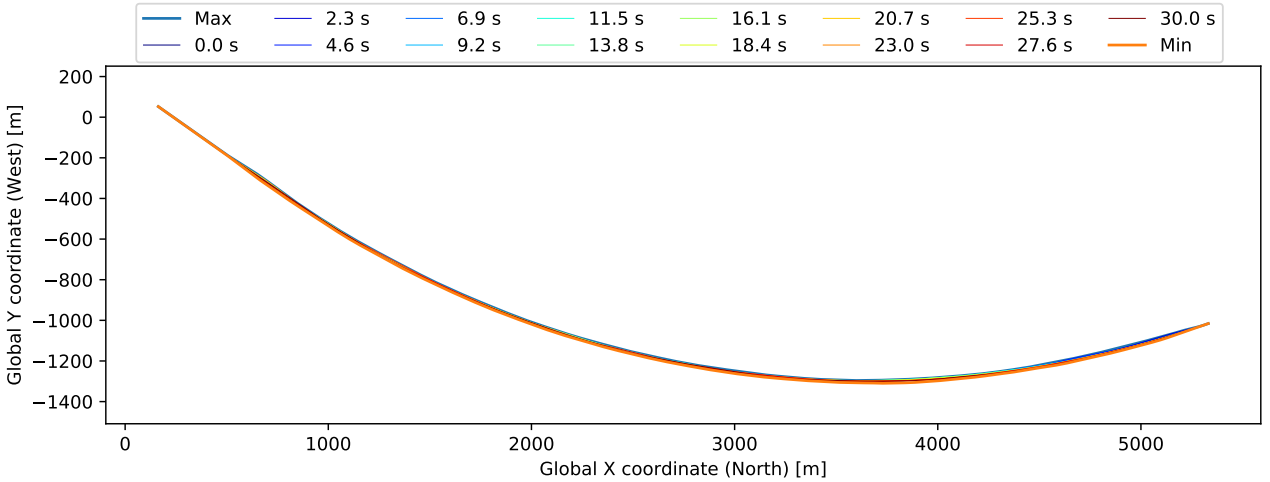

Figure 3.372: Bridgegirder deflection (10x displacment scaling)

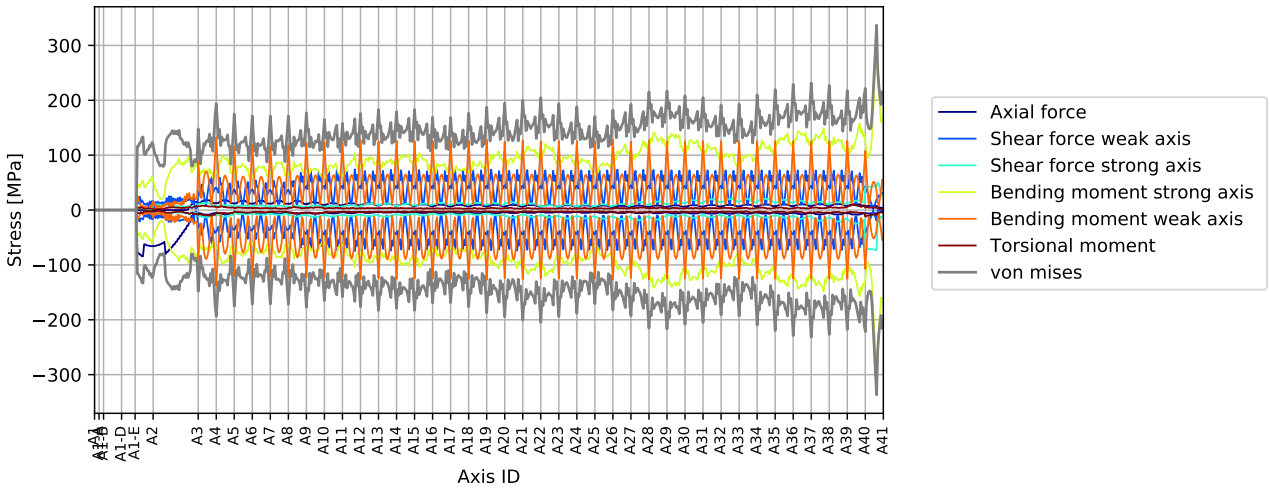

Figure 3.373: Stress envelope from all force components

3.9.2 Envelope plots

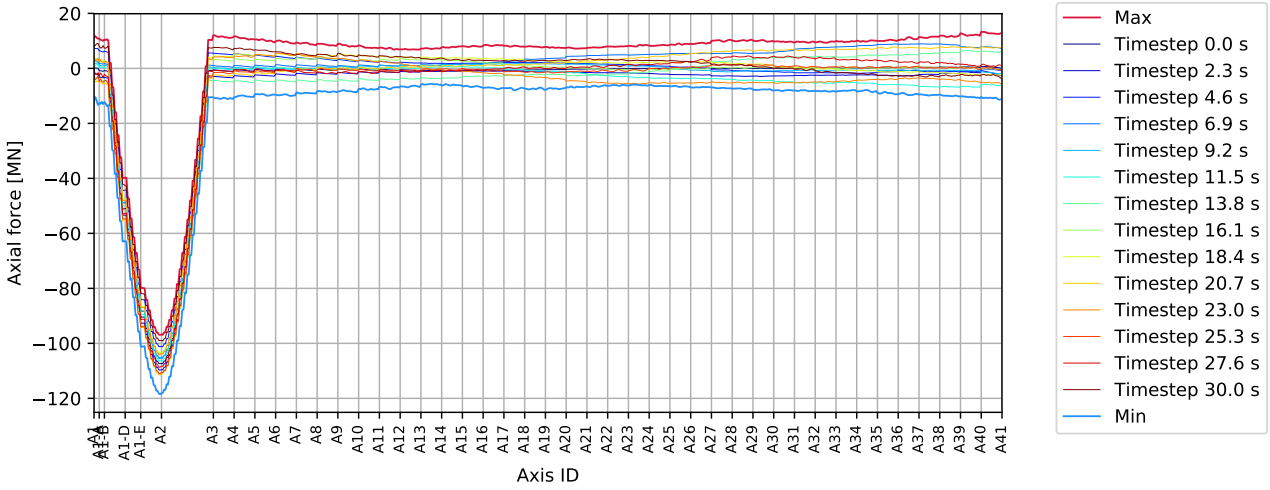

Figure 3.374: P A40 0deg - bridgegirder : Axial force [MN]

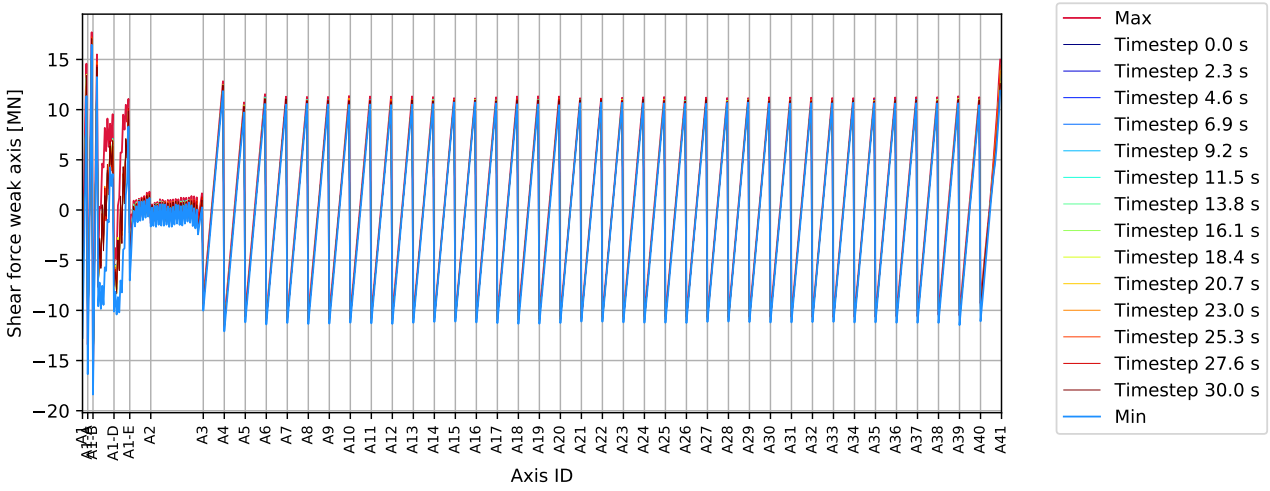

Figure 3.375: P A40 0deg - bridgegirder : Shear force weak axis [MN]

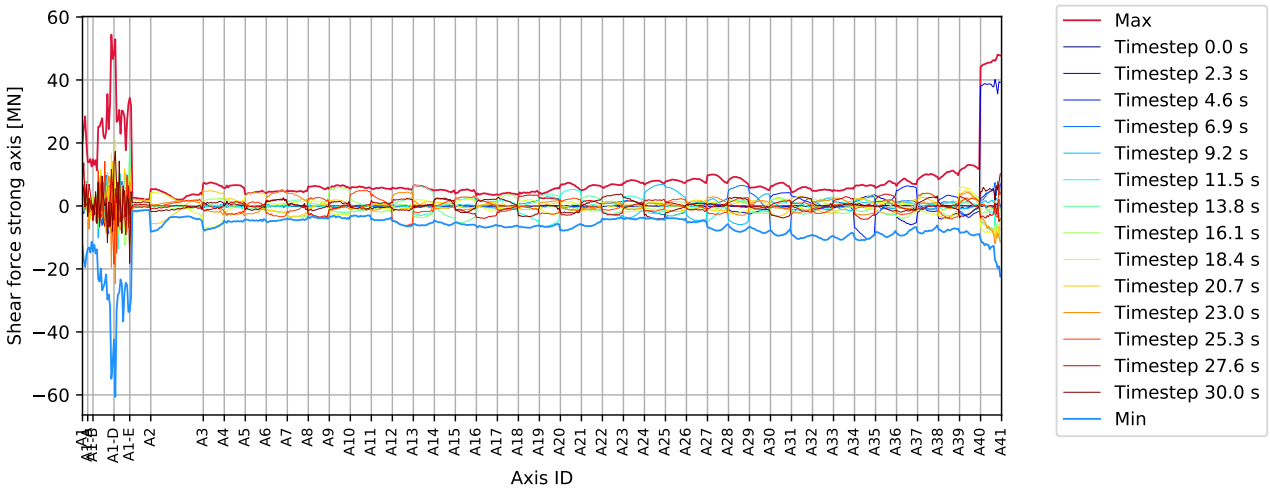

Figure 3.376: P A40 0deg - bridgegirder : Shear force strong axis [MN]

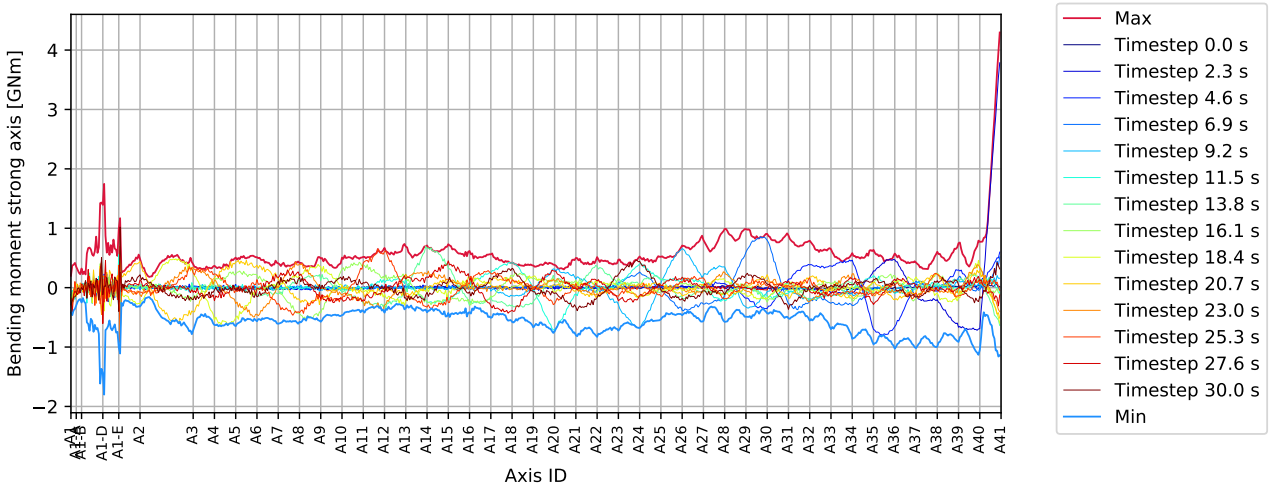

Figure 3.377: P A40 0deg - bridgegirder : Bending moment strong axis [GNm]

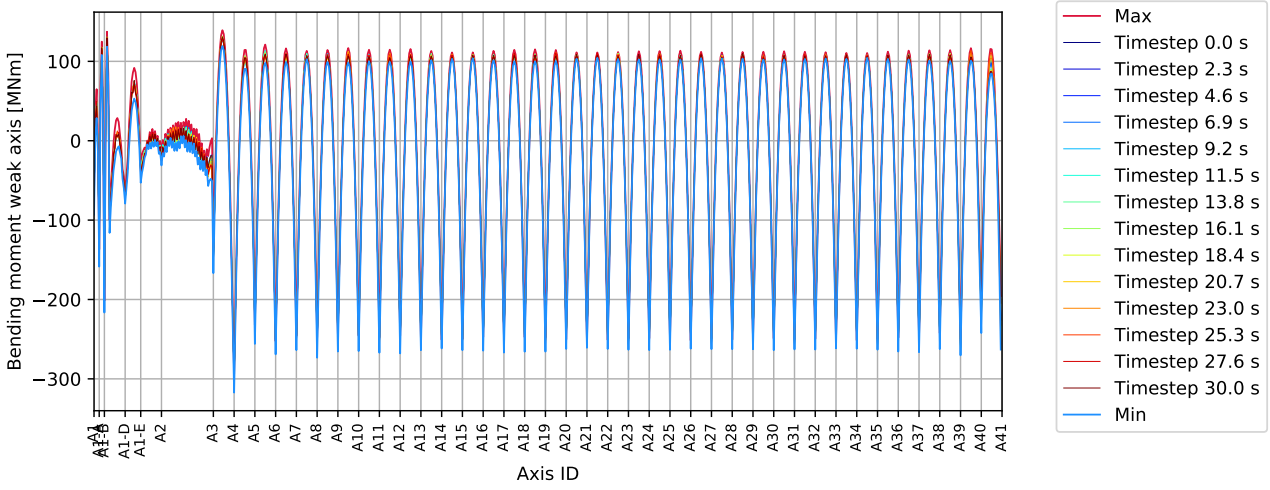

Figure 3.378: P A40 0deg - bridgegirder : Bending moment weak axis [MNm]

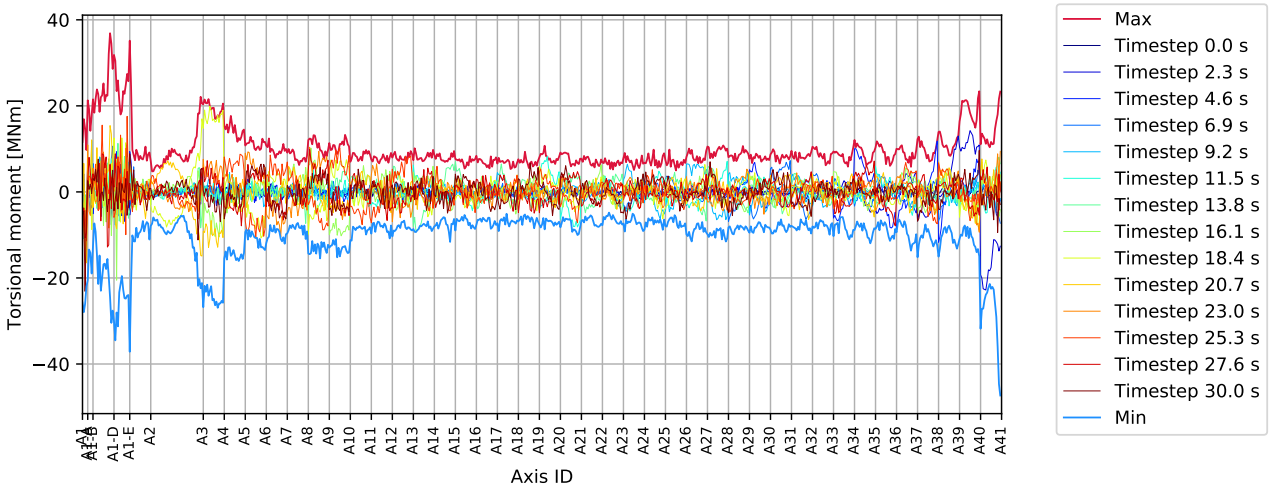

Figure 3.379: P A40 0deg - bridgegirder : Torsional moment [MNm]

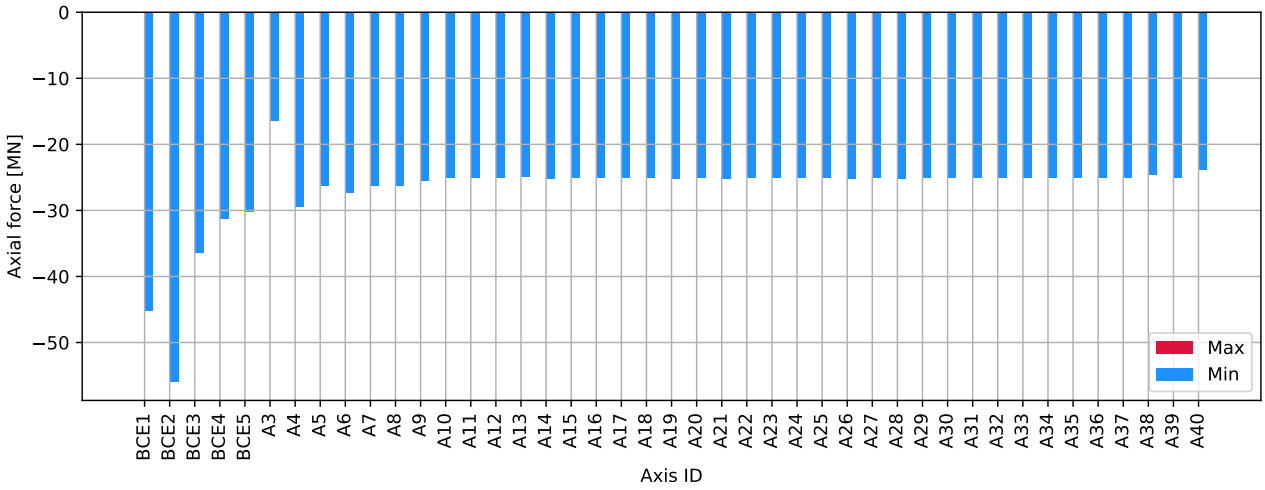

Figure 3.380: P A40 0deg - columns bottom : Axial force [MN]

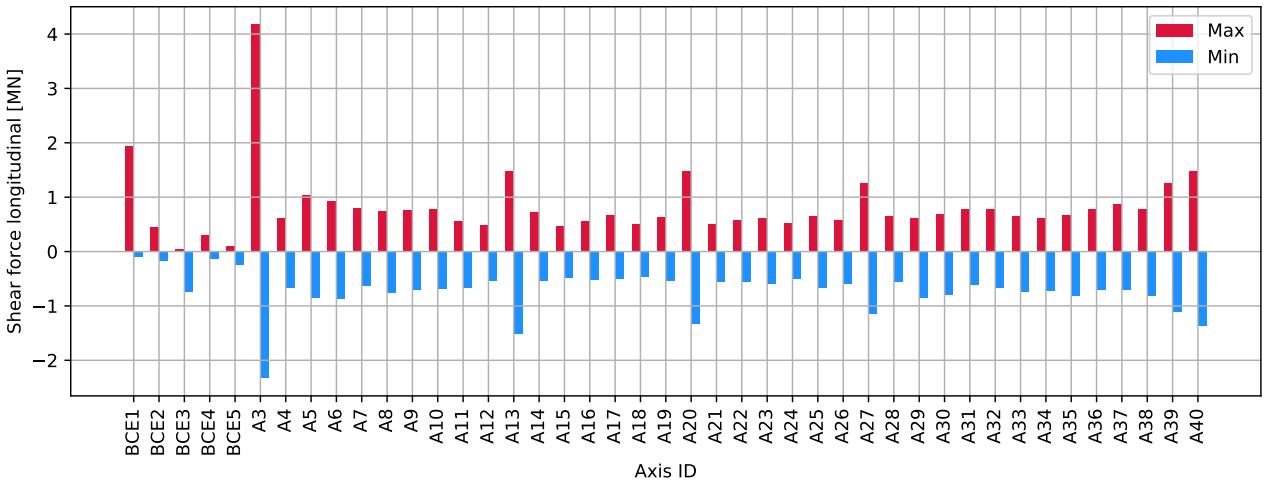

Figure 3.381: P A40 0deg - columns bottom : Shear force longitudinal [MN]

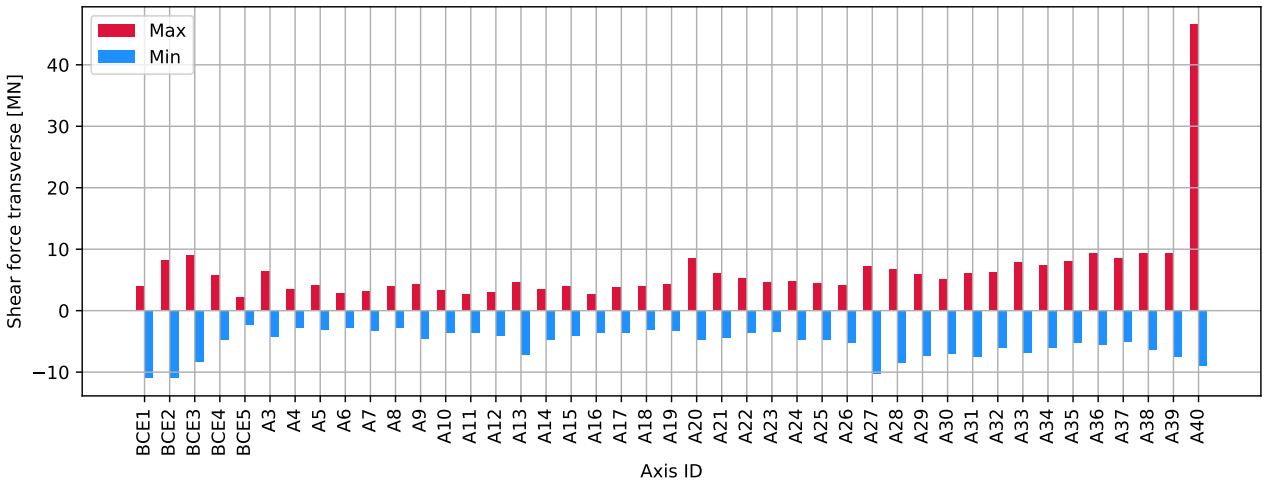

Figure 3.382: P A40 0deg - columns bottom : Shear force transverse [MN]

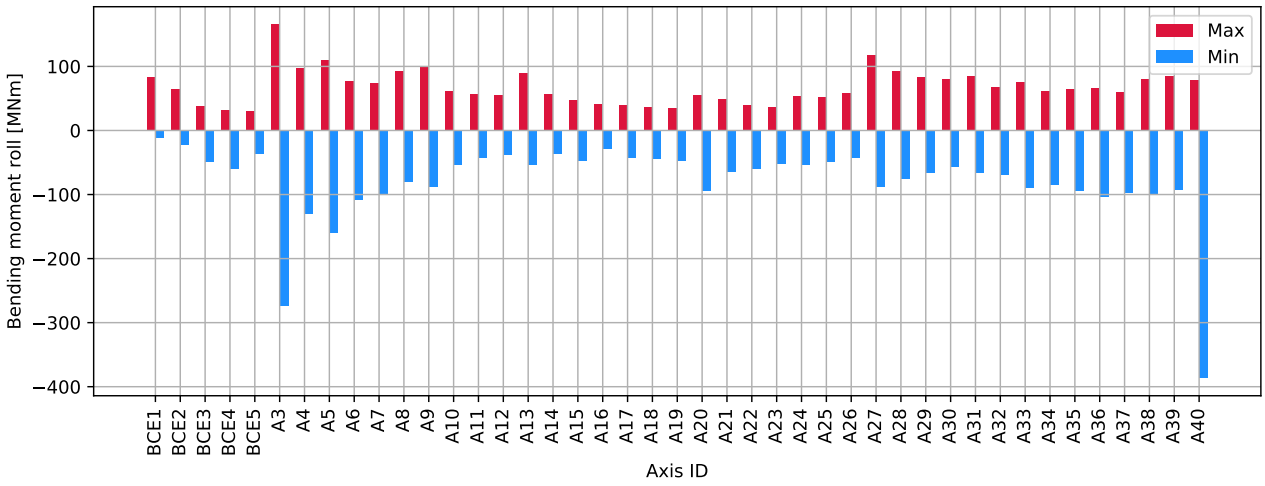

Figure 3.383: P A40 0deg - columns bottom : Bending moment roll [MNm]

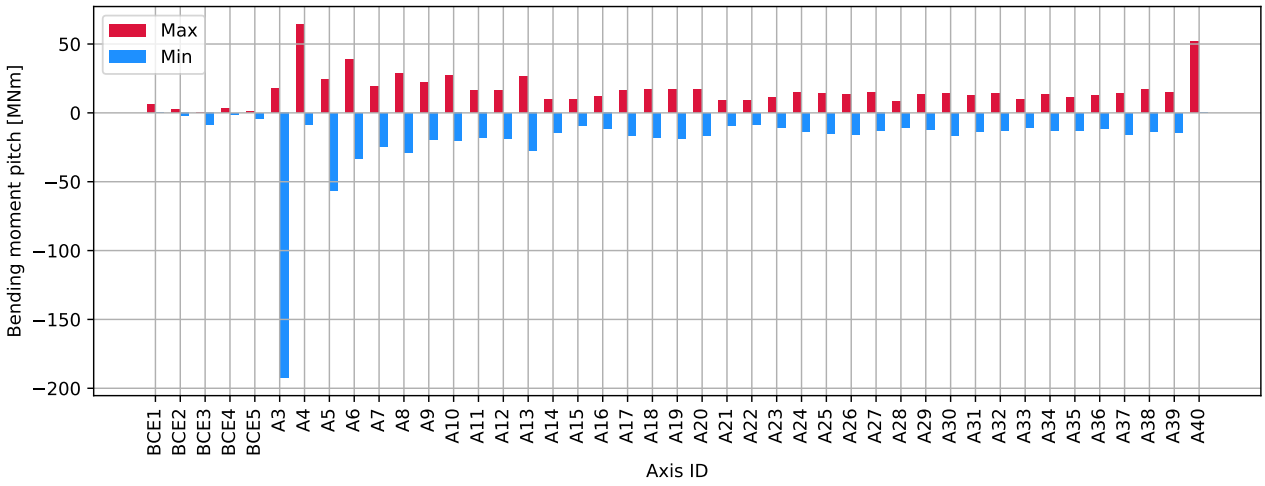

Figure 3.384: P A40 0deg - columns bottom : Bending moment pitch [MNm]

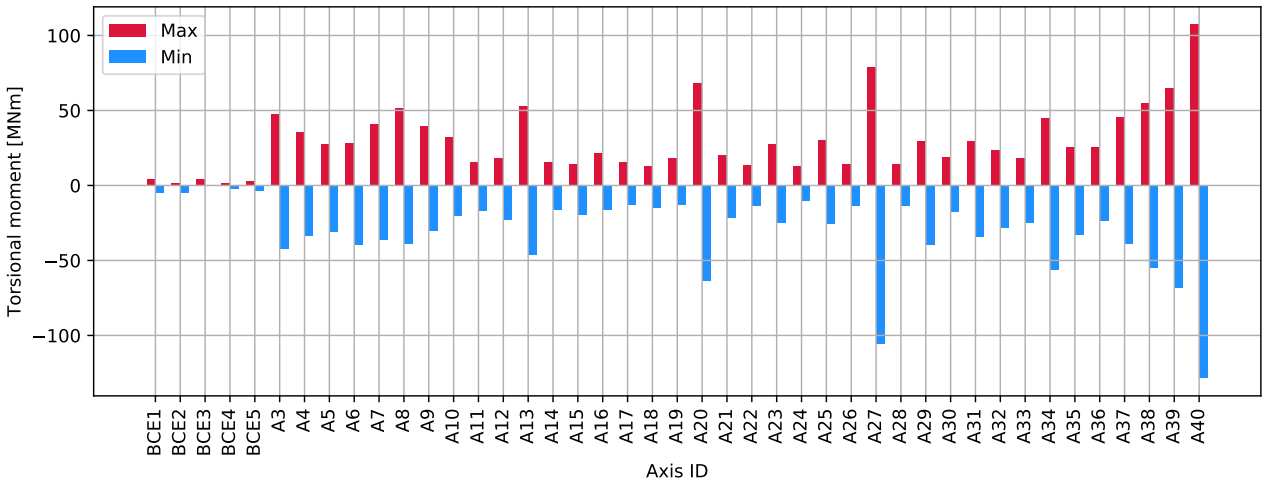

Figure 3.385: P A40 0deg - columns bottom : Torsional moment [MNm]

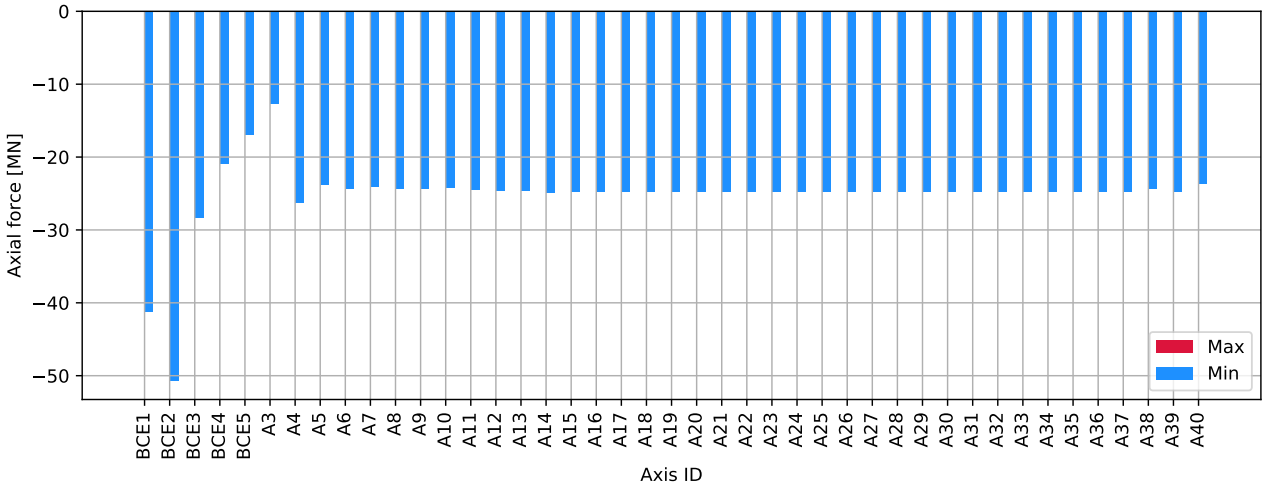

Figure 3.386: P A40 0deg - columns top : Axial force [MN]

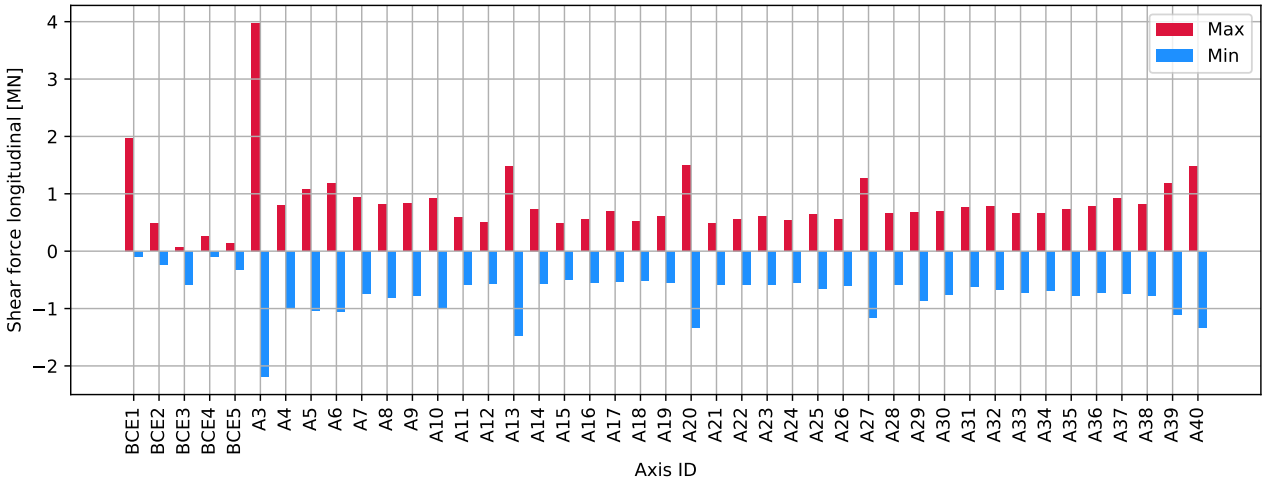

Figure 3.387: P A40 0deg - columns top : Shear force longitudinal [MN]

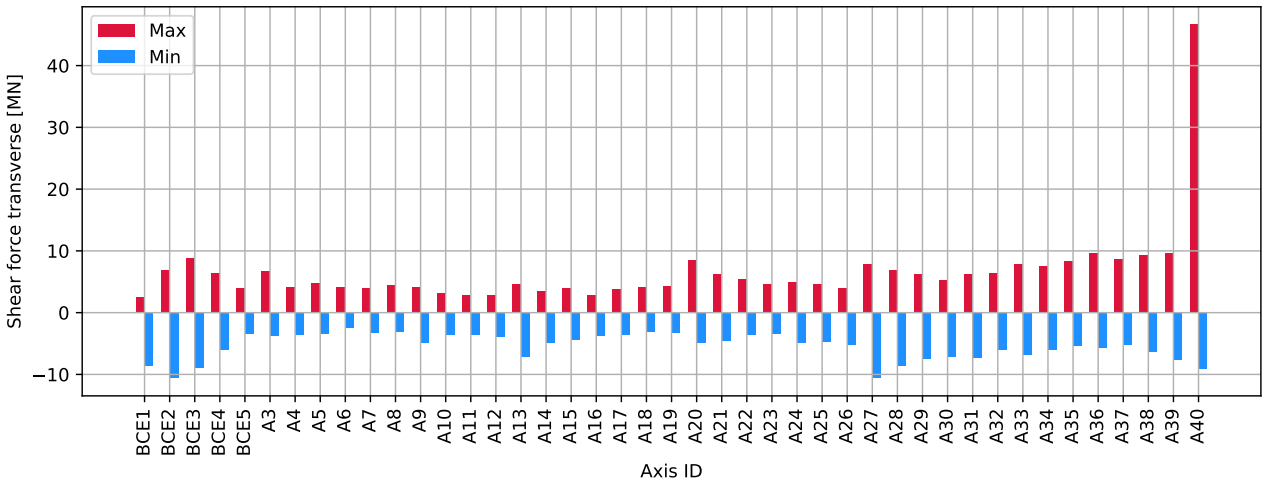

Figure 3.388: P A40 0deg - columns top : Shear force transverse [MN]

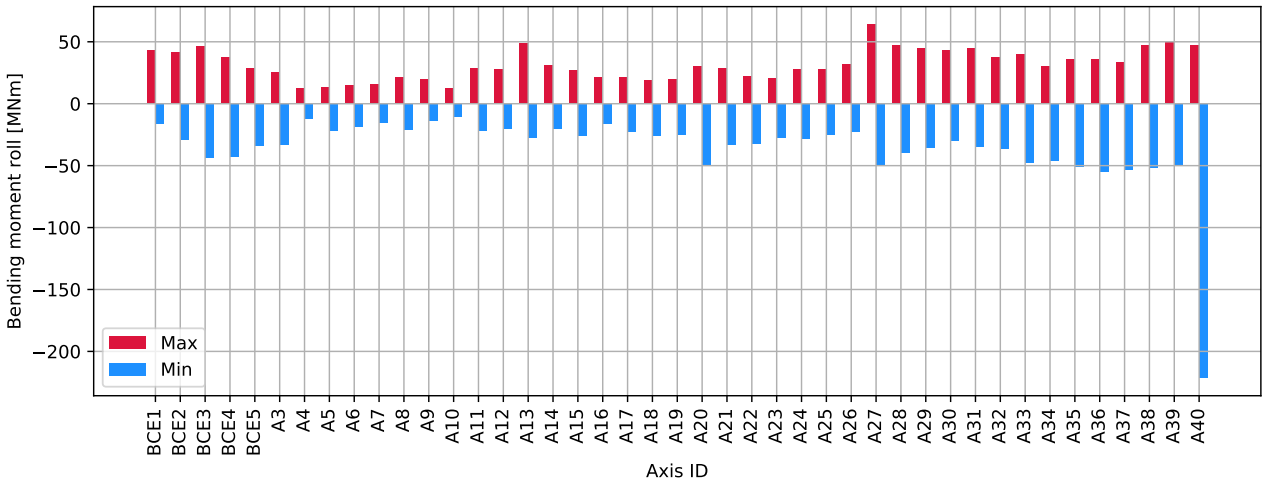

Figure 3.389: P A40 0deg - columns top : Bending moment roll [MNm]

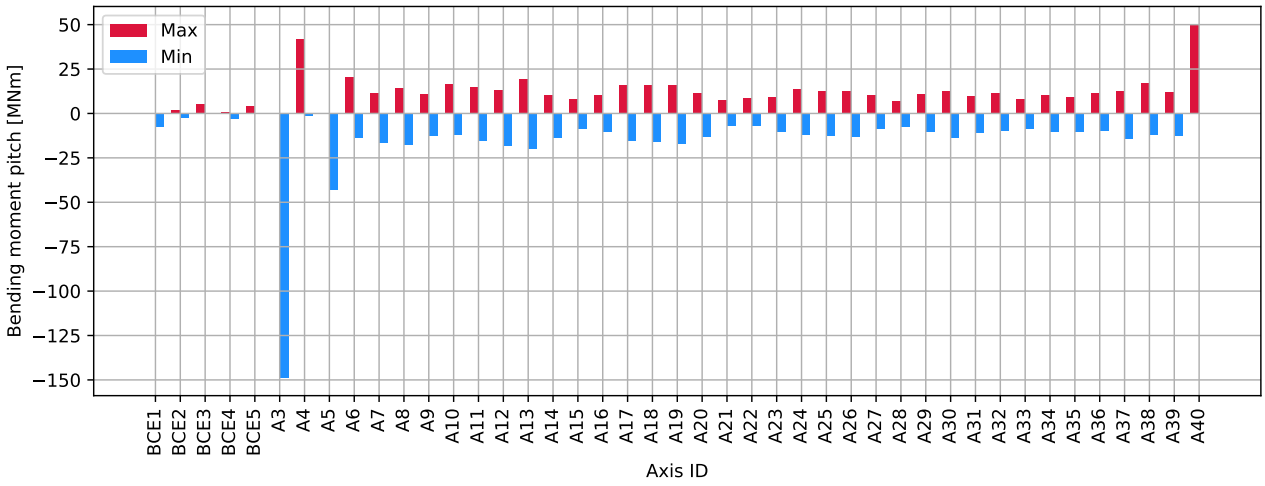

Figure 3.390: P A40 0deg - columns top : Bending moment pitch [MNm]

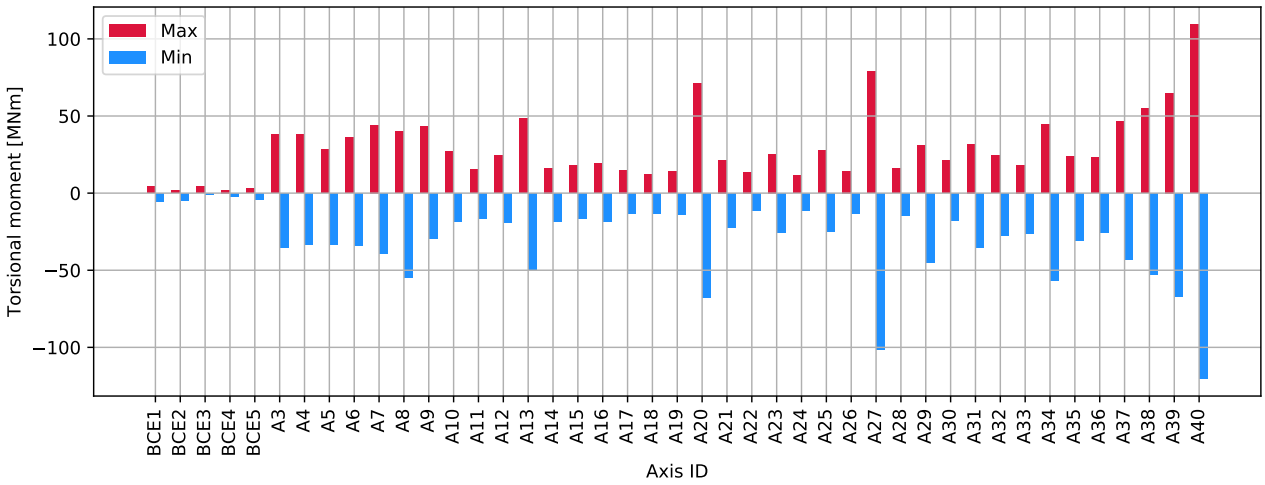

Figure 3.391: P A40 0deg - columns top : Torsional moment [MNm]

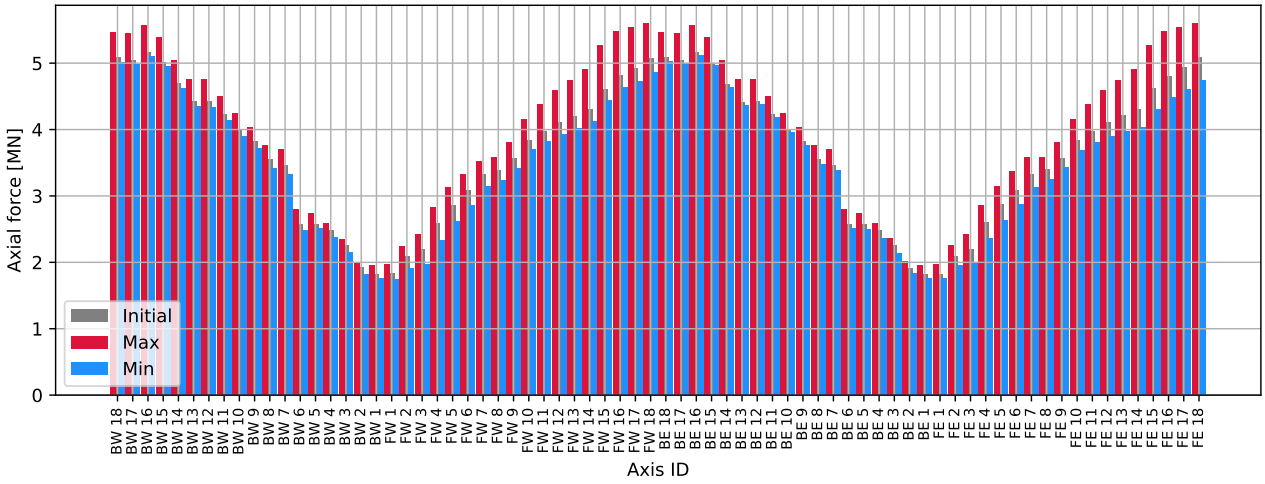

Figure 3.392: P A40 0deg - cables : Axial force [MN]

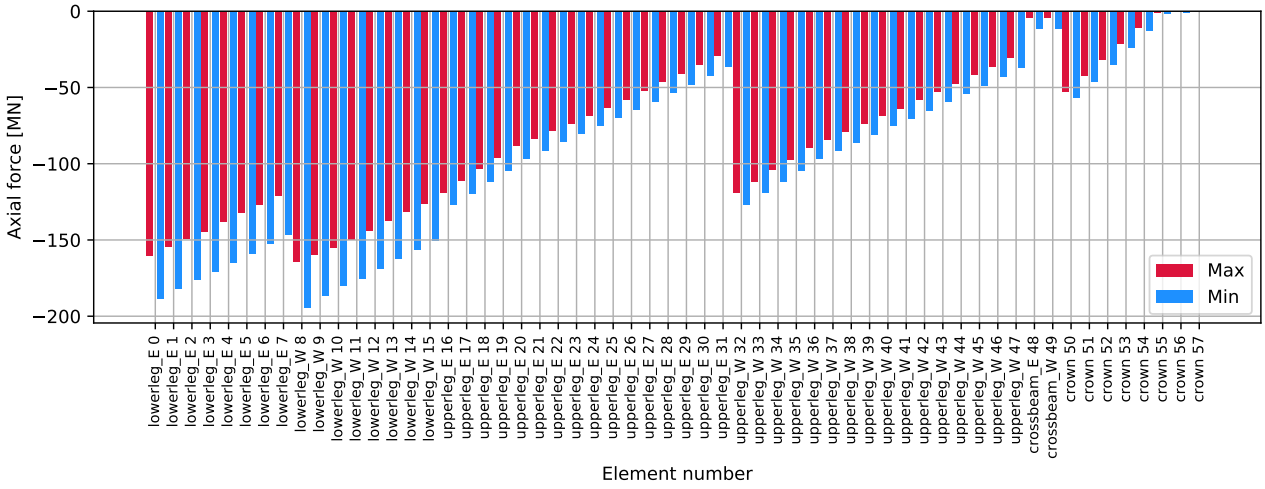

Figure 3.393: P A40 0deg - tower: Axial force [MN]

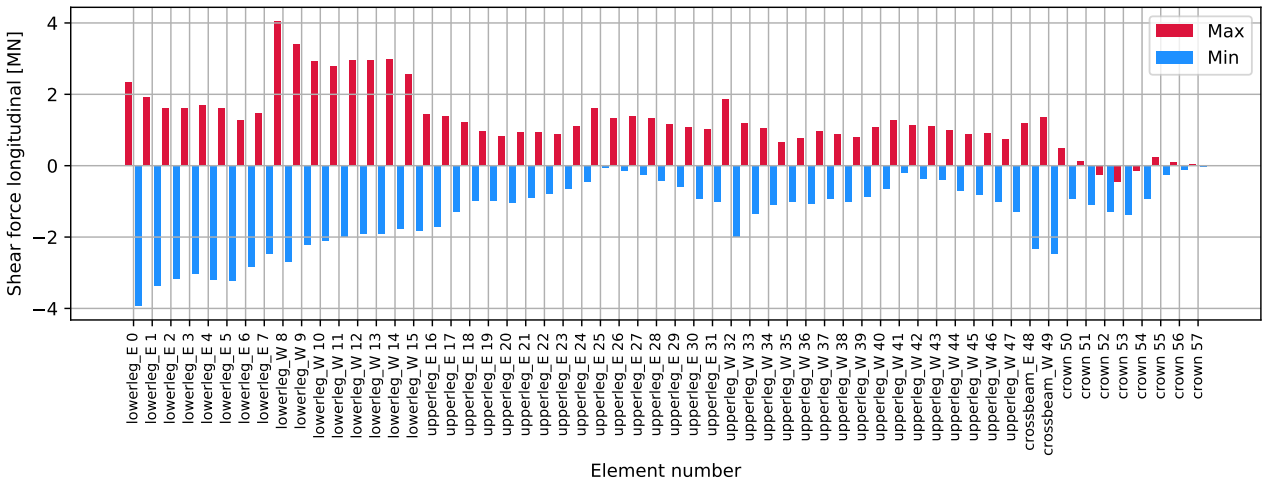

Figure 3.394: P A40 0deg - tower: Shear force longitudinal [MN]

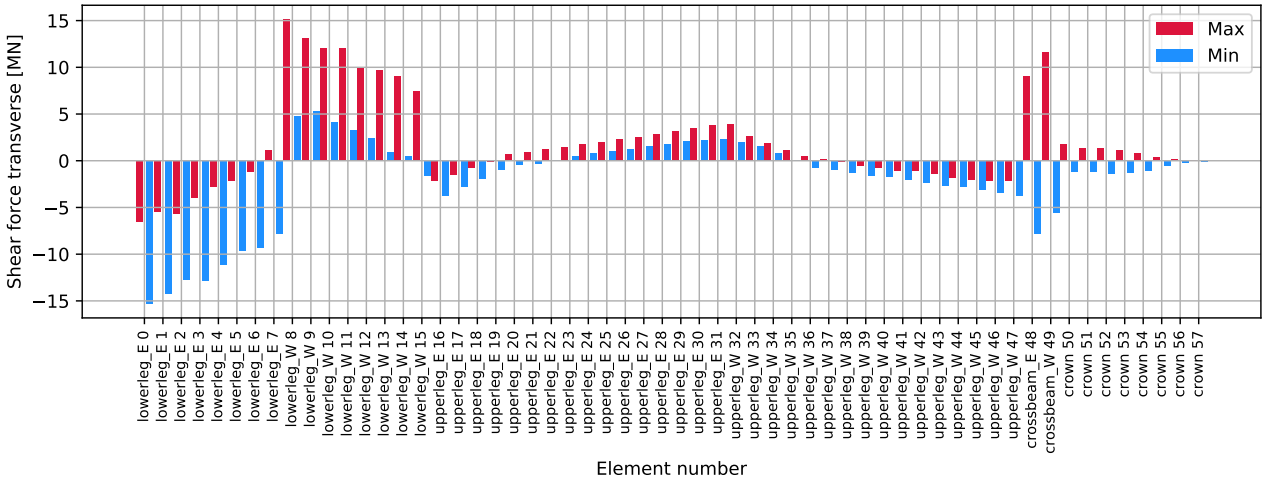

Figure 3.395: P A40 0deg - tower: Shear force transverse [MN]

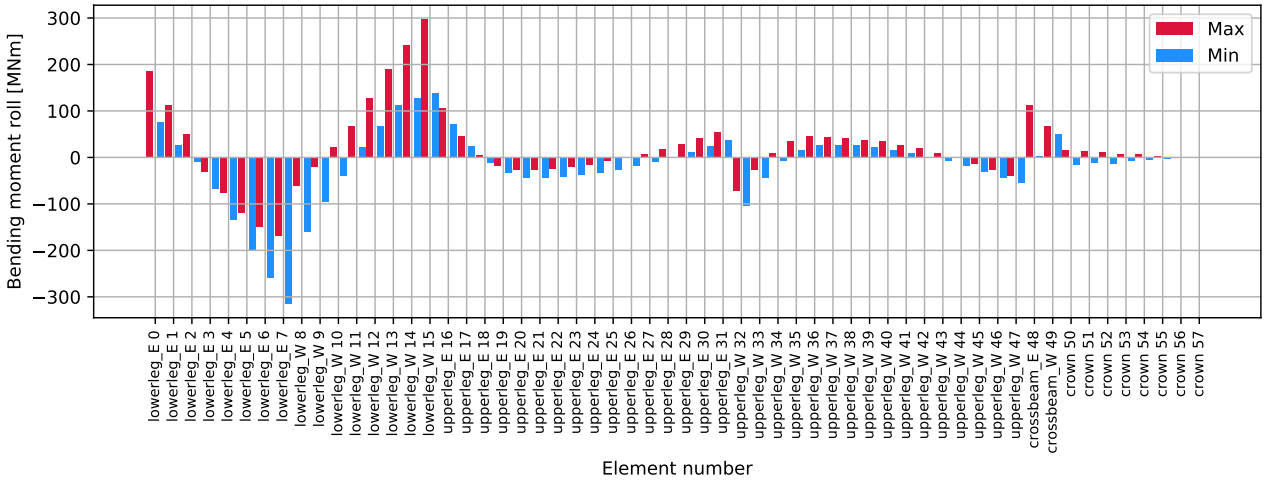

Figure 3.396: P A40 0deg - tower: Bending moment roll [MNm]

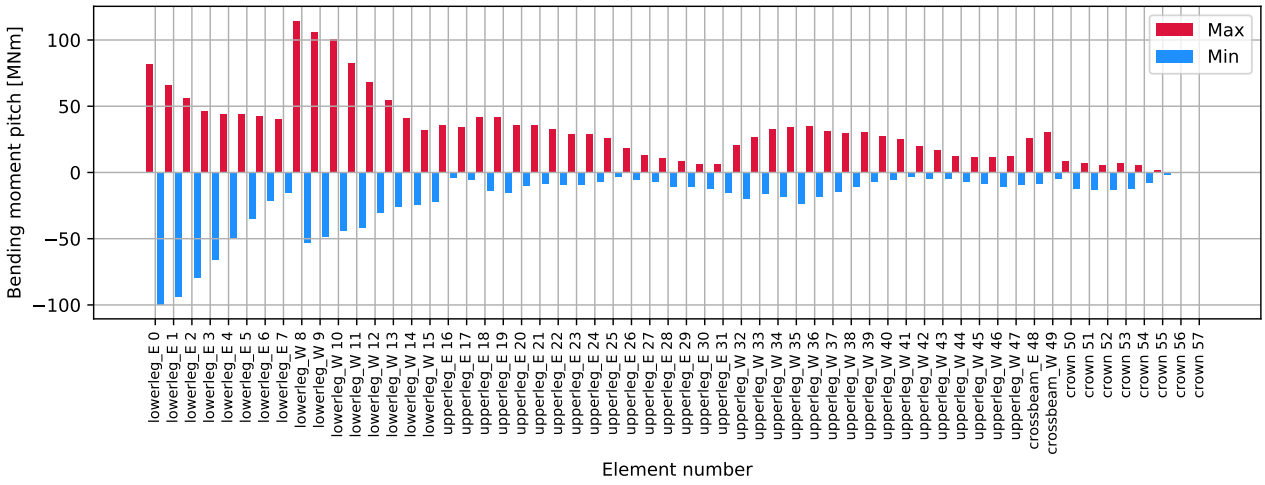

Figure 3.397: P A40 0deg - tower: Bending moment pitch [MNm]

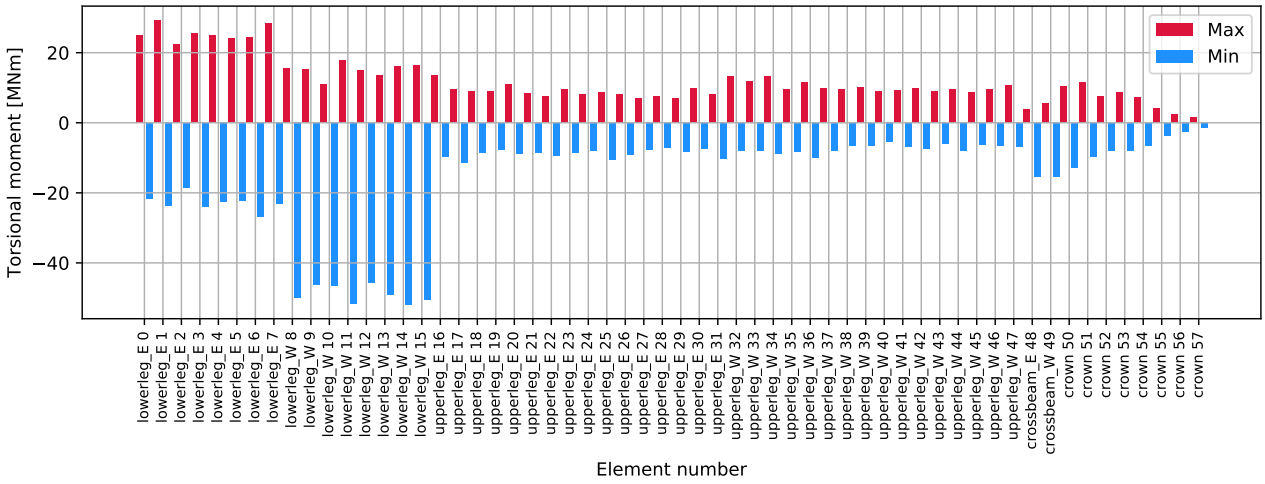

Figure 3.398: P A40 0deg - tower: Torsional moment [MNm]

3.9.3 Time series

Note : Time series are filtered using a Saviotzky-Golay filter for increased readability of the time history plots. Hence, maximum values that occur due to a rapid vibration are not shown in the plots. For maximum values, refer to the tabulated data.
All elements are numbered from South to North, bottom to top

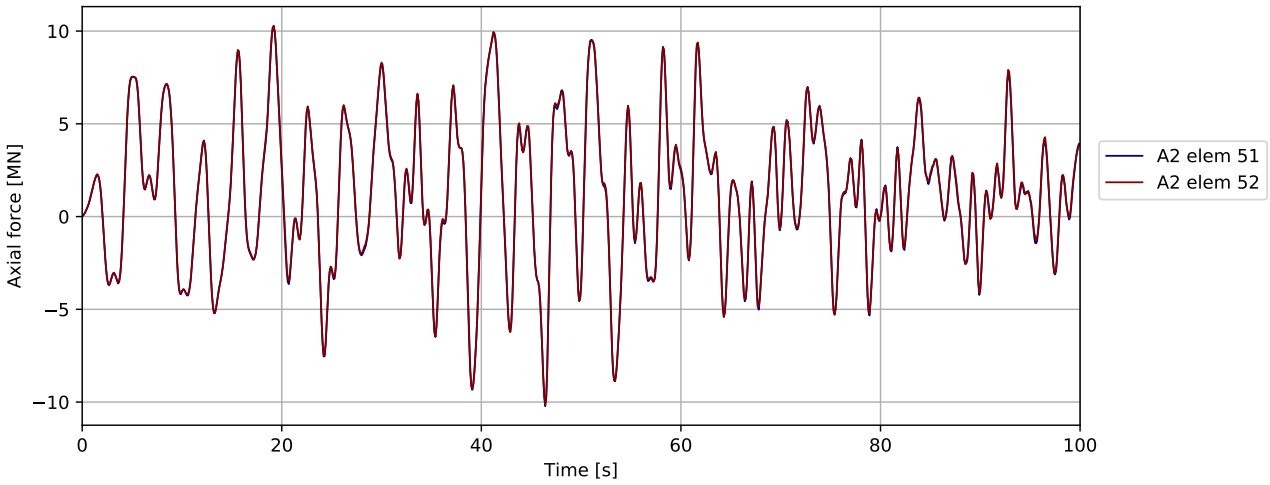

Figure 3.399: P A40 0deg - bridgegirder @ pylon: Axial force [MN]

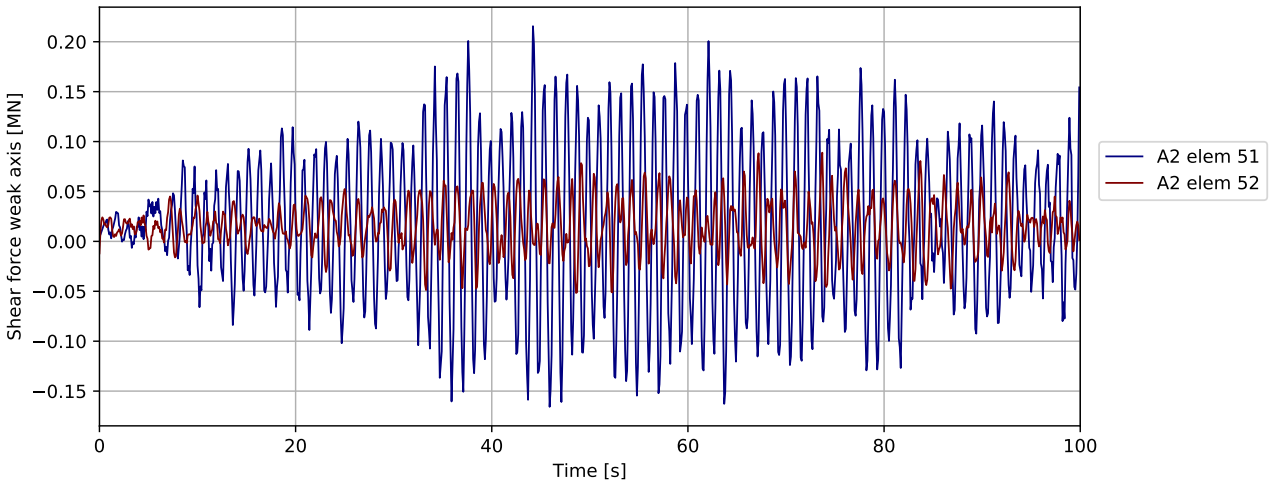

Figure 3.400: P A40 0deg - bridgegirder @ pylon: Shear force weak axis [MN]

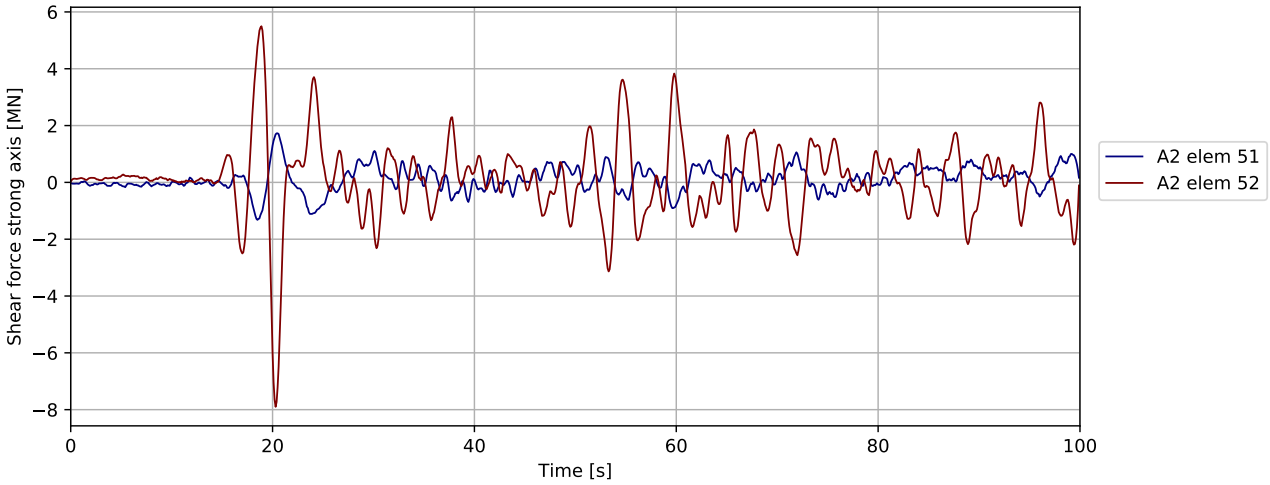

Figure 3.401: P A40 0deg - bridgegirder @ pylon: Shear force strong axis [MN]

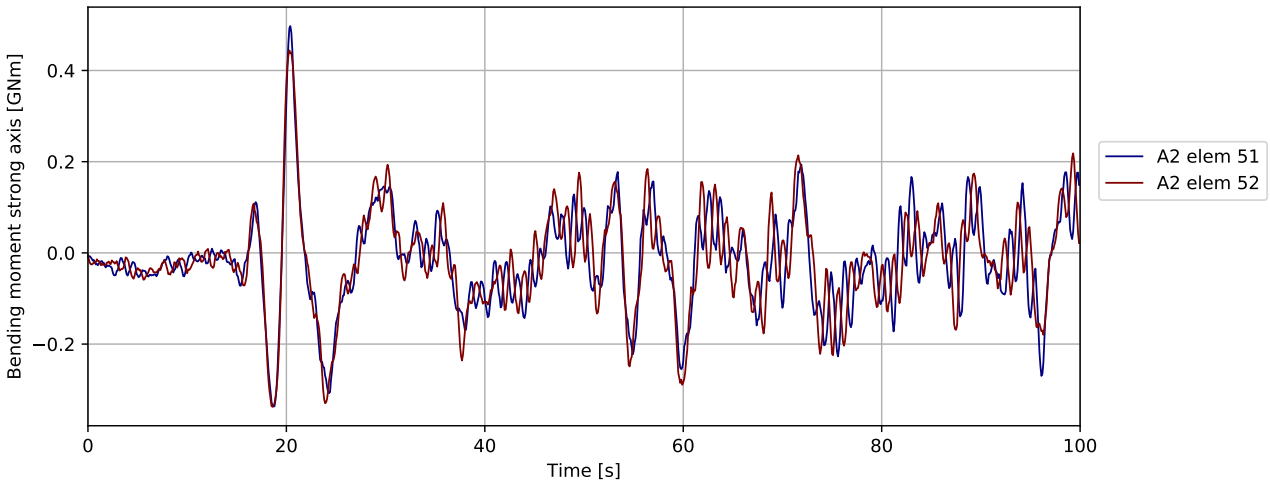

Figure 3.402: P A40 0deg - bridgegirder @ pylon: Bending moment strong axis [GNm]

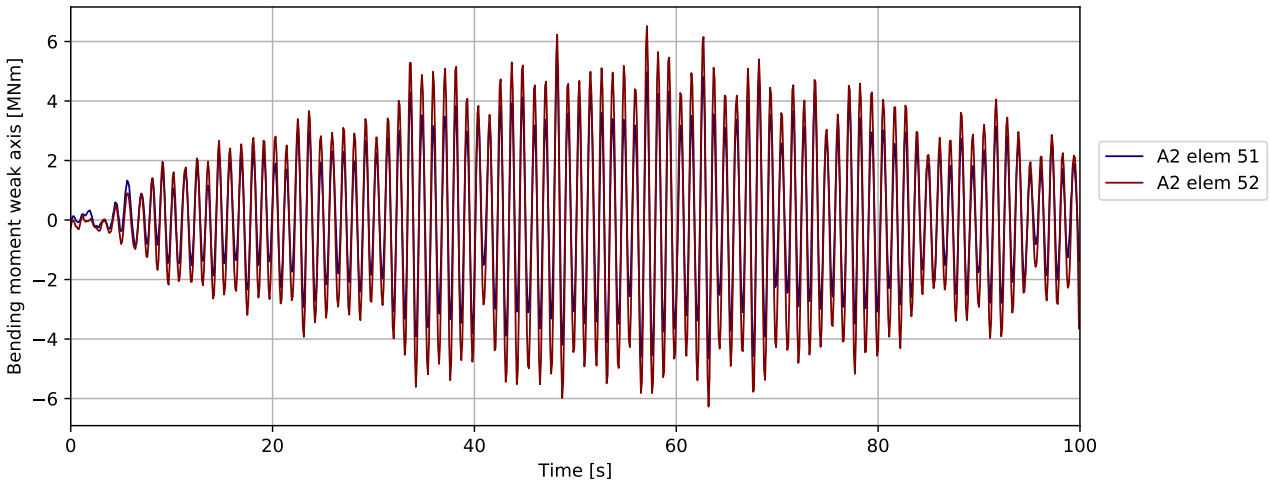

Figure 3.403: P A40 0deg - bridgegirder @ pylon: Bending moment weak axis [MNm]

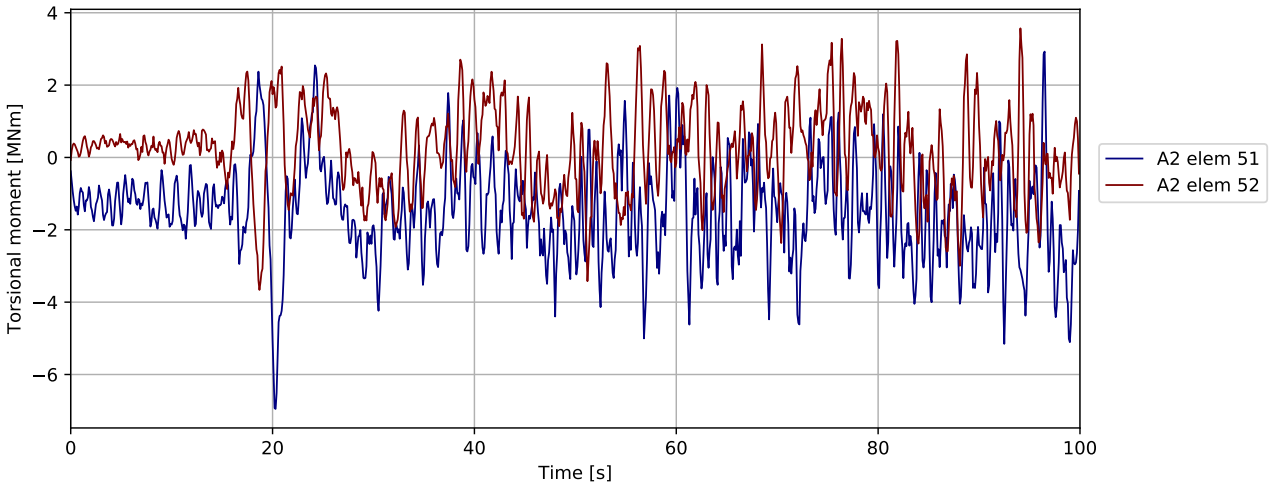

Figure 3.404: P A40 0deg - bridgegirder @ pylon: Torsional moment [MNm]

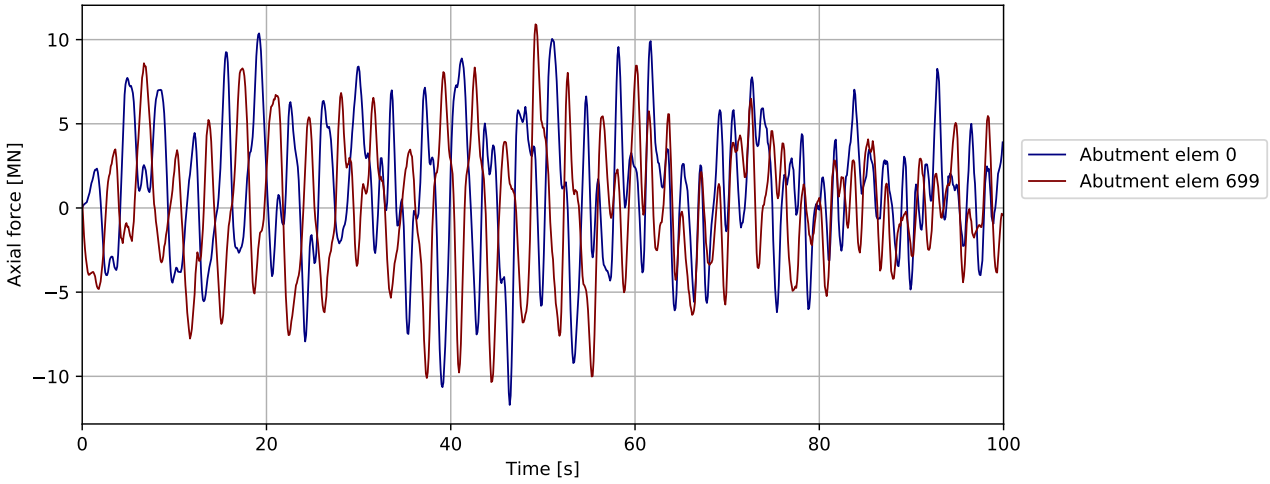

Figure 3.405: P A40 0deg - bridgegirder @abutments: Axial force [MN]

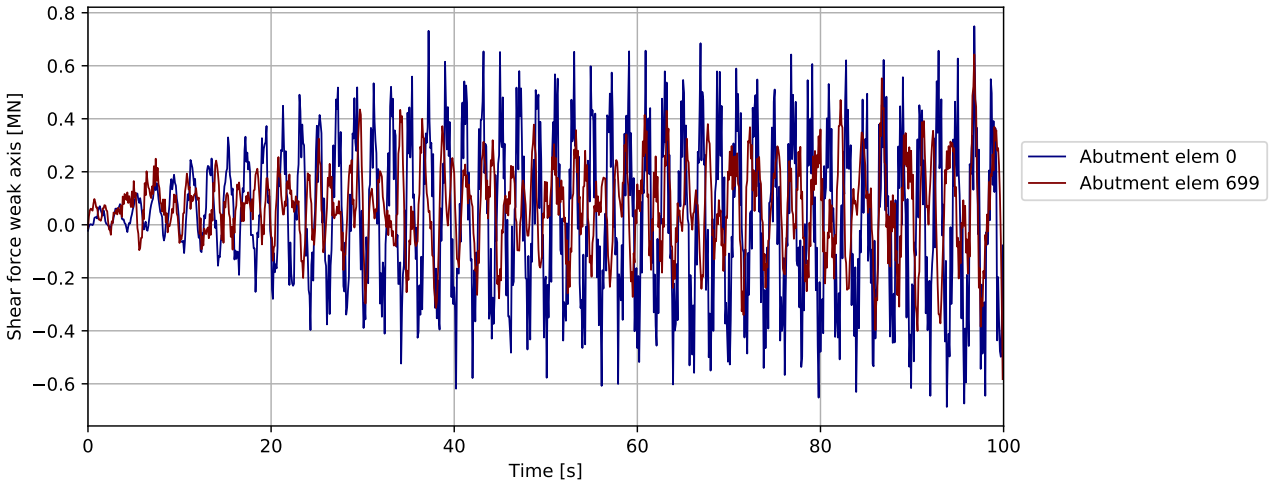

Figure 3.406: P A40 0deg - bridgegirder @abutments: Shear force weak axis [MN]

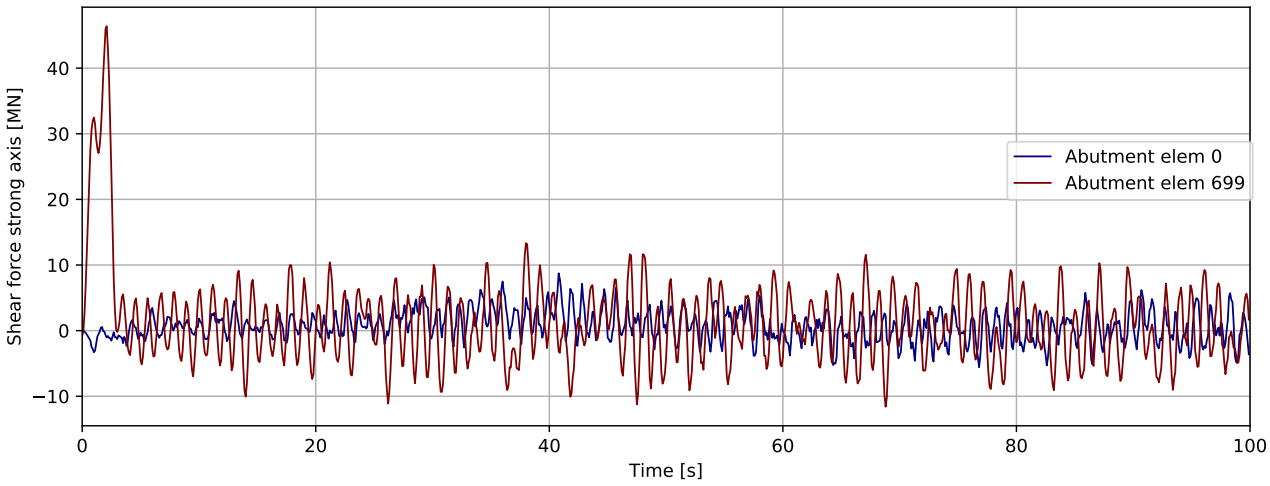

Figure 3.407: P A40 0deg - bridgegirder @abutments: Shear force strong axis [MN]

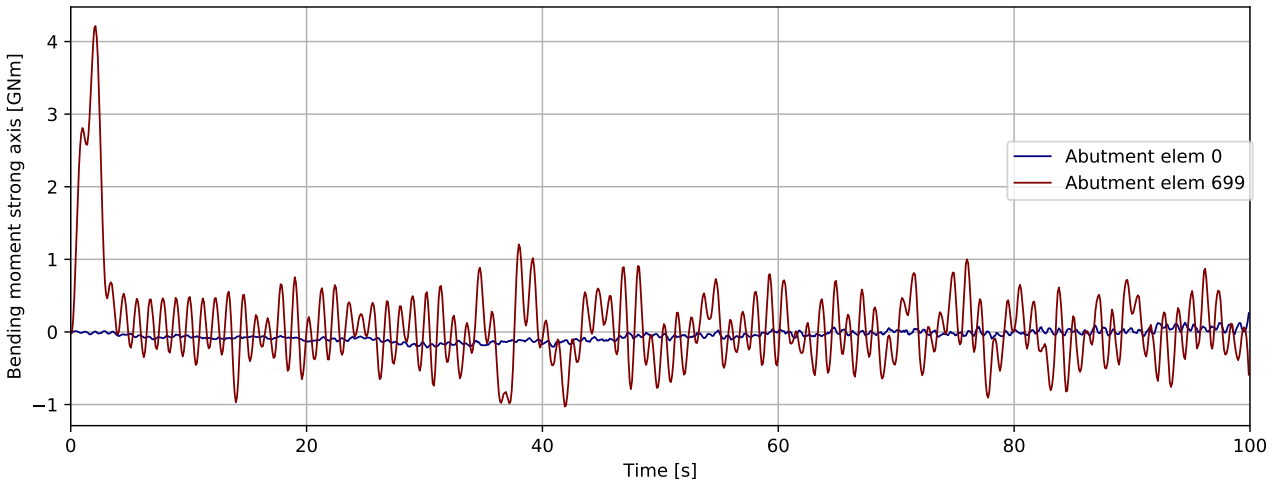

Figure 3.408: P A40 0deg - bridgegirder @abutments: Bending moment strong axis [GNm]

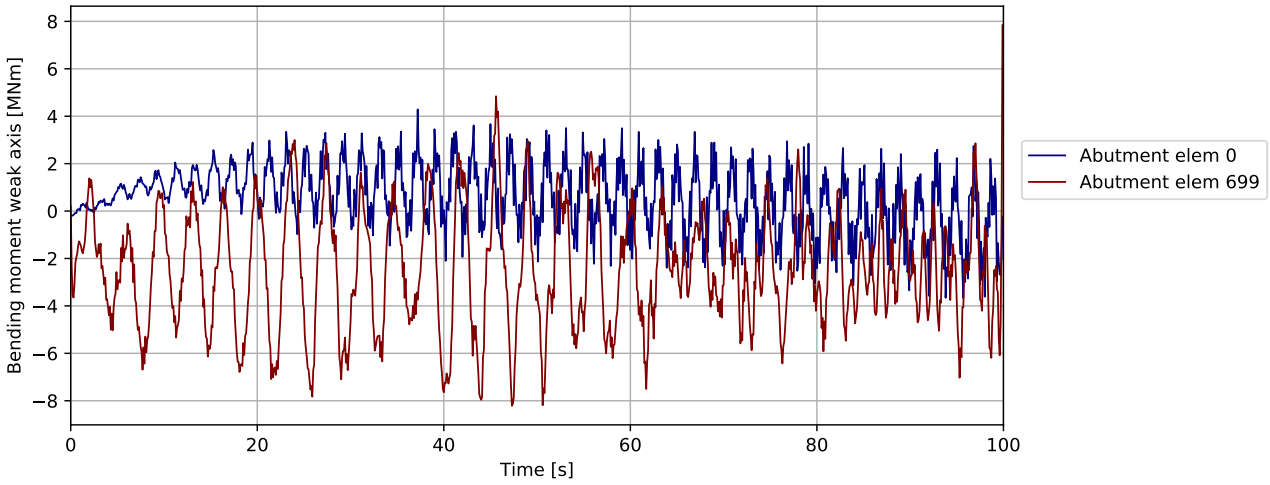

Figure 3.409: P A40 0deg - bridgegirder @abutments: Bending moment weak axis [MNm]

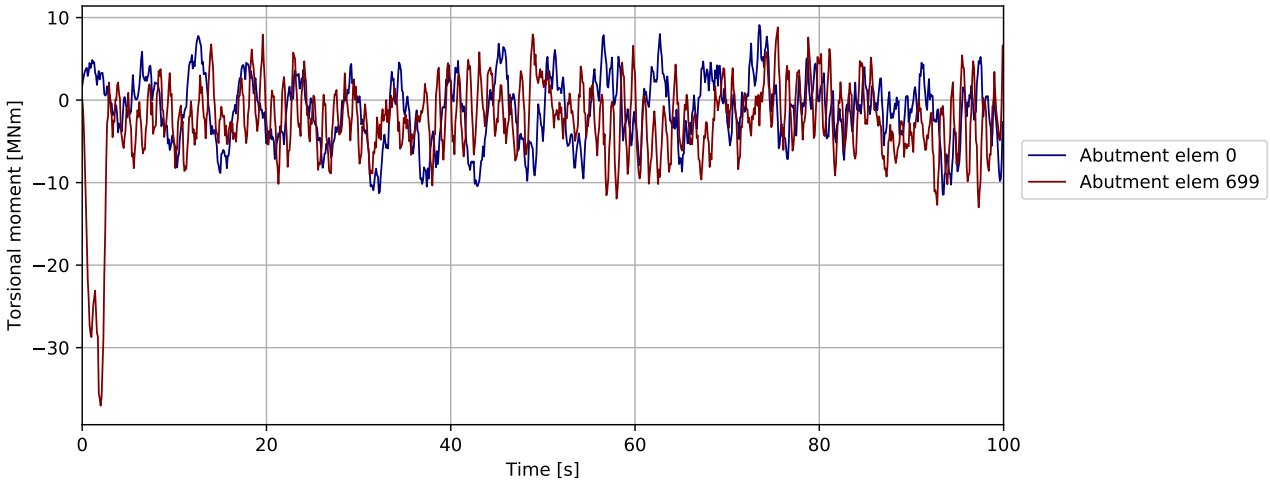

Figure 3.410: P A40 0deg - bridgegirder @abutments: Torsional moment [MNm]

Note : Compressive spring force is negative

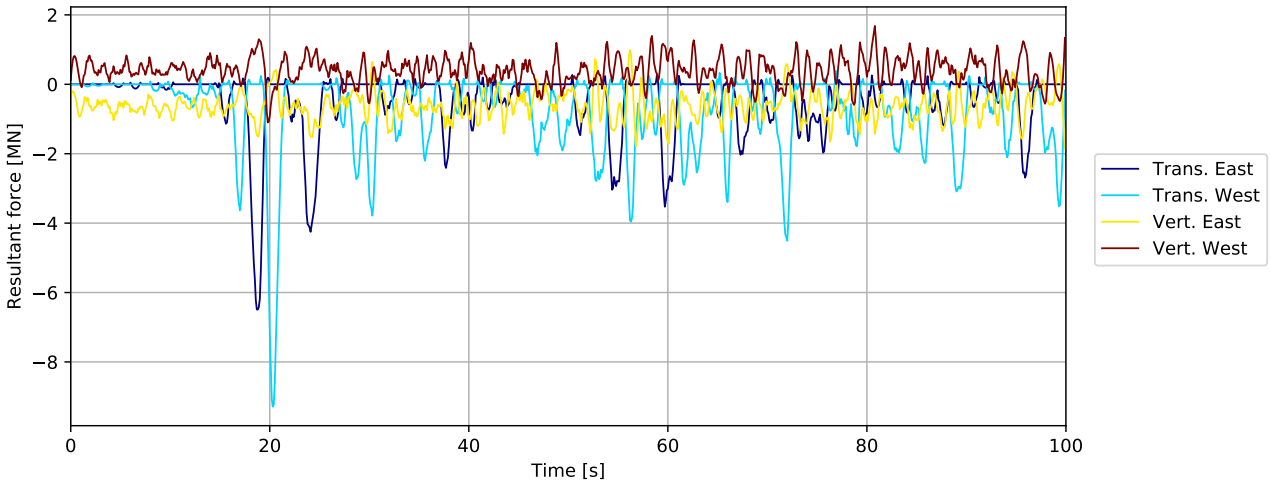

Figure 3.411: P A40 0deg - bridgegirder supports in tower: Resultant force [MN]

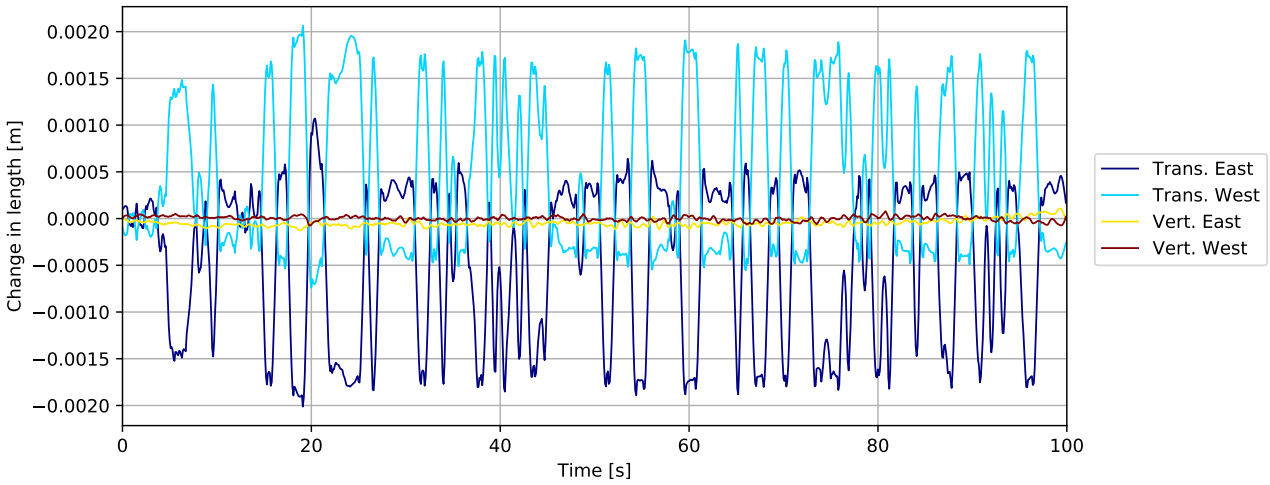

Figure 3.412: P A40 0deg - bridgegirder supports in tower: Change in length [m]

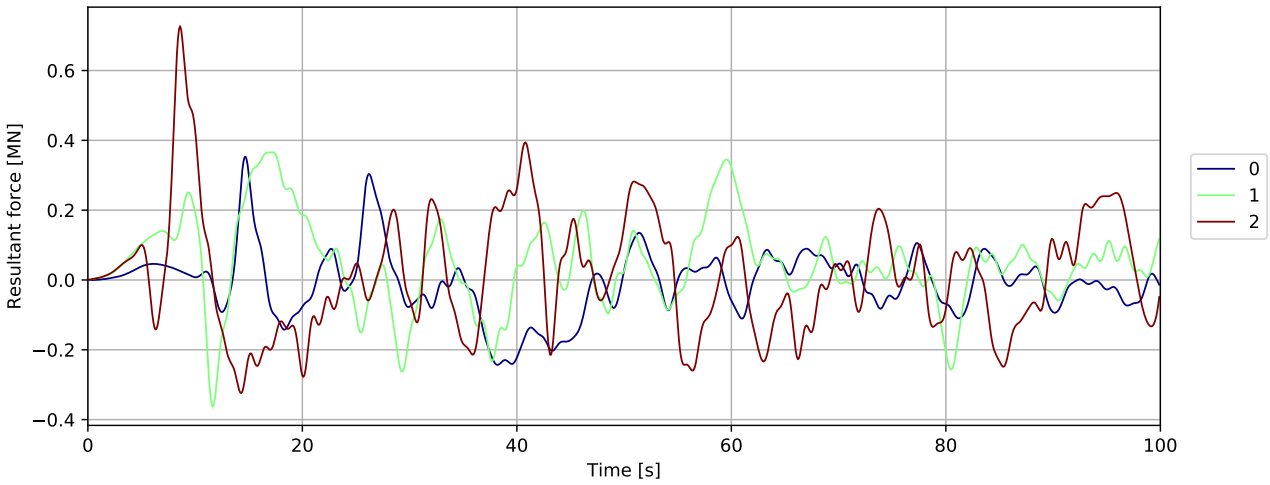

Figure 3.413: Mooring force

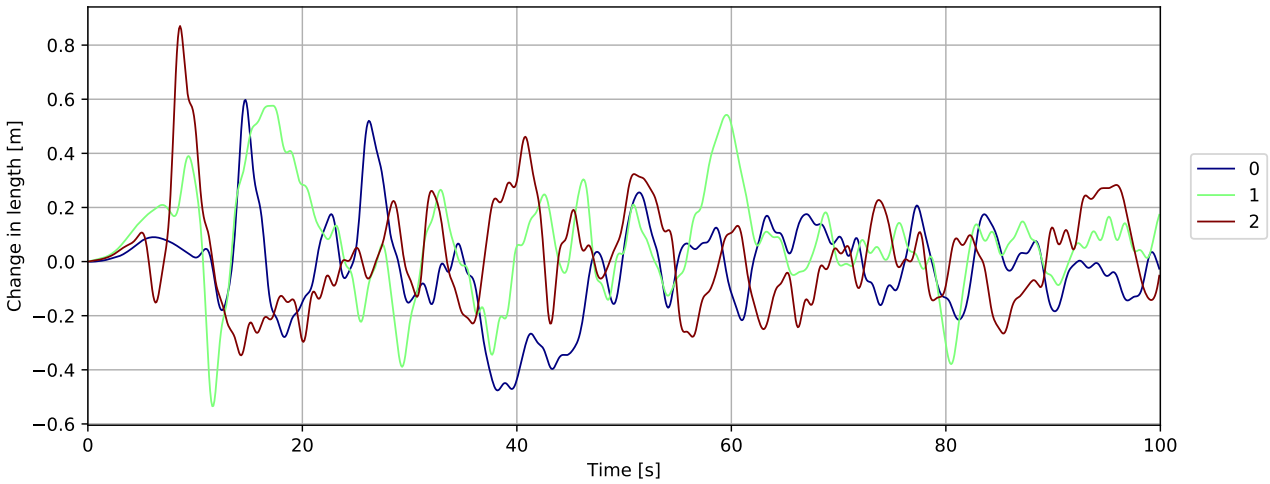

Figure 3.414: Mooring displacement

3.10 PontoonA3 45deg

3.10.1 Overall response

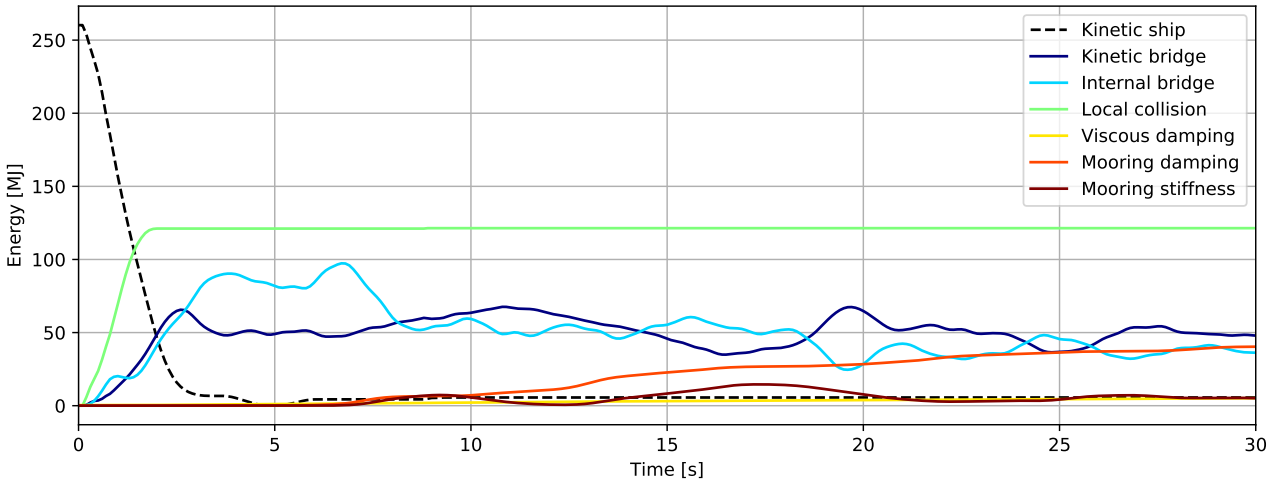

Figure 3.415: Energy [MJ] - initial phase

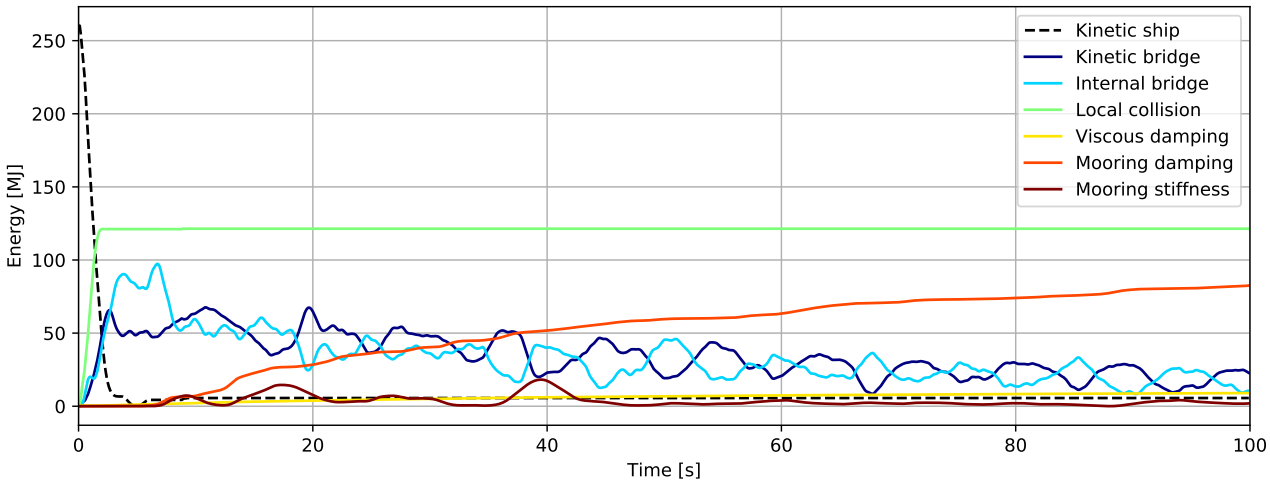

Figure 3.416: Energy [MJ]

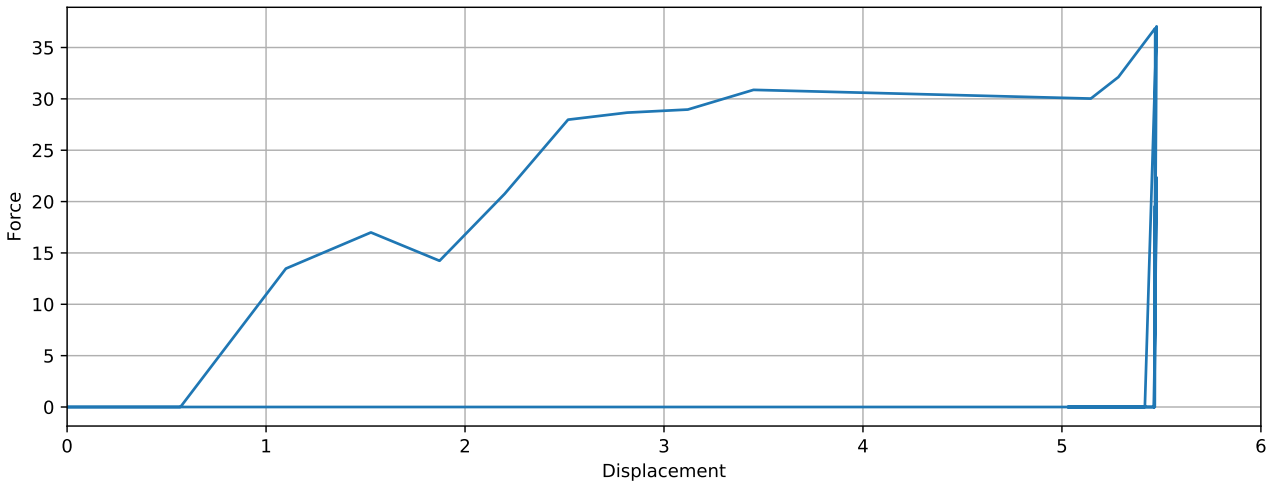

Figure 3.417: Simulated local collision force-displacement

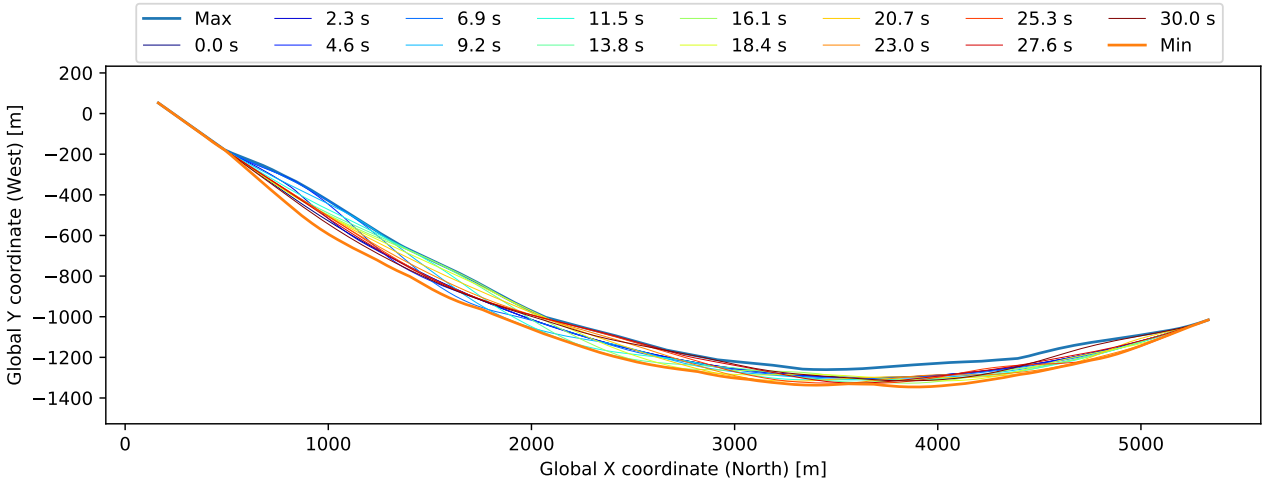

Figure 3.418: Bridgegirder deflection (10x displacment scaling)

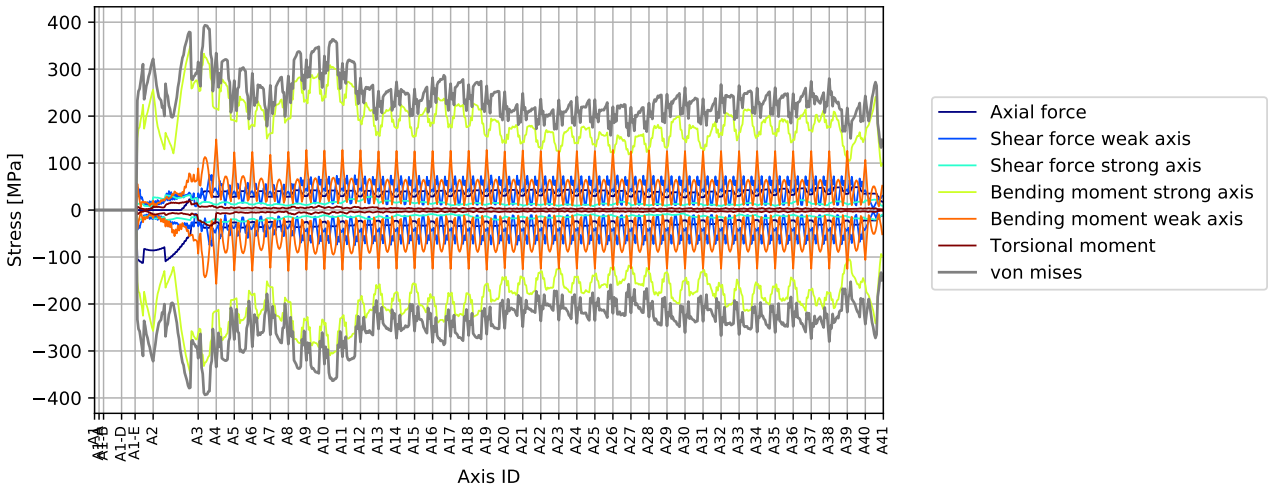

Figure 3.419: Stress envelope from all force components

3.10.2 Envelope plots

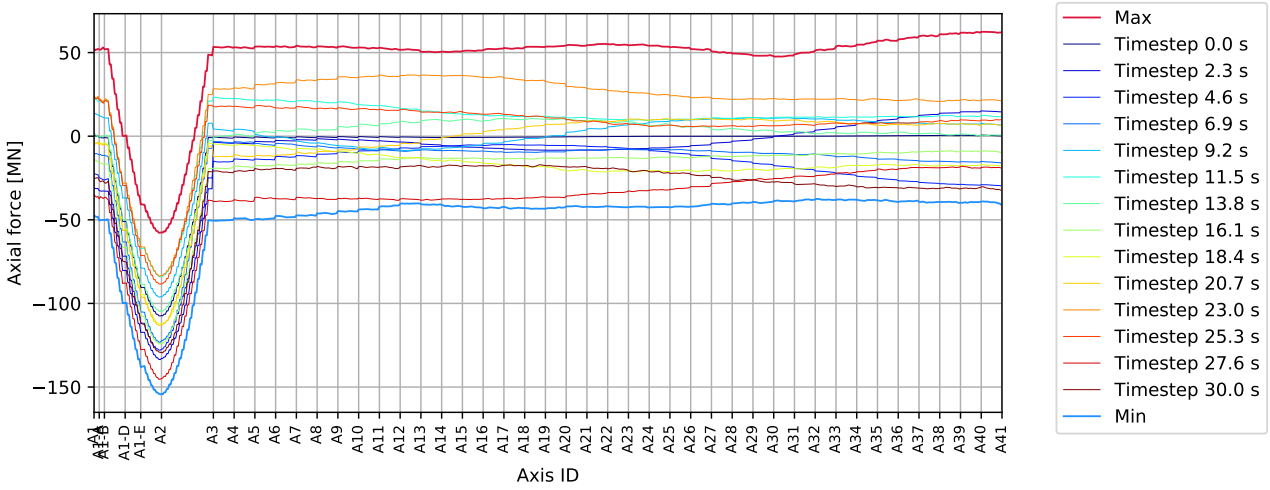

Figure 3.420: P A3 45deg - bridgegirder : Axial force [MN]

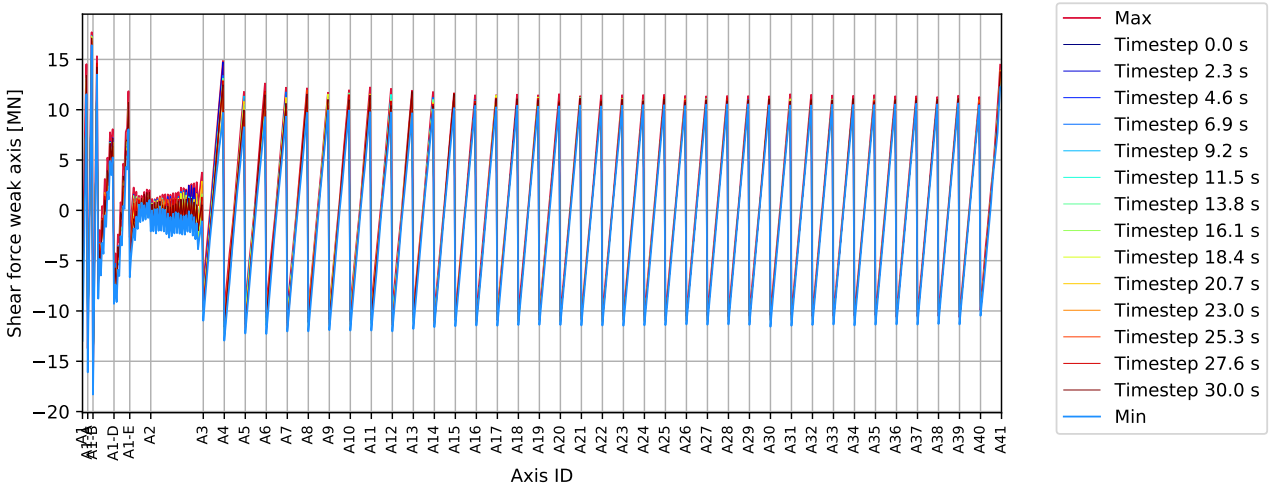

Figure 3.421: P A3 45deg - bridgegirder : Shear force weak axis [MN]

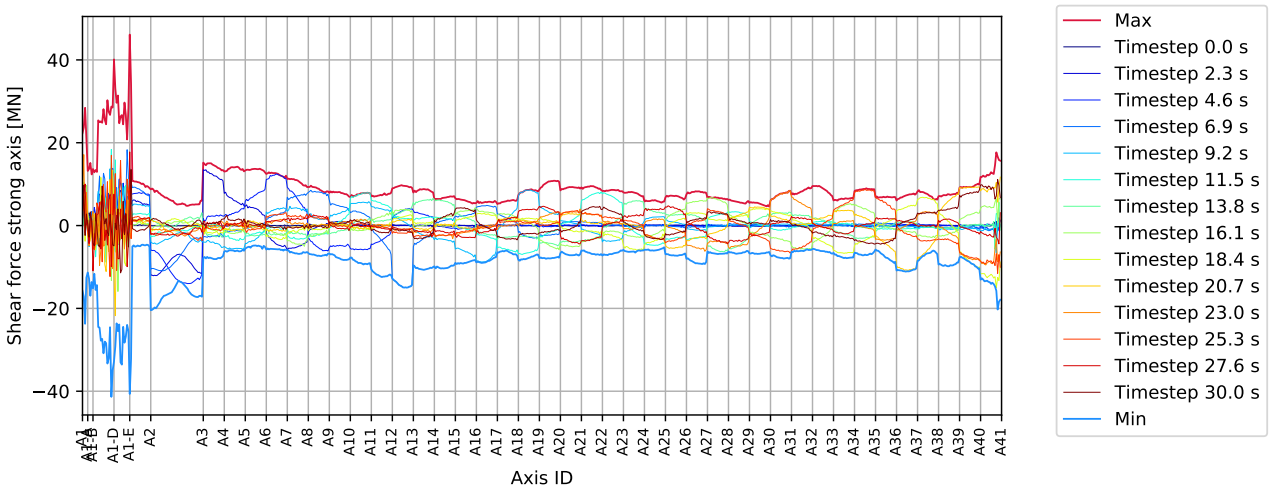

Figure 3.422: P A3 45deg - bridgegirder : Shear force strong axis [MN]

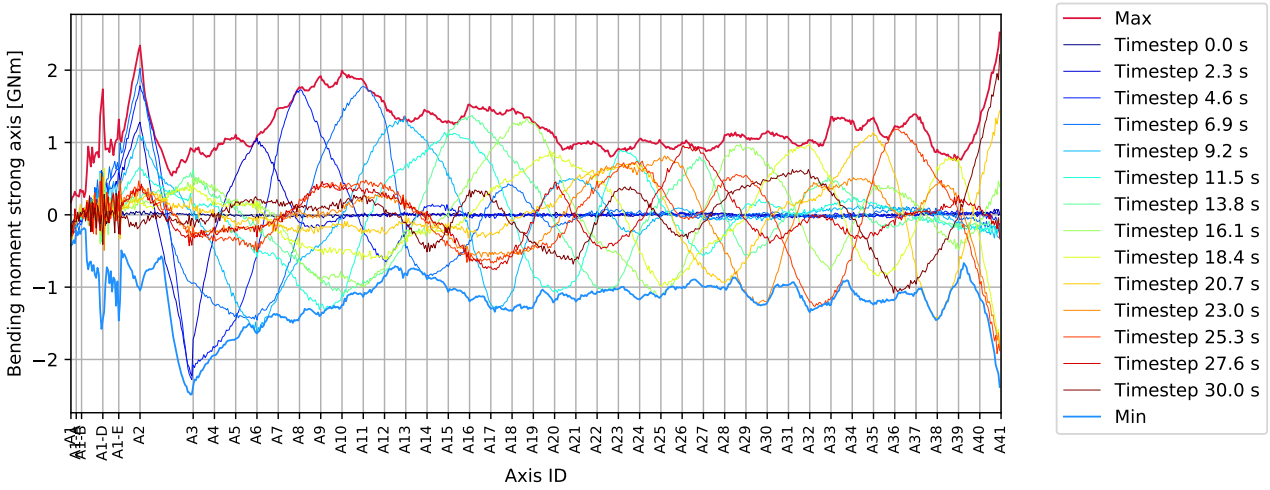

Figure 3.423: P A3 45deg - bridgegirder : Bending moment strong axis [GNm]

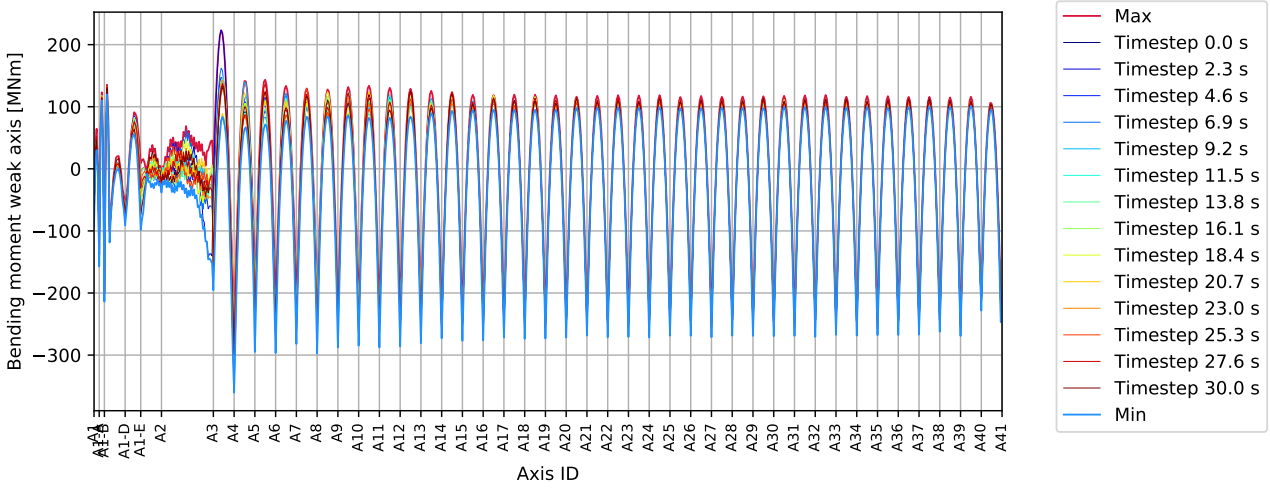

Figure 3.424: P A3 45deg - bridgegirder : Bending moment weak axis [MNm]

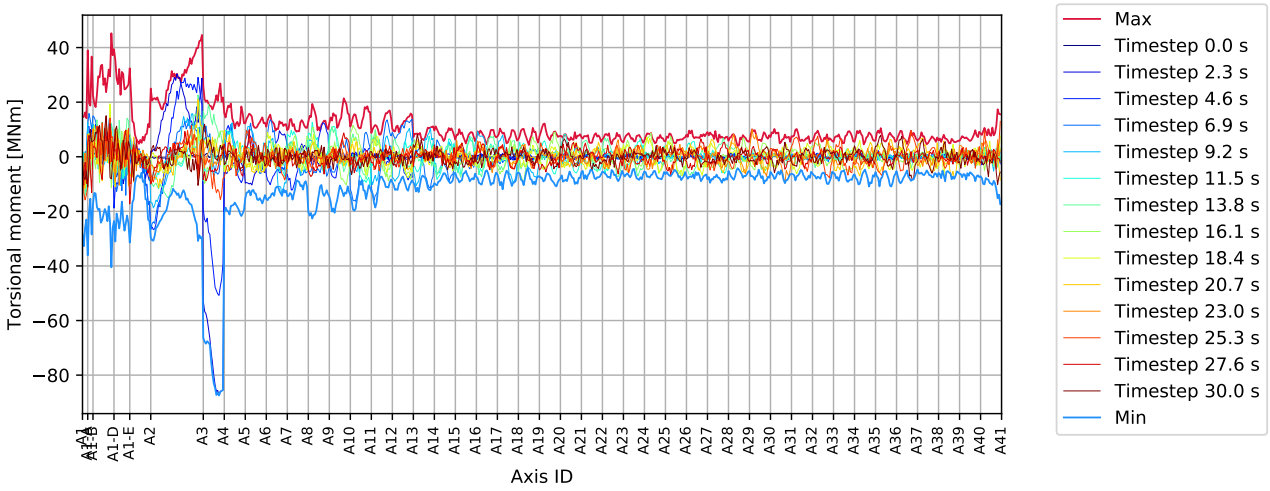

Figure 3.425: P A3 45deg - bridgegirder : Torsional moment [MNm]

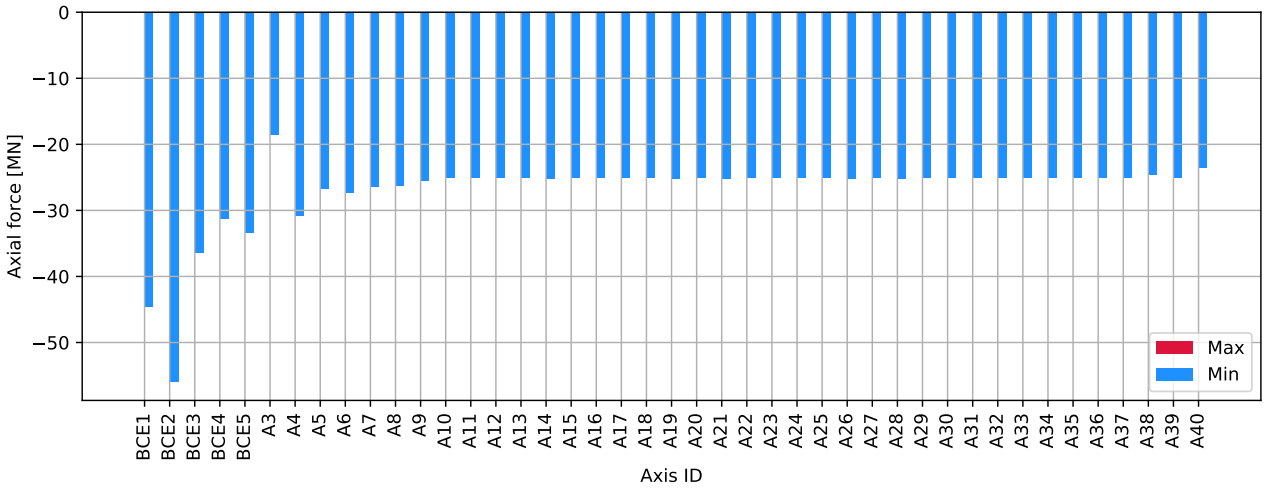

Figure 3.426: P A3 45deg - columns bottom : Axial force [MN]

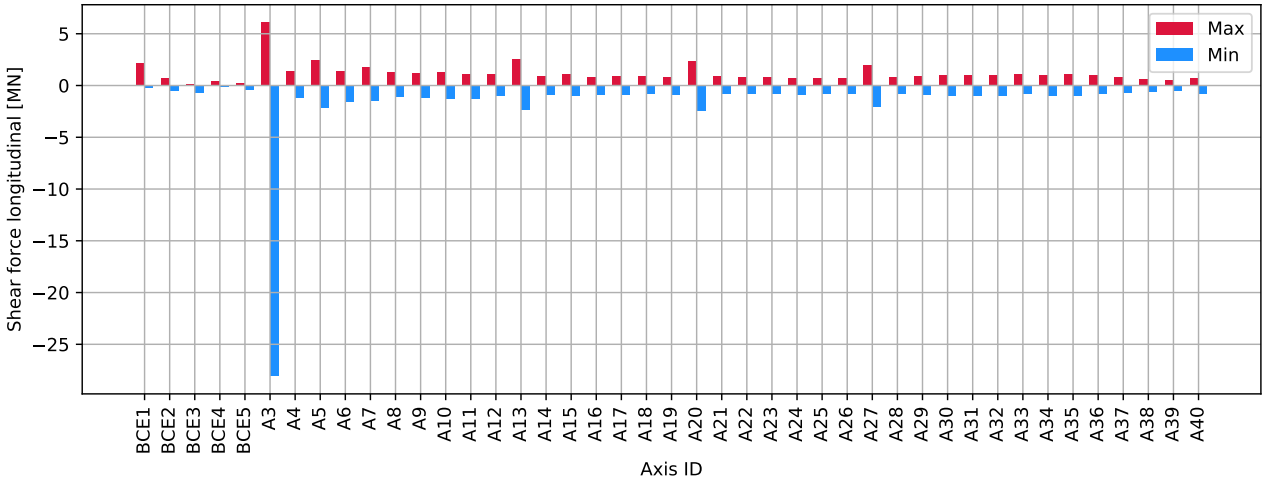

Figure 3.427: P A3 45deg - columns bottom : Shear force longitudinal [MN]

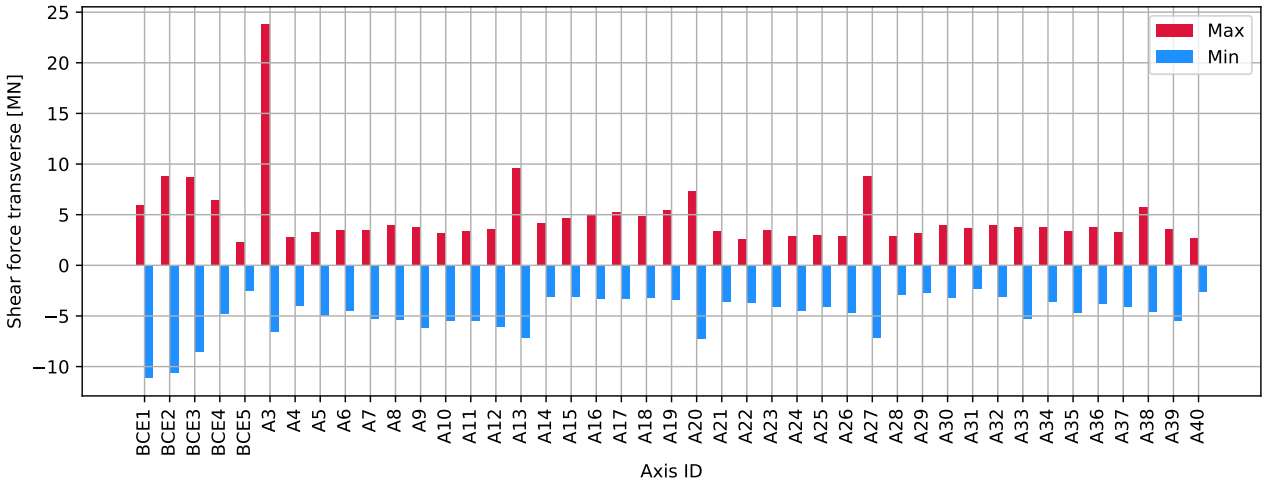

Figure 3.428: P A3 45deg - columns bottom : Shear force transverse [MN]

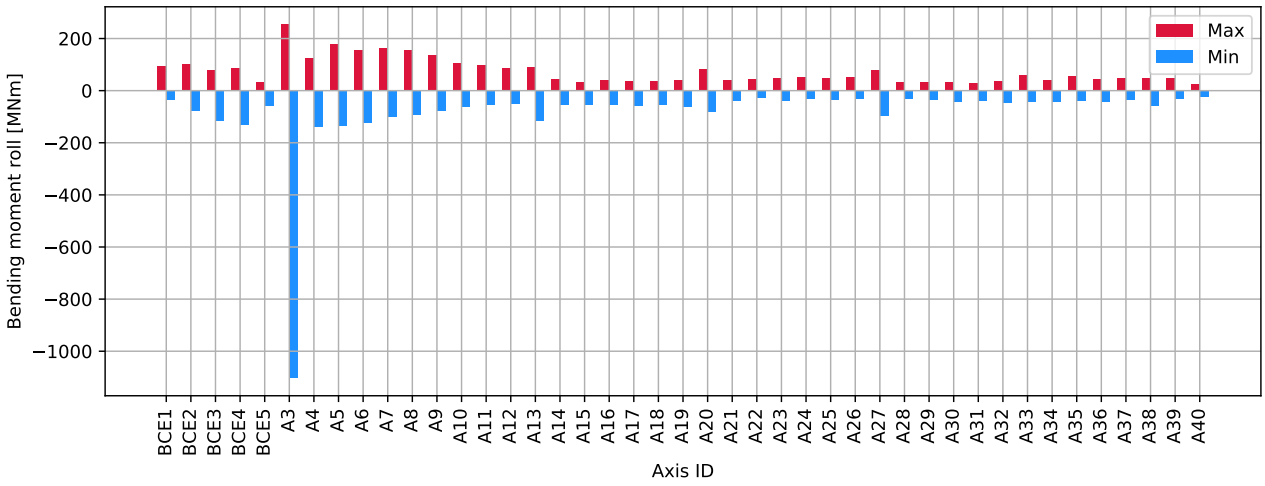

Figure 3.429: P A3 45deg - columns bottom : Bending moment roll [MNm]

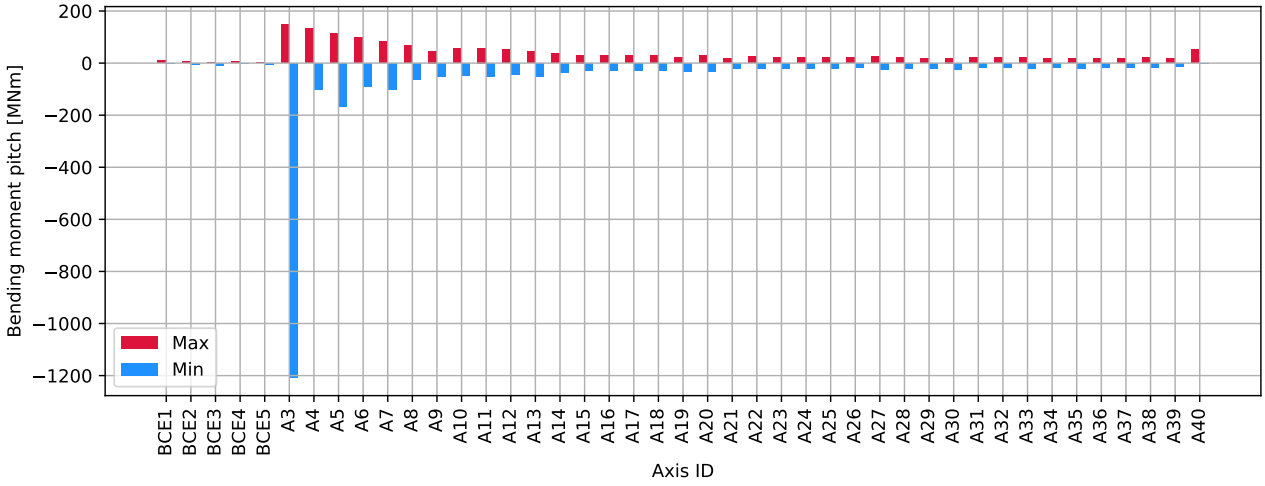

Figure 3.430: P A3 45deg - columns bottom : Bending moment pitch [MNm]

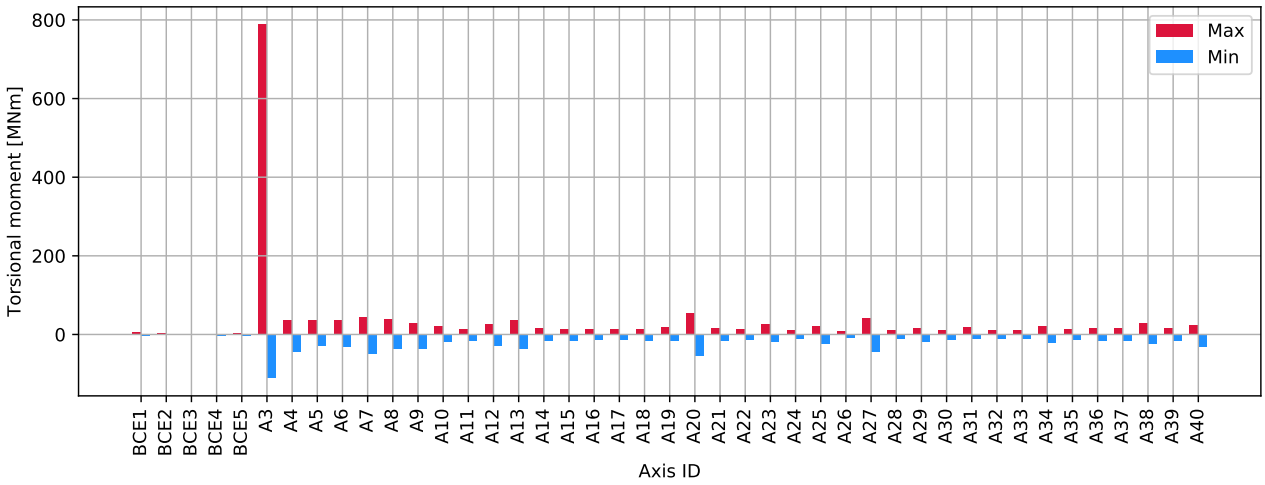

Figure 3.431: P A3 45deg - columns bottom : Torsional moment [MNm]

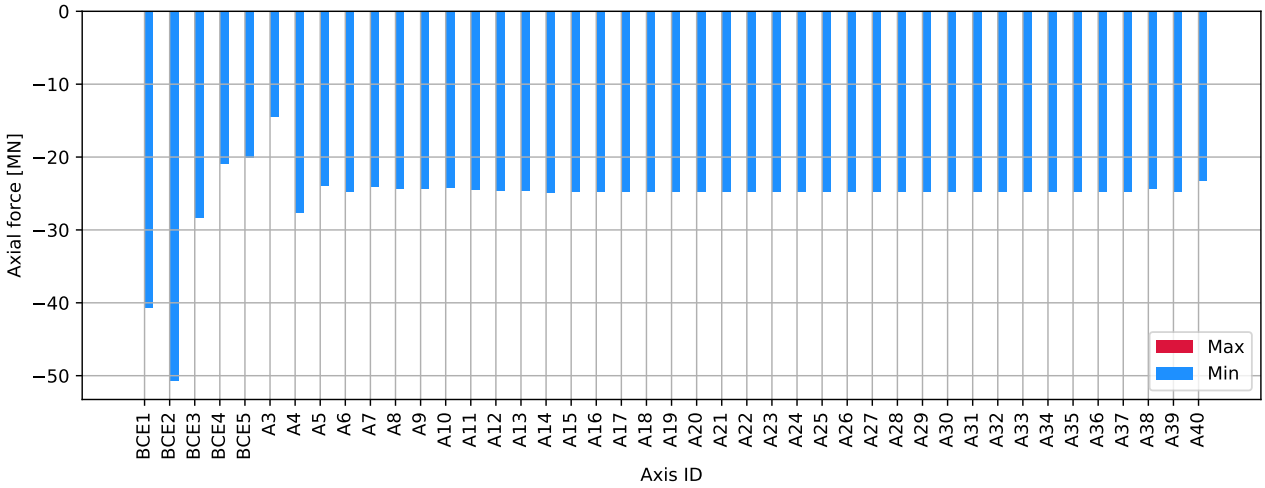

Figure 3.432: P A3 45deg - columns top : Axial force [MN]

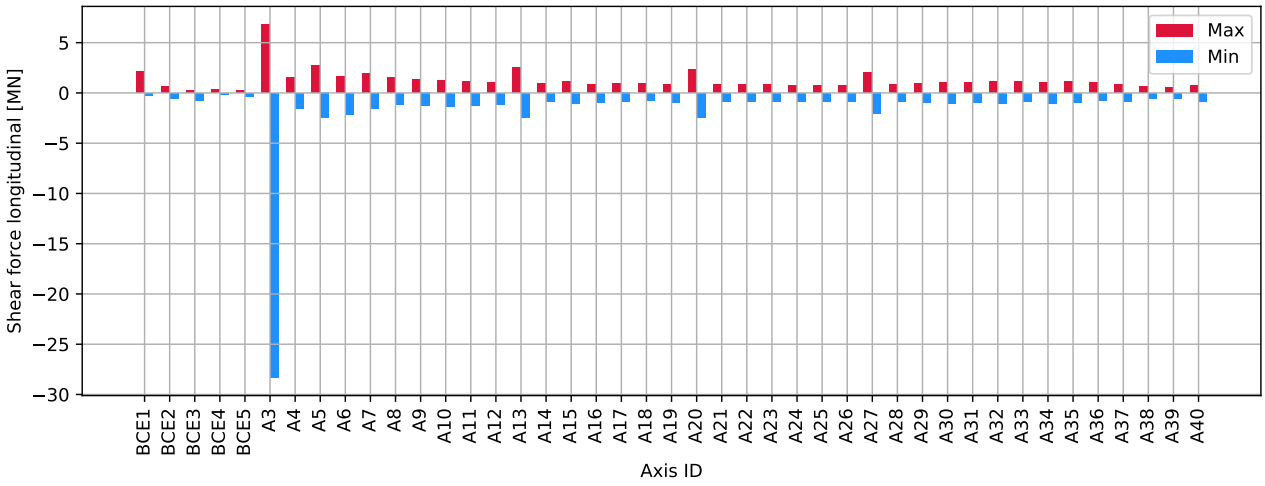

Figure 3.433: P A3 45deg - columns top : Shear force longitudinal [MN]

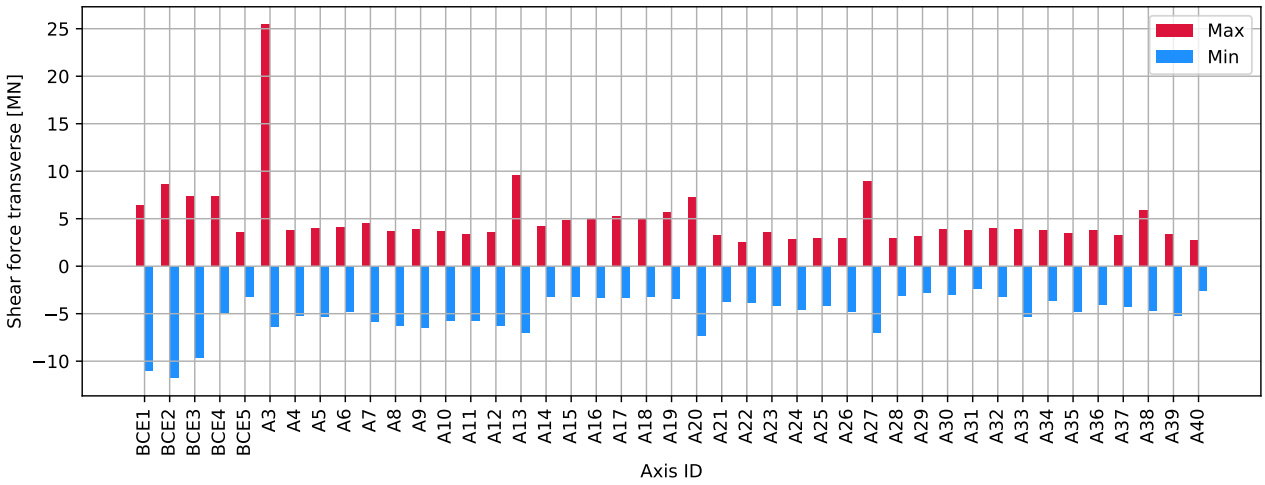

Figure 3.434: P A3 45deg - columns top : Shear force transverse [MN]

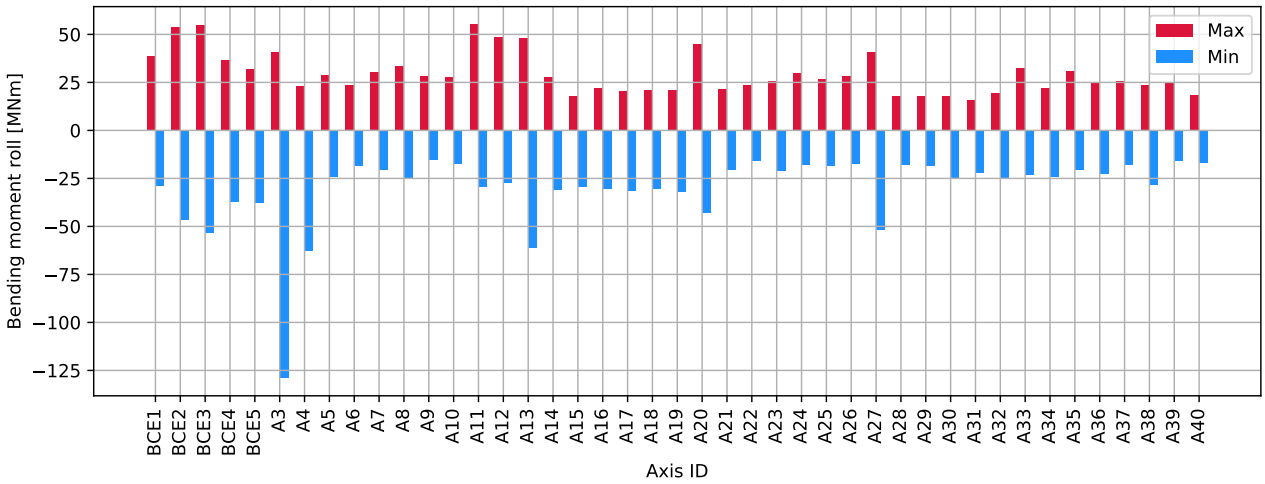

Figure 3.435: P A3 45deg - columns top : Bending moment roll [MNm]

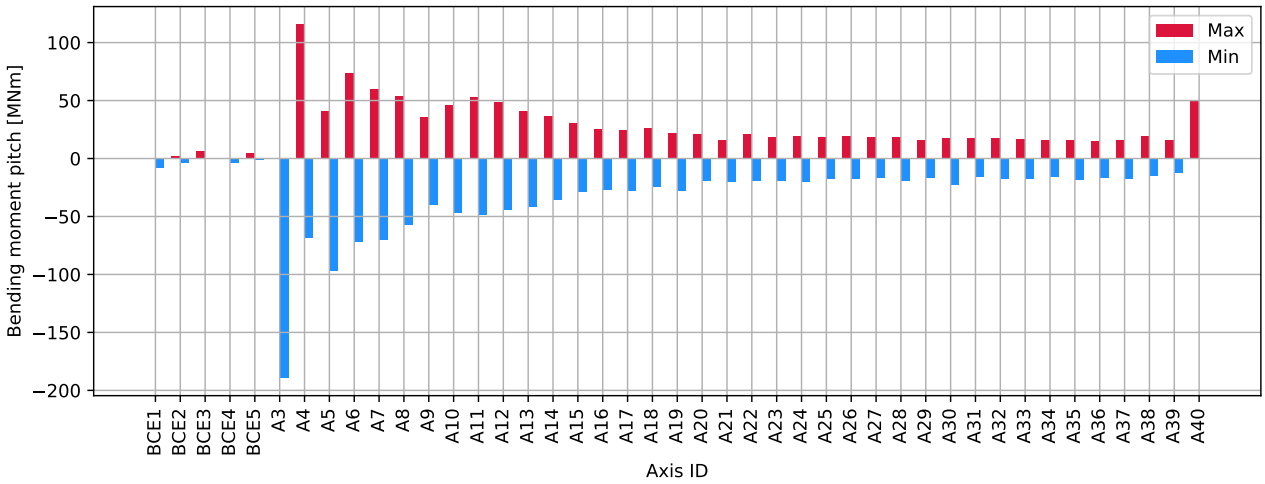

Figure 3.436: P A3 45deg - columns top : Bending moment pitch [MNm]

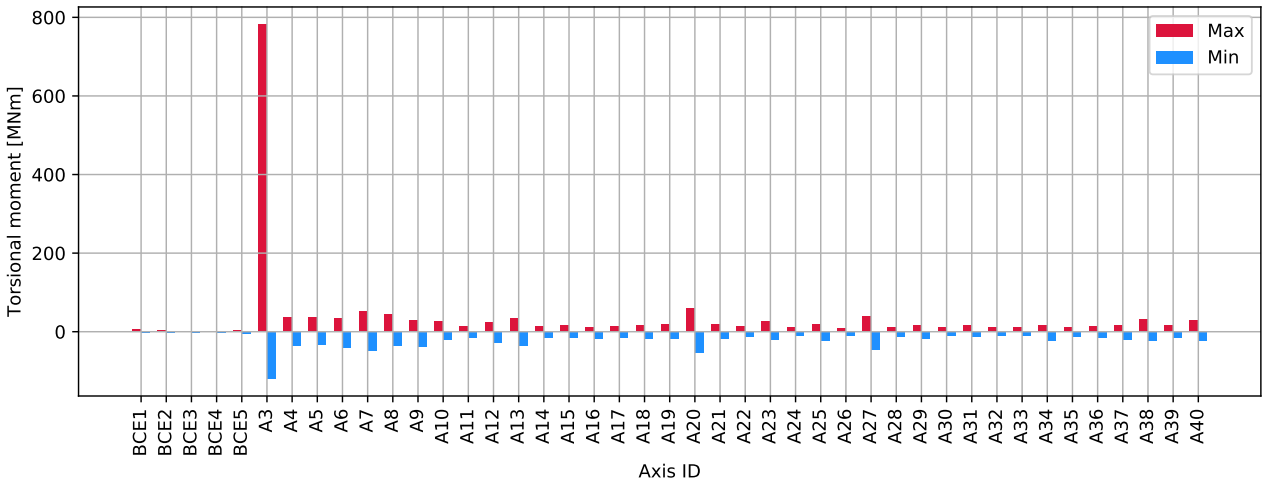

Figure 3.437: P A3 45deg - columns top : Torsional moment [MNm]

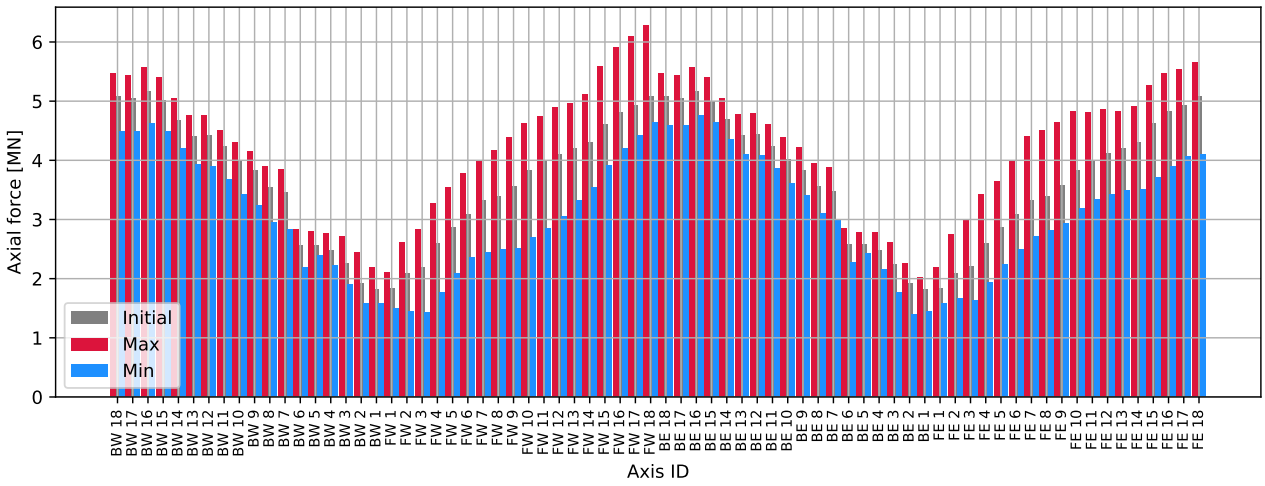

Figure 3.438: P A3 45deg - cables : Axial force [MN]

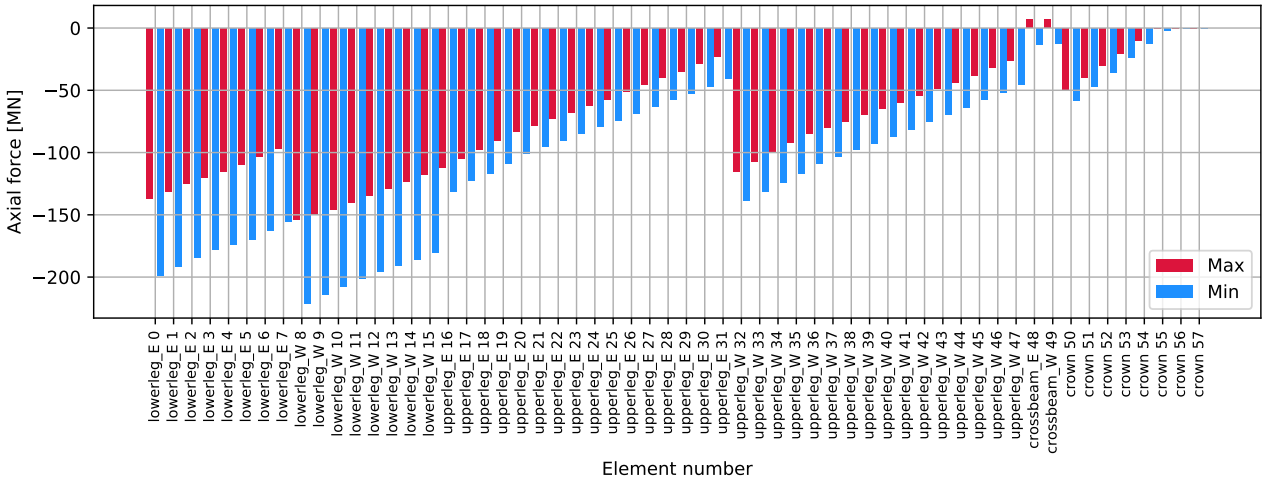

Figure 3.439: P A3 45deg - tower: Axial force [MN]

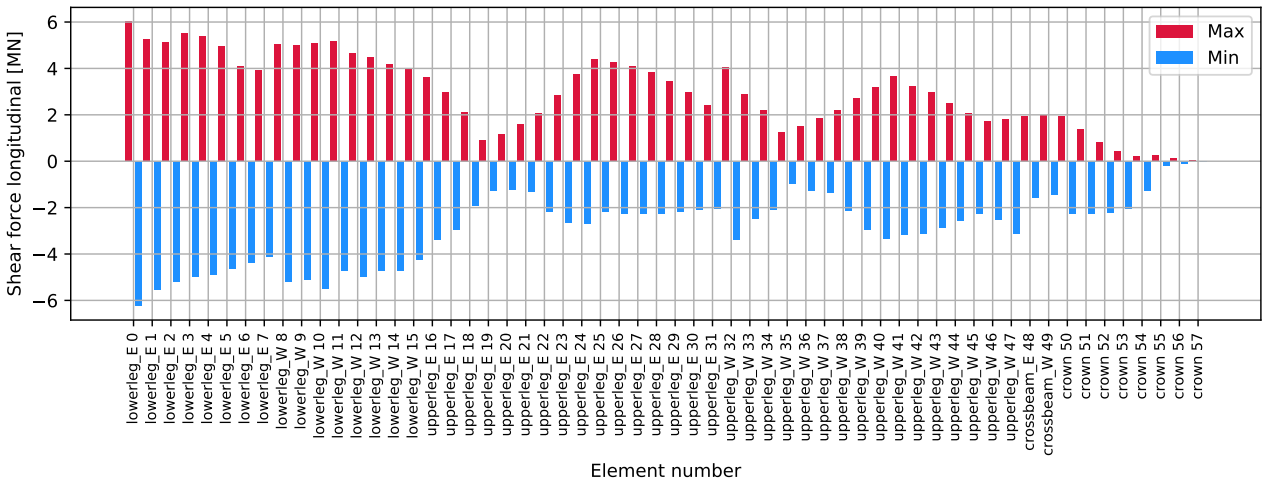

Figure 3.440: P A3 45deg - tower: Shear force longitudinal [MN]

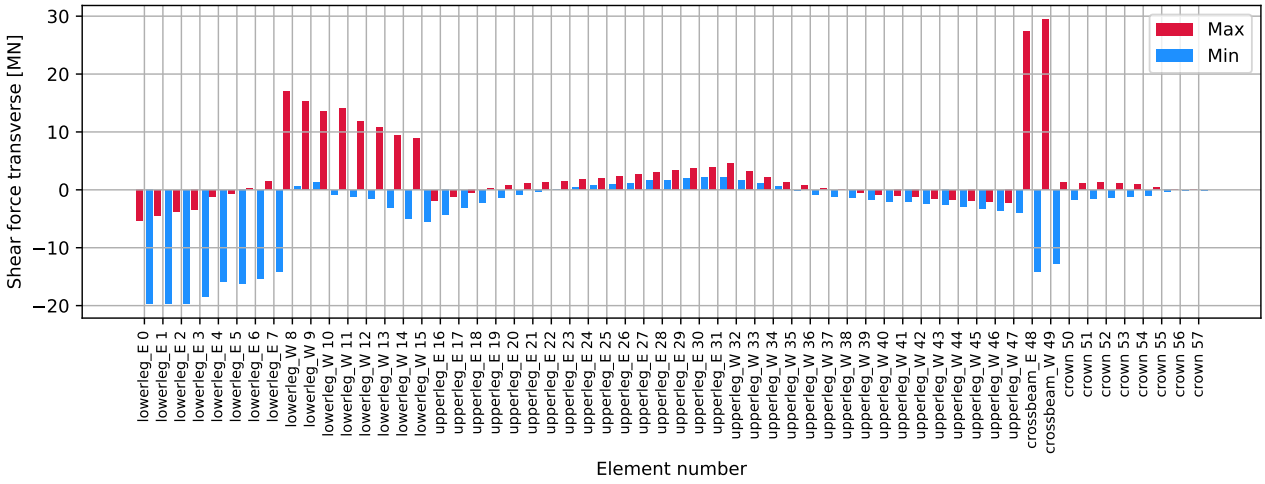

Figure 3.441: P A3 45deg - tower: Shear force transverse [MN]

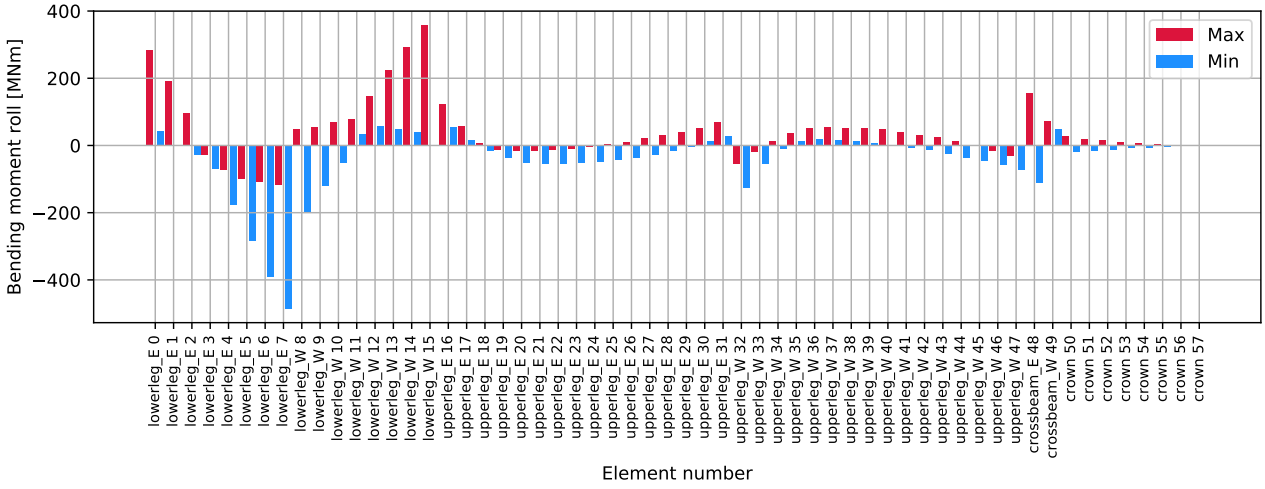

Figure 3.442: P A3 45deg - tower: Bending moment roll [MNm]

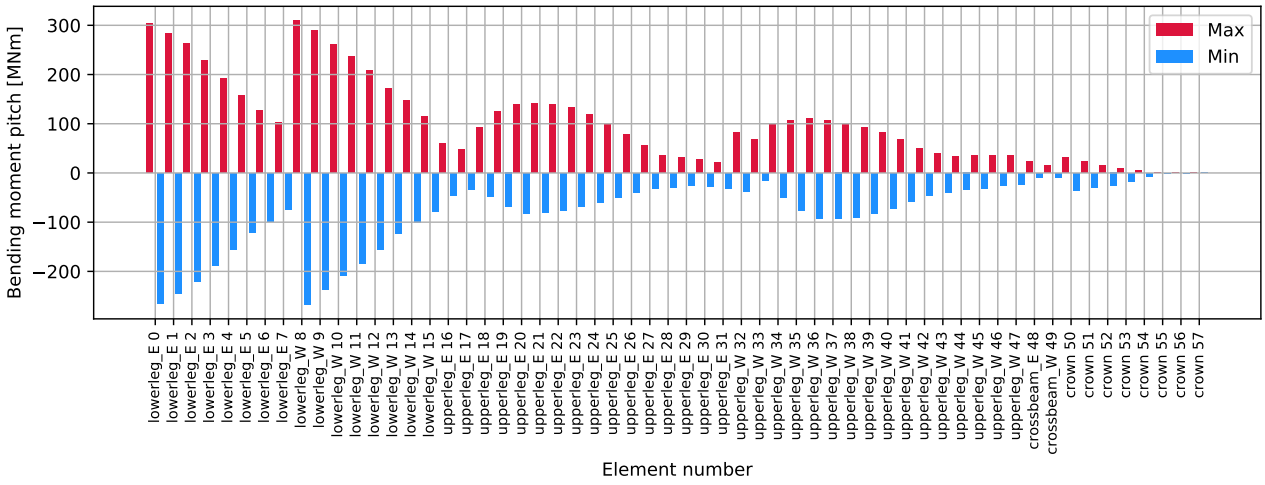

Figure 3.443: P A3 45deg - tower: Bending moment pitch [MNm]

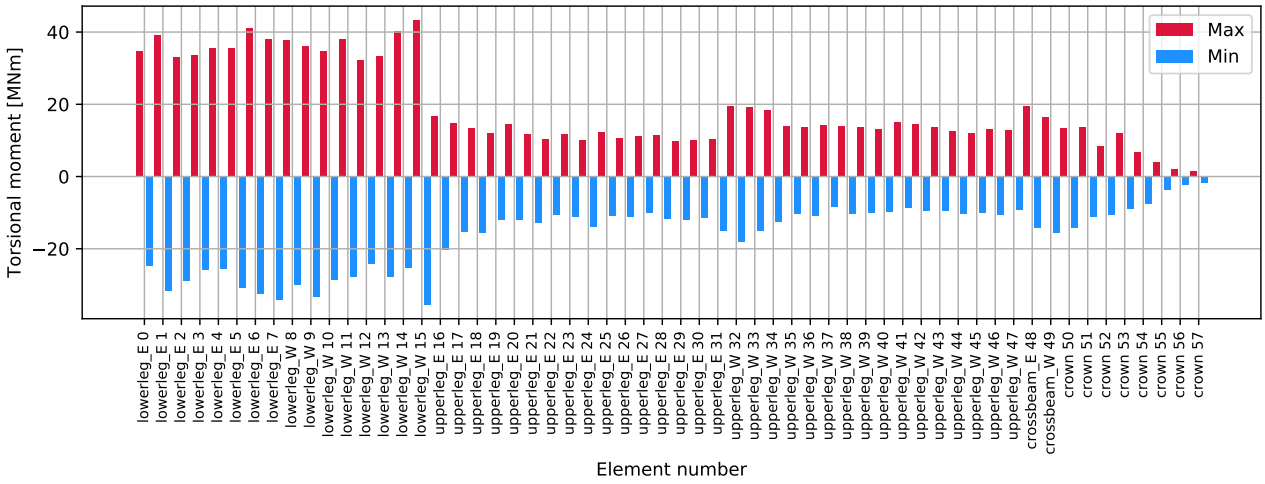

Figure 3.444: P A3 45deg - tower: Torsional moment [MNm]

3.10.3 Time series

Note : Time series are filtered using a Saviotzky-Golay filter for increased readability of the time history plots. Hence, maximum values that occur due to a rapid vibration are not shown in the plots. For maximum values, refer to the tabulated data.
All elements are numbered from South to North, bottom to top

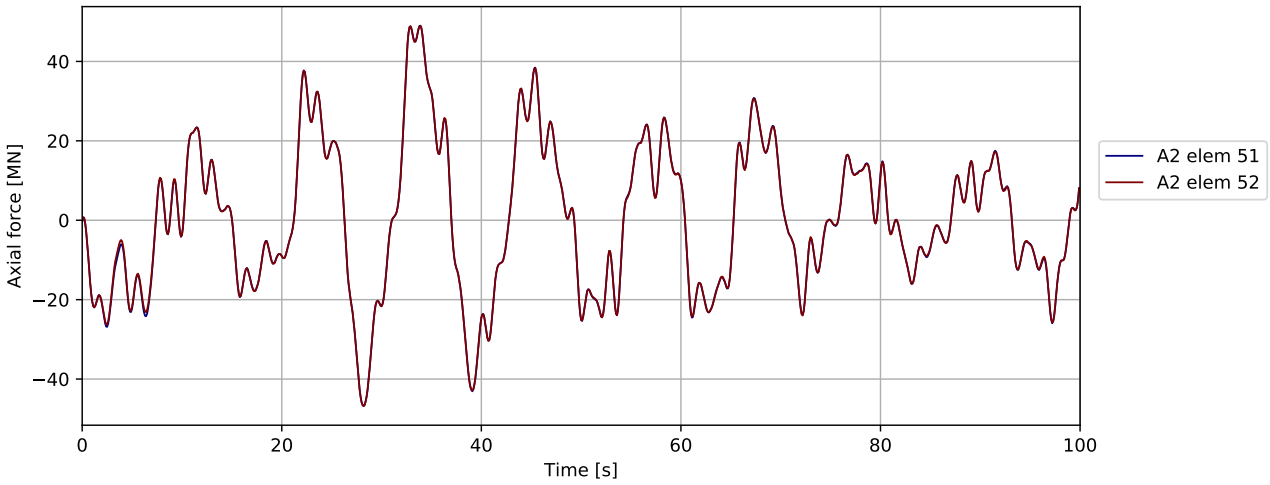

Figure 3.445: P A3 45deg - bridgegirder @ pylon: Axial force [MN]

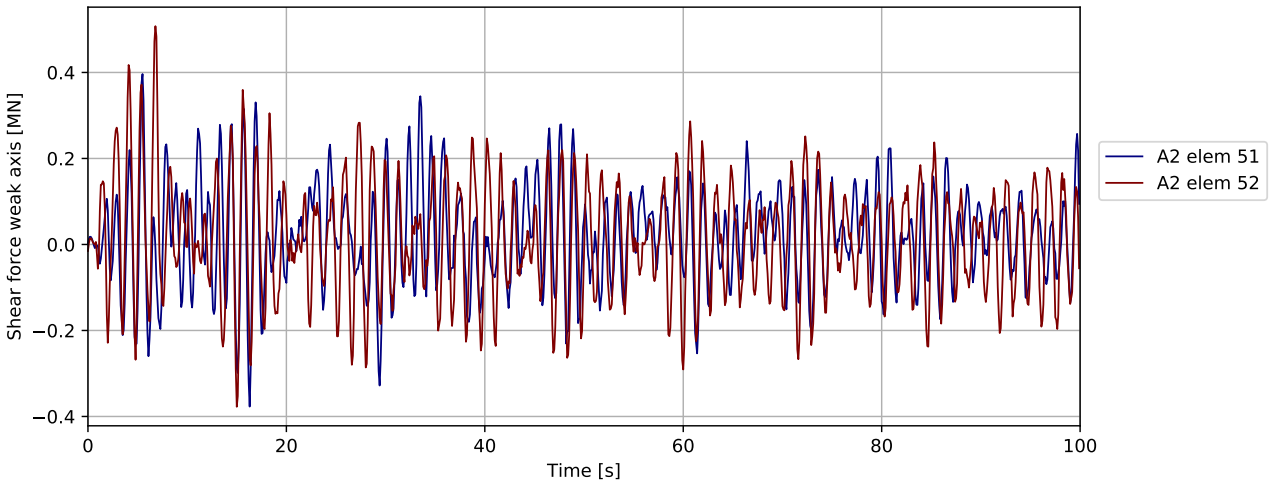

Figure 3.446: P A3 45deg - bridgegirder @ pylon: Shear force weak axis [MN]

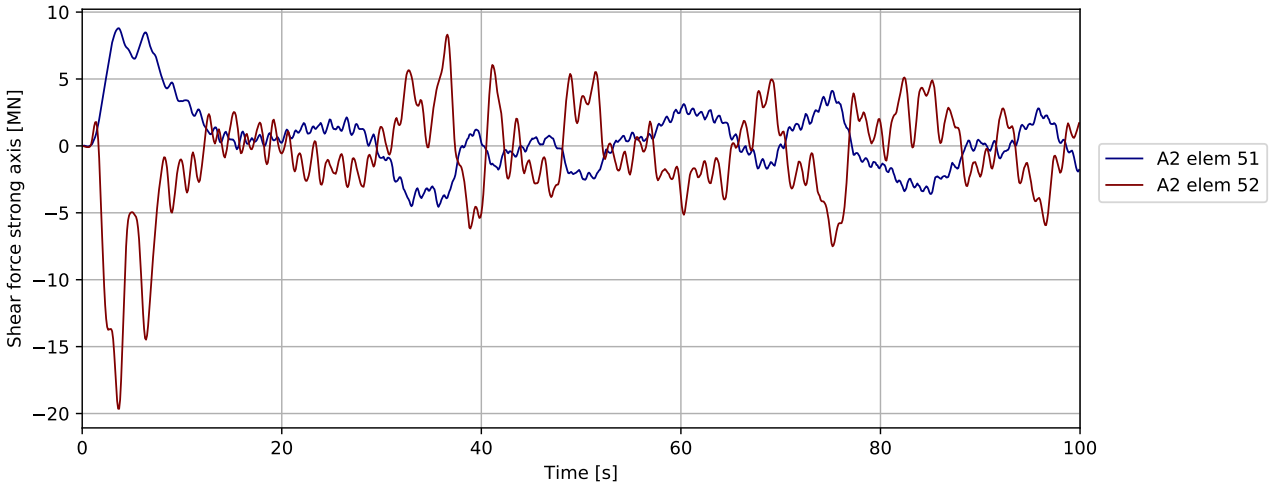

Figure 3.447: P A3 45deg - bridgegirder @ pylon: Shear force strong axis [MN]

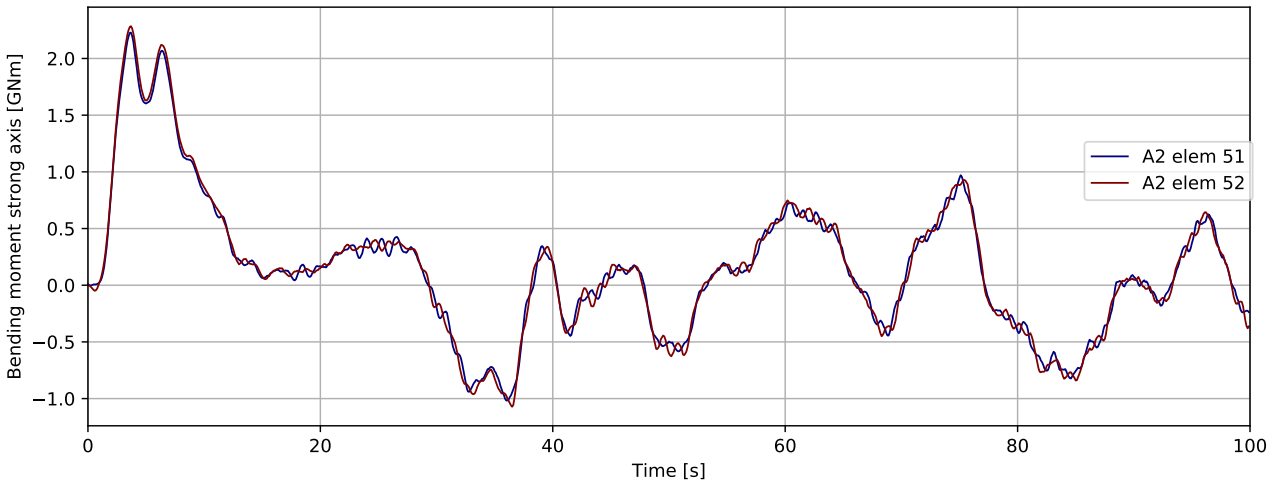

Figure 3.448: P A3 45deg - bridgegirder @ pylon: Bending moment strong axis [GNm]

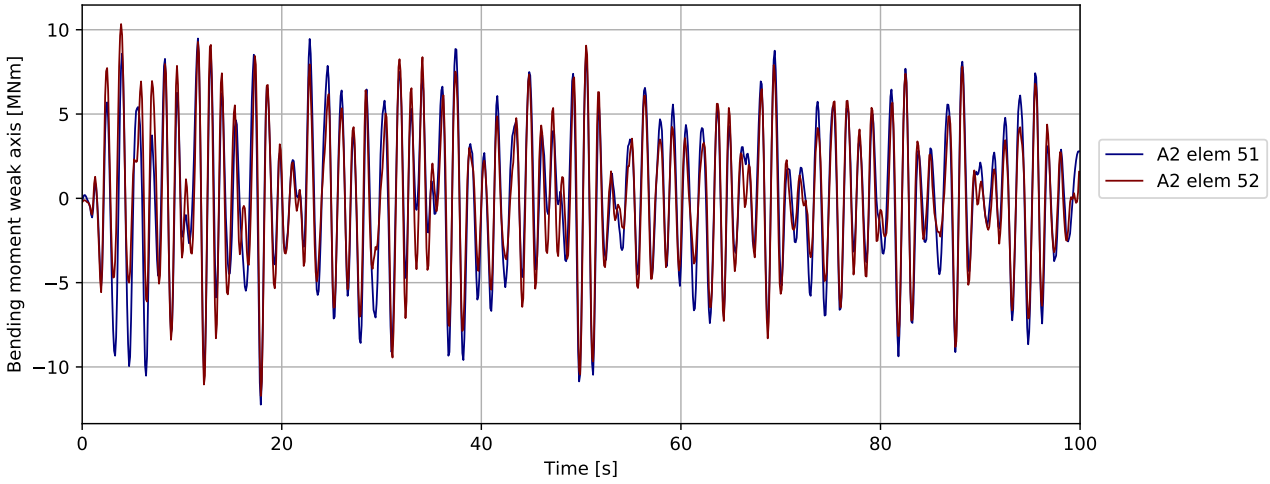

Figure 3.449: P A3 45deg - bridgegirder @ pylon: Bending moment weak axis [MNm]

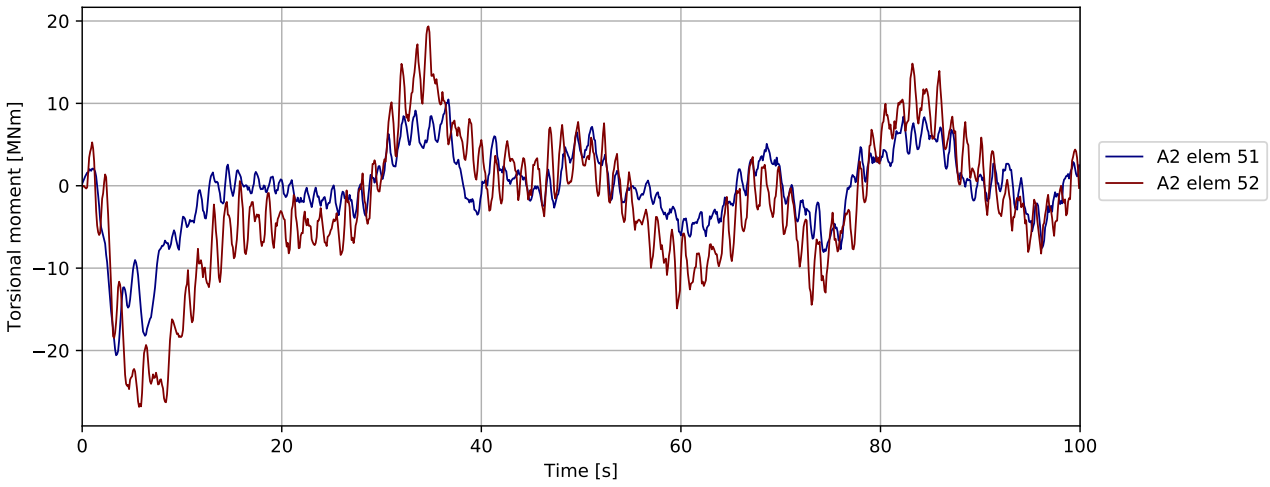

Figure 3.450: P A3 45deg - bridgegirder @ pylon: Torsional moment [MNm]

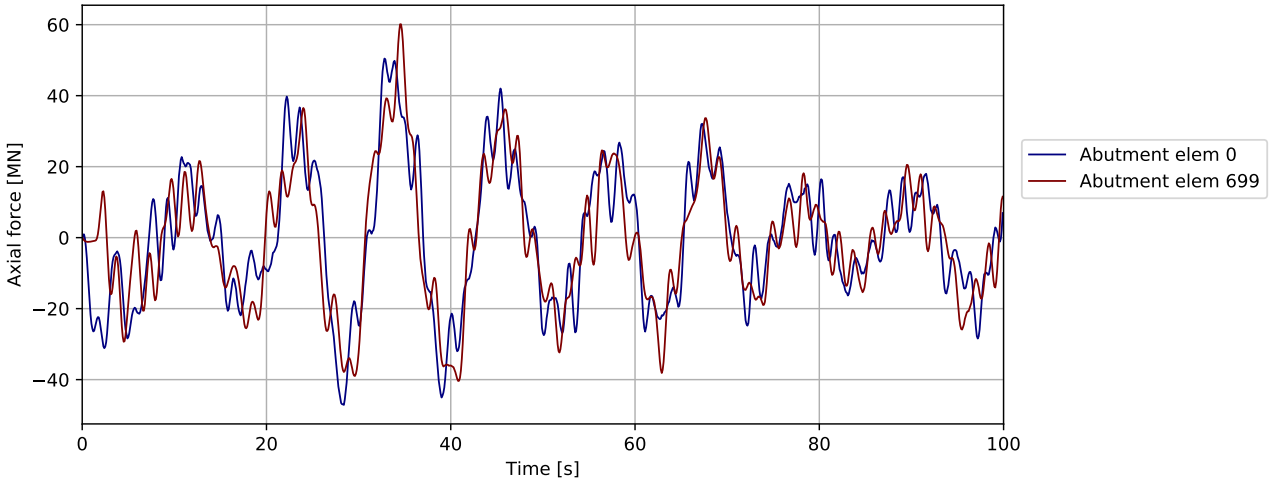

Figure 3.451: P A3 45deg - bridgegirder @abutments: Axial force [MN]

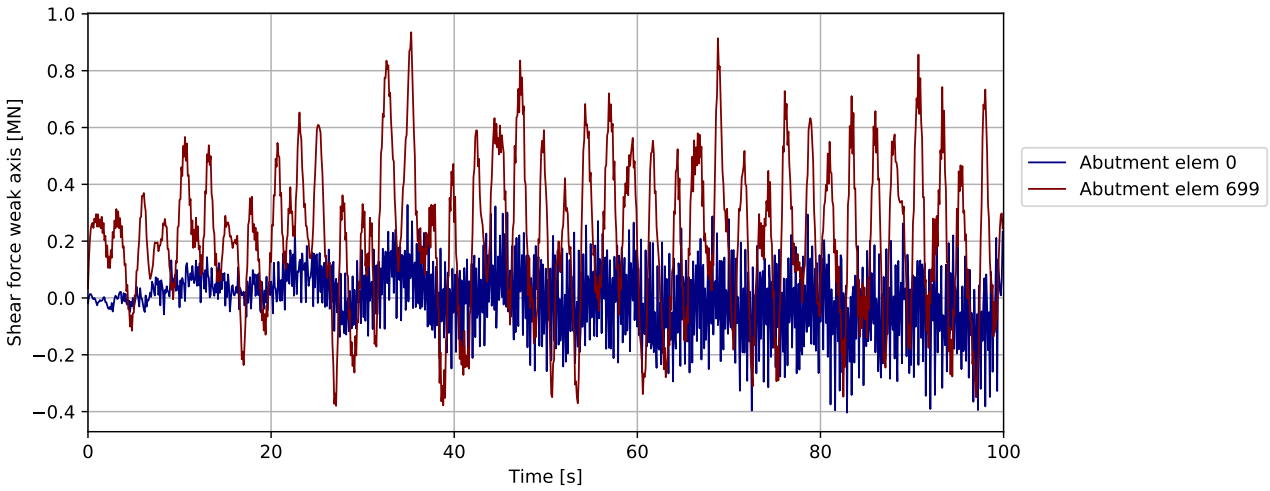

Figure 3.452: P A3 45deg - bridgegirder @abutments: Shear force weak axis [MN]

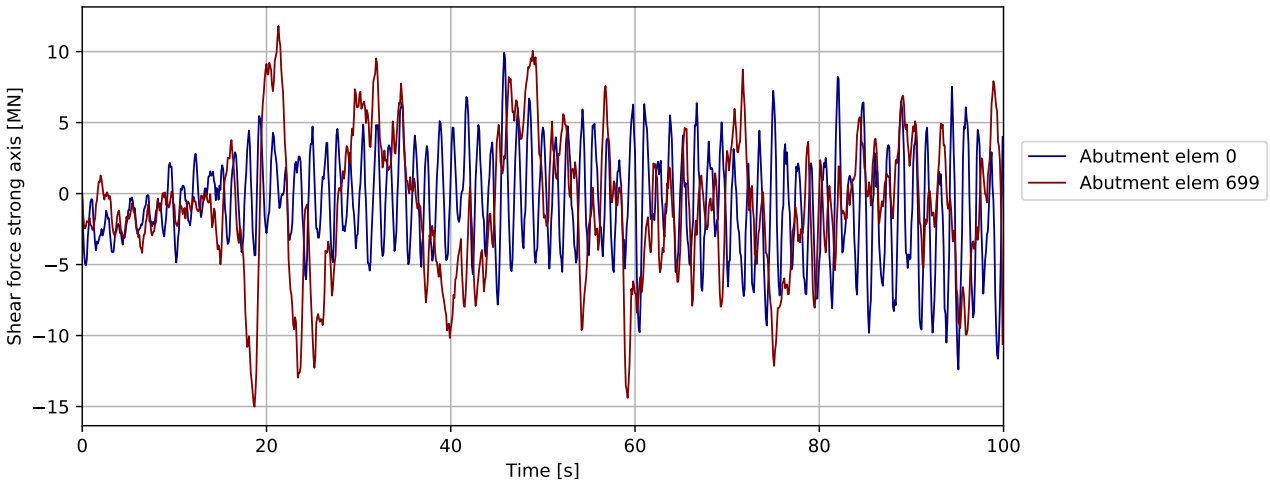

Figure 3.453: P A3 45deg - bridgegirder @abutments: Shear force strong axis [MN]

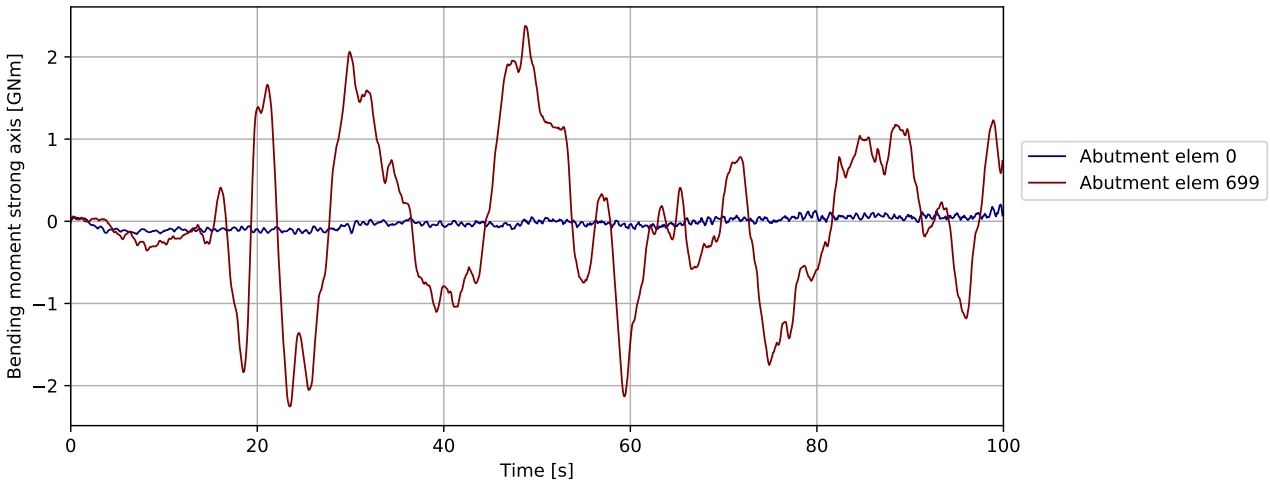

Figure 3.454: P A3 45deg - bridgegirder @abutments: Bending moment strong axis [GNm]

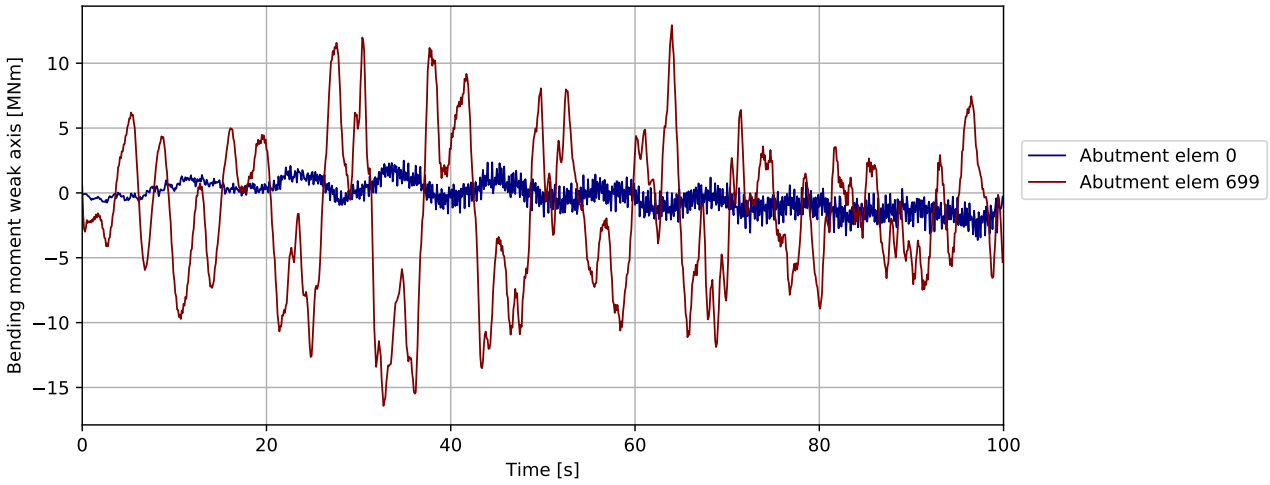

Figure 3.455: P A3 45deg - bridgegirder @abutments: Bending moment weak axis [MNm]

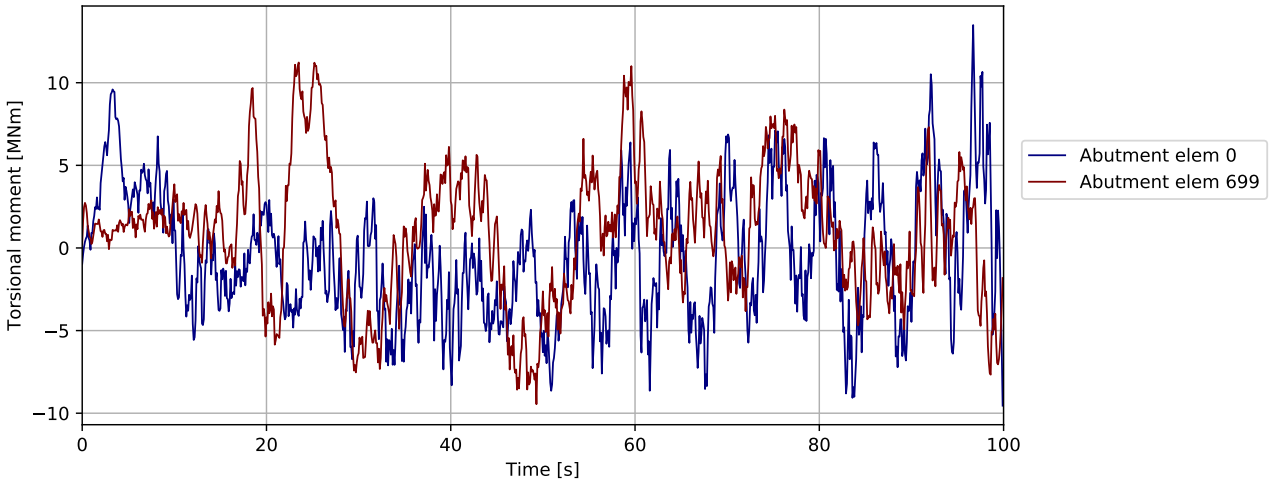

Figure 3.456: P A3 45deg - bridgegirder @abutments: Torsional moment [MNm]

Note : Compressive spring force is negative

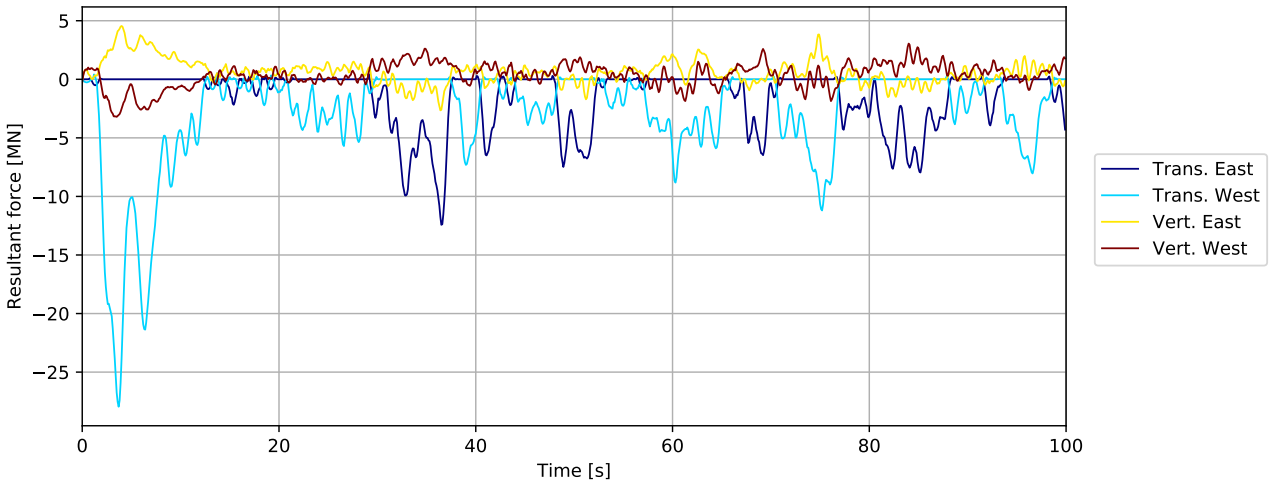

Figure 3.457: P A3 45deg - bridgegirder supports in tower: Resultant force [MN]

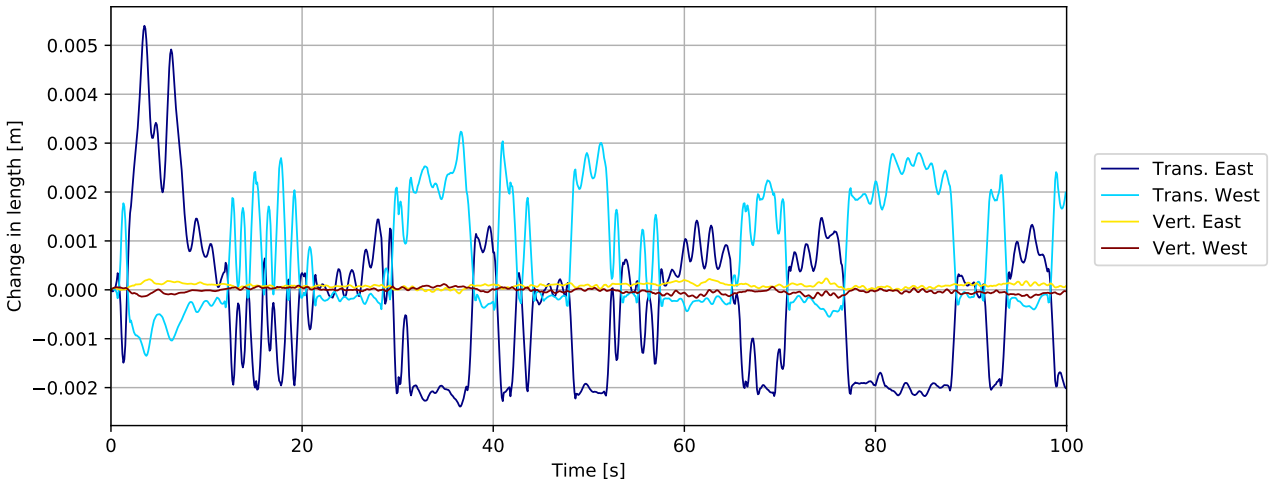

Figure 3.458: P A3 45deg - bridgegirder supports in tower: Change in length [m]

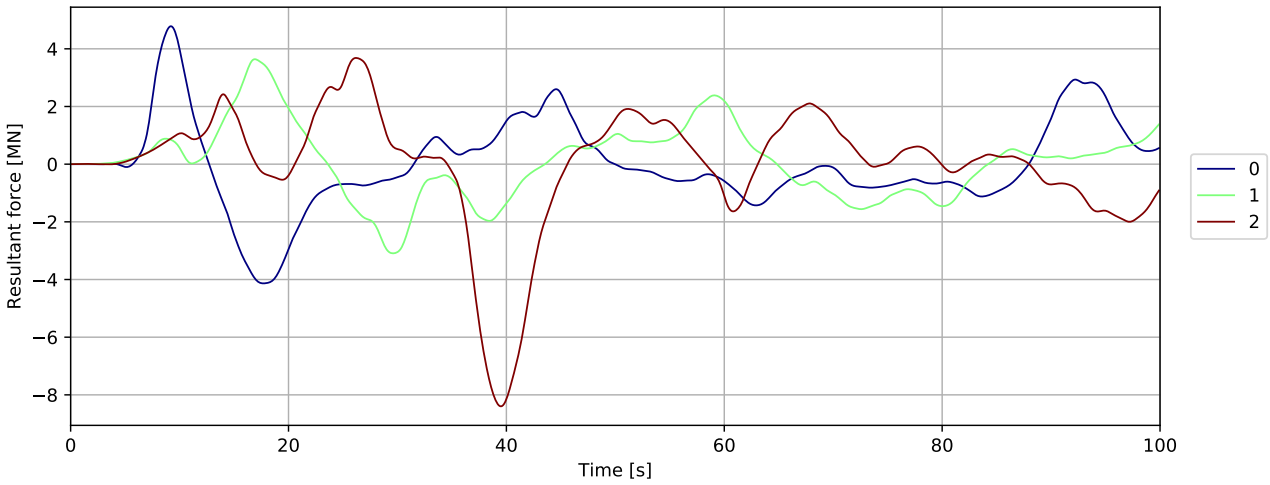

Figure 3.459: Mooring force

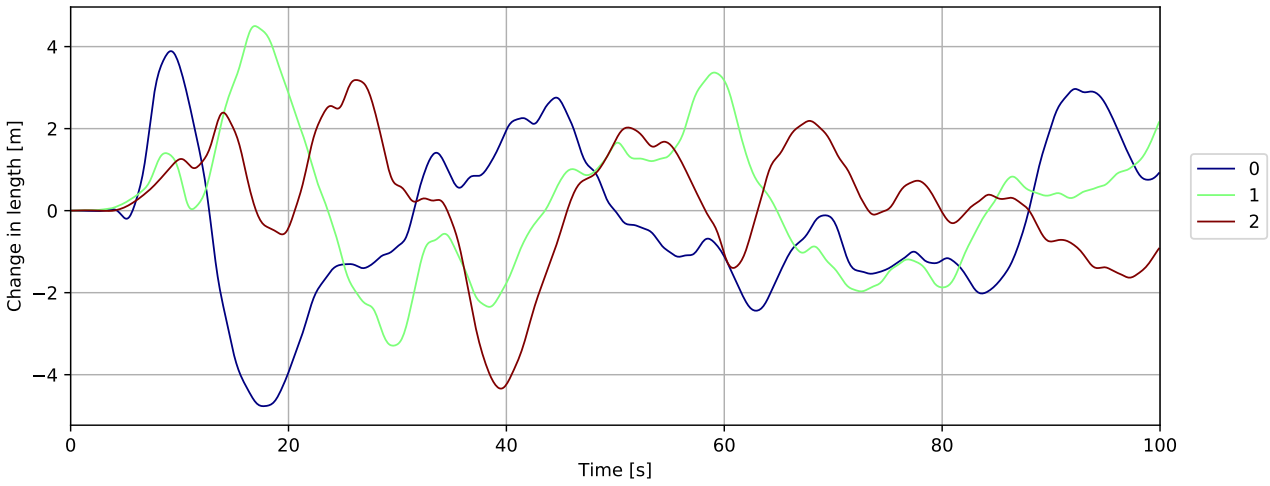

Figure 3.460: Mooring displacement

3.11 PontoonA4 45deg

3.11.1 Overall response

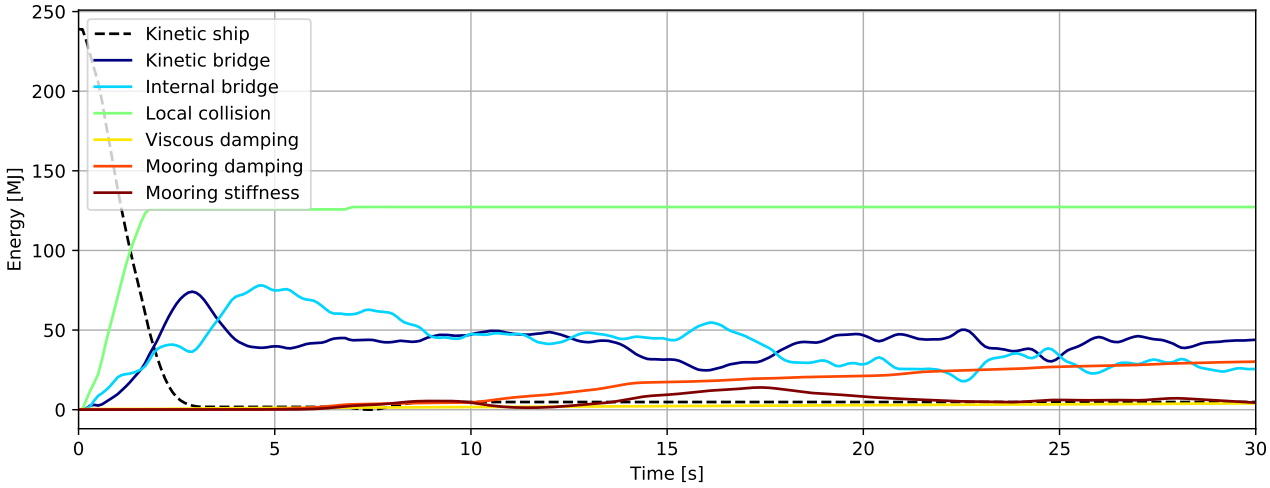

Figure 3.461: Energy [MJ] - initial phase

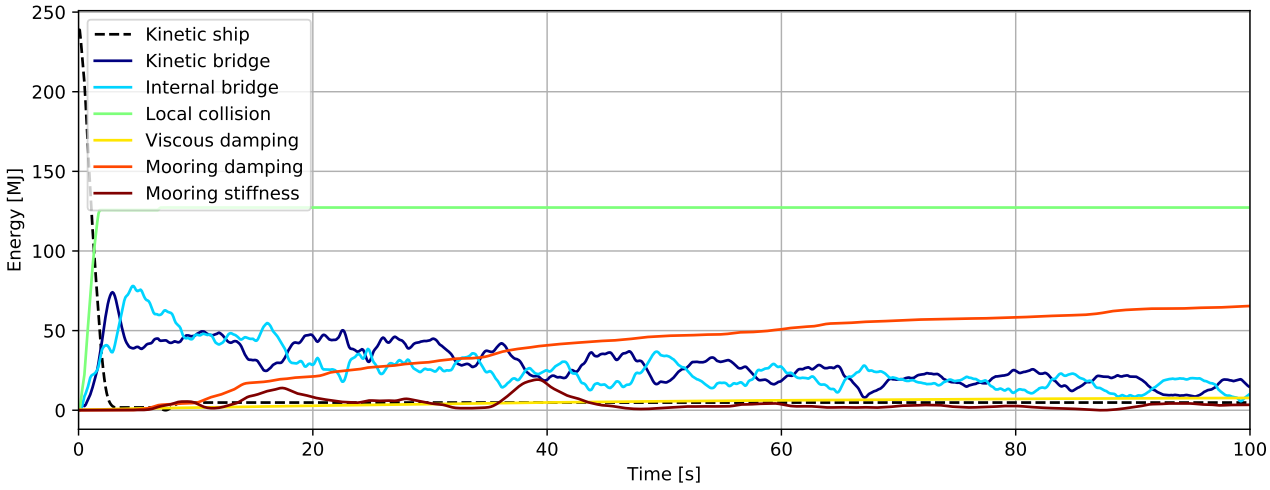

Figure 3.462: Energy [MJ]

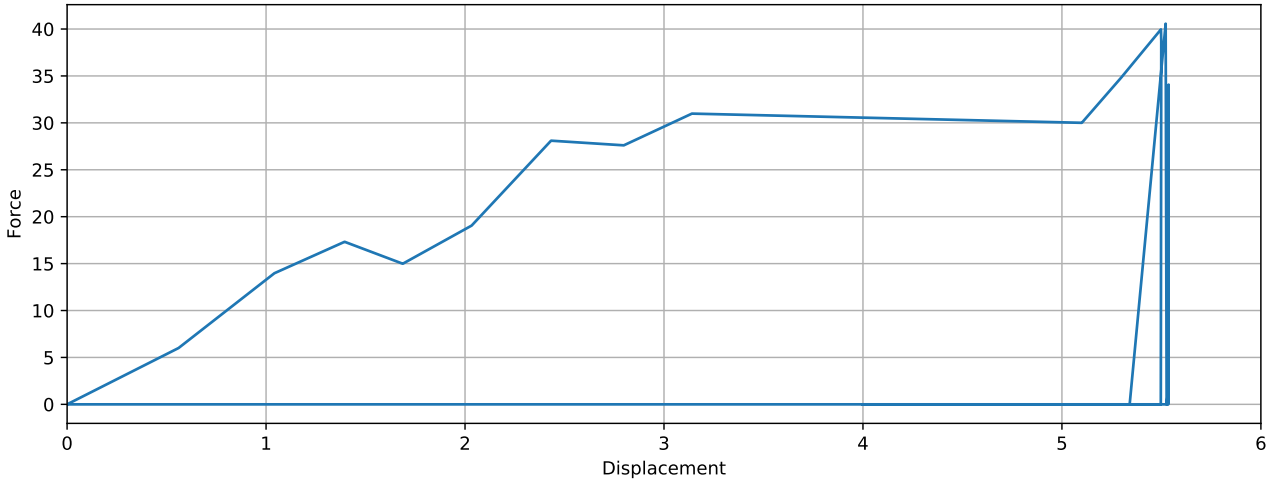

Figure 3.463: Simulated local collision force-displacement

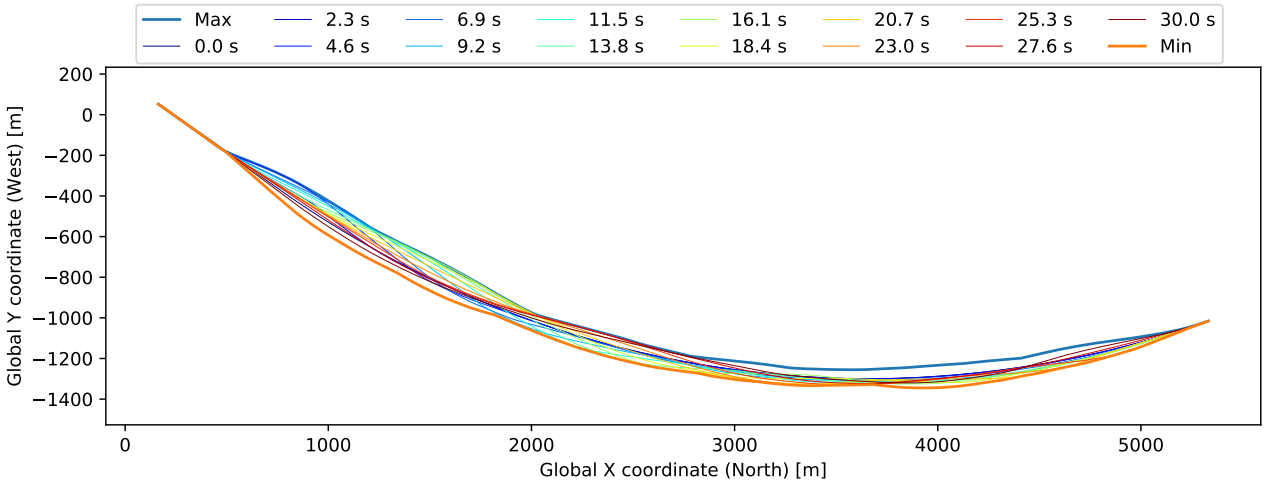

Figure 3.464: Bridgegirder deflection (10x displacment scaling)

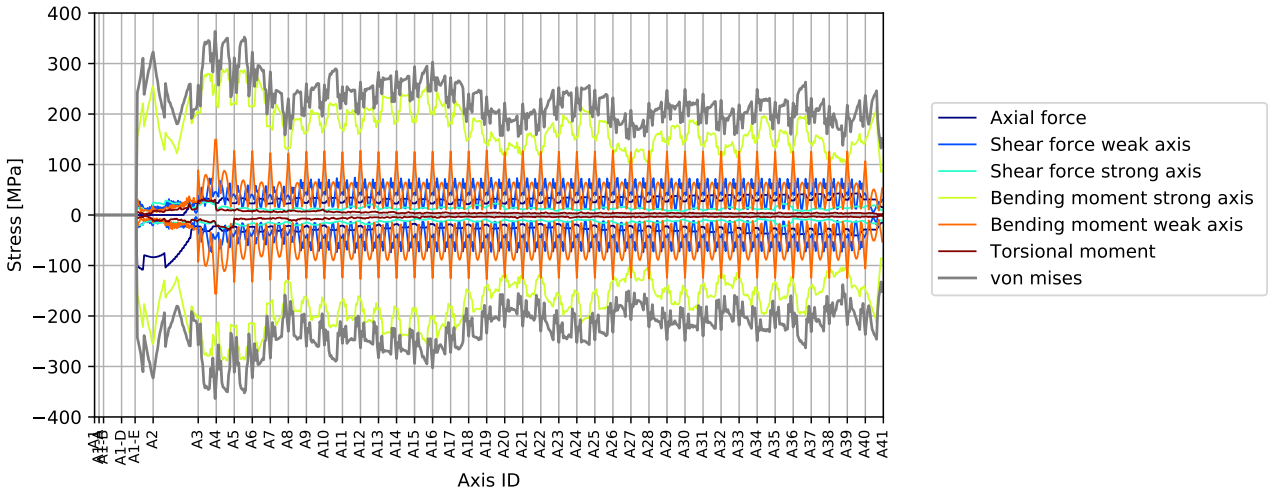

Figure 3.465: Stress envelope from all force components

3.11.2 Envelope plots

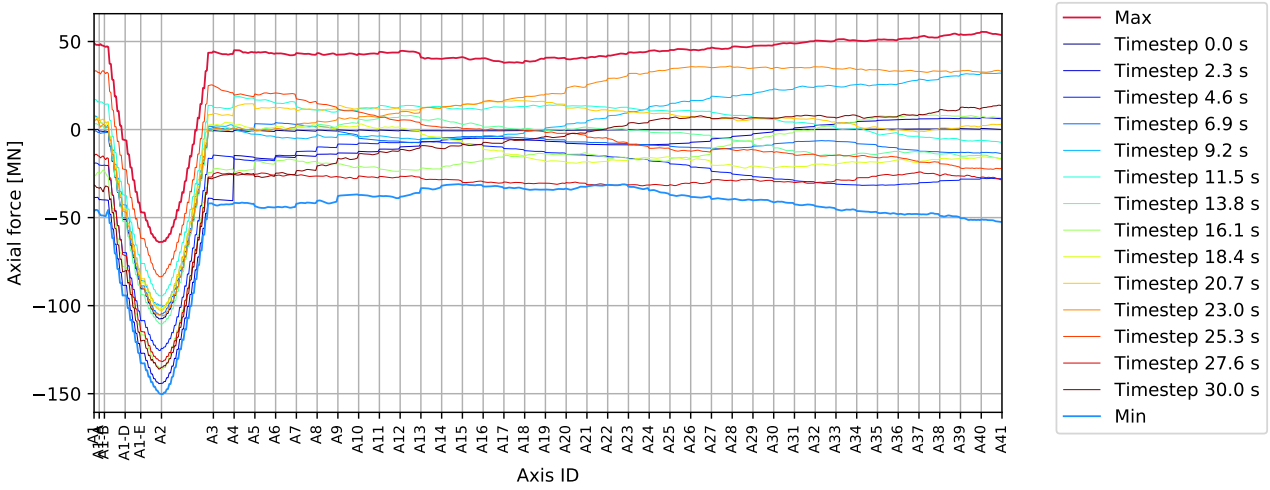

Figure 3.466: P A4 45deg - bridgegirder : Axial force [MN]

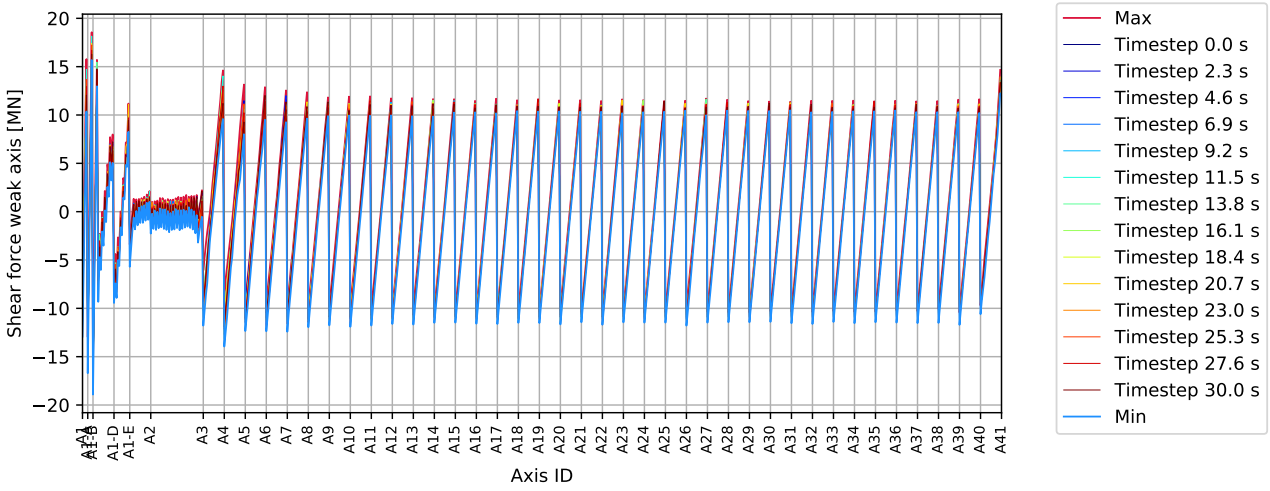

Figure 3.467: P A4 45deg - bridgegirder : Shear force weak axis [MN]

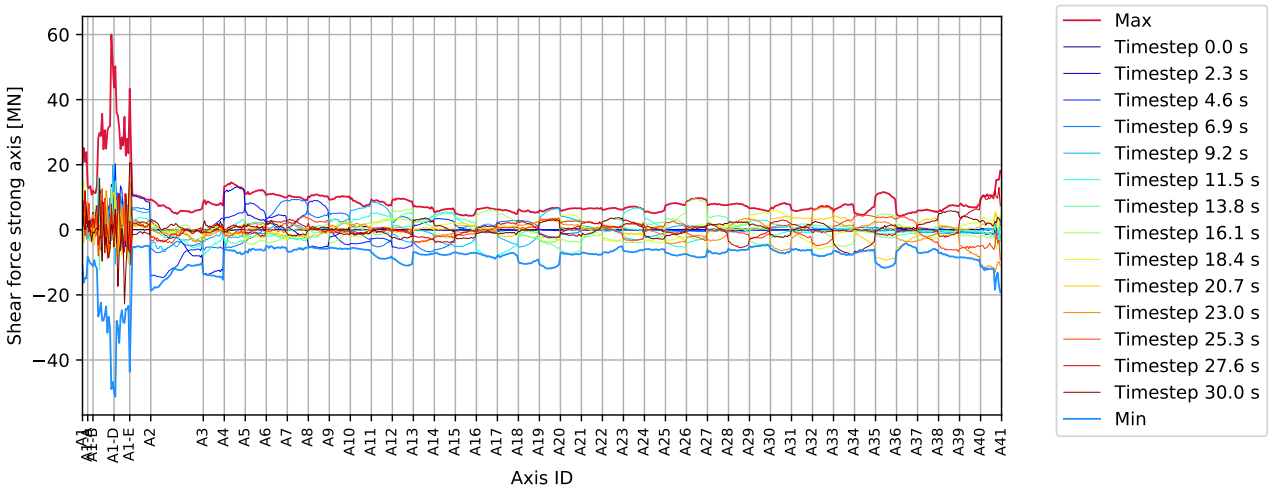

Figure 3.468: P A4 45deg - bridgegirder : Shear force strong axis [MN]

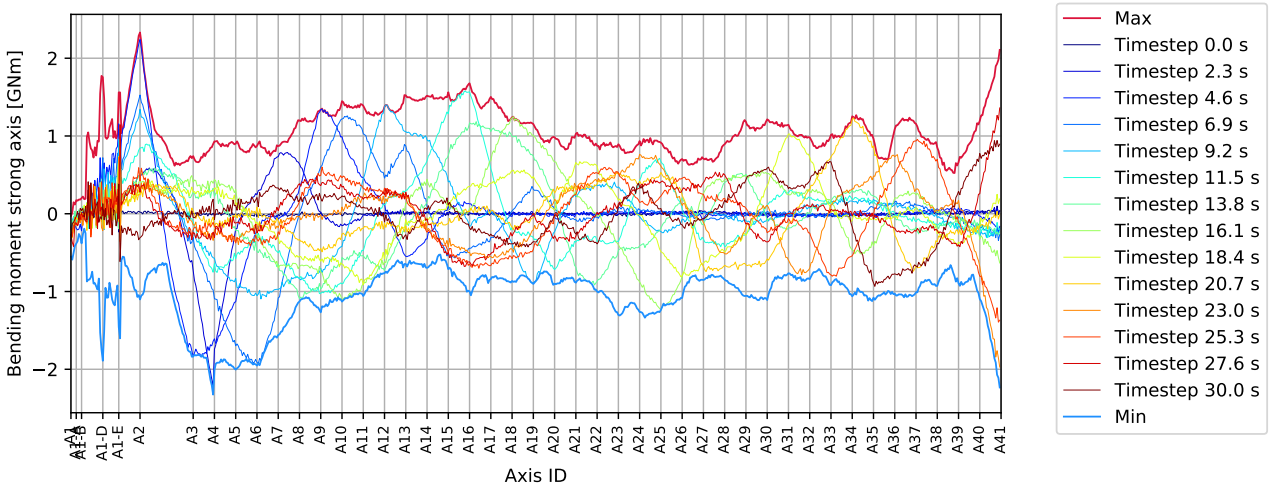

Figure 3.469: P A4 45deg - bridgegirder : Bending moment strong axis [GNm]

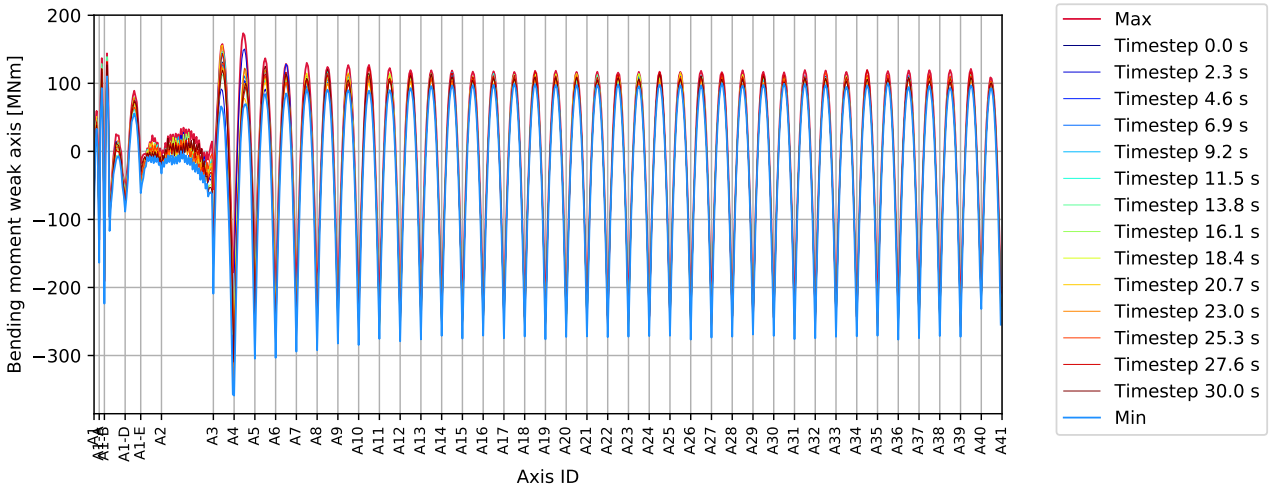

Figure 3.470: P A4 45deg - bridgegirder : Bending moment weak axis [MNm]

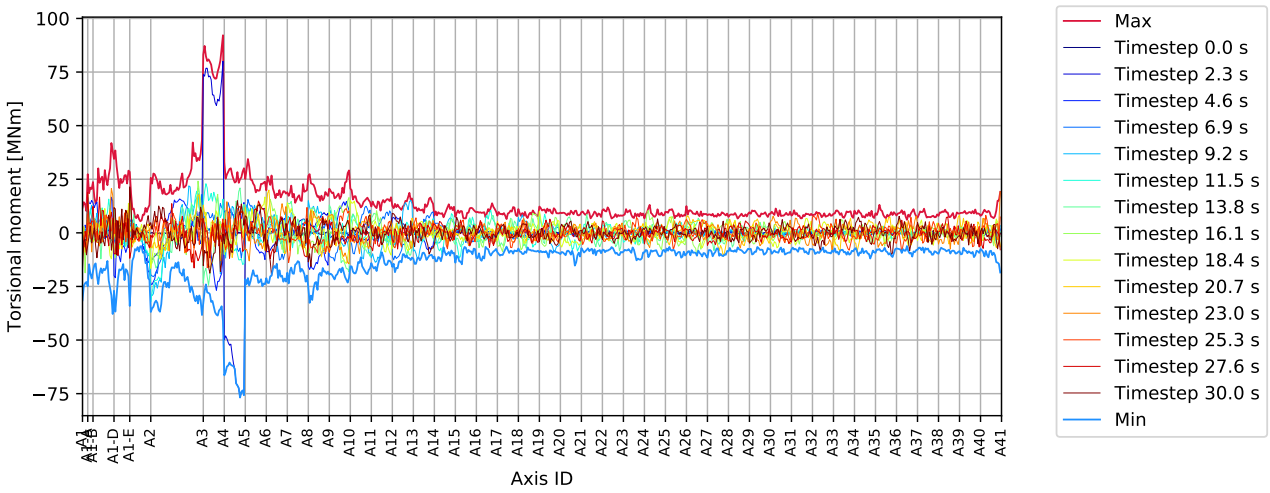

Figure 3.471: P A4 45deg - bridgegirder : Torsional moment [MNm]

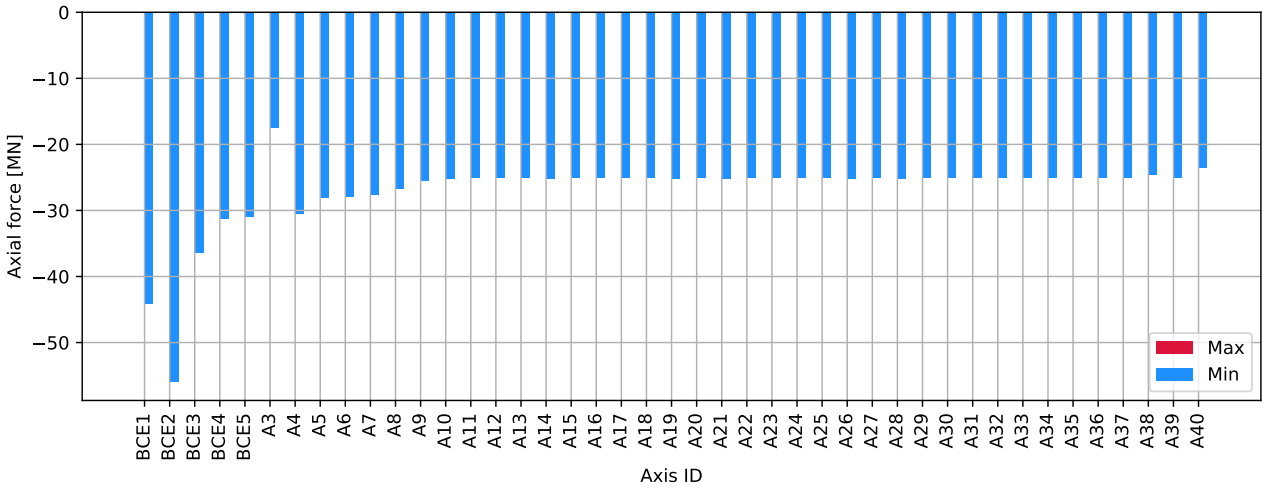

Figure 3.472: P A4 45deg - columns bottom : Axial force [MN]

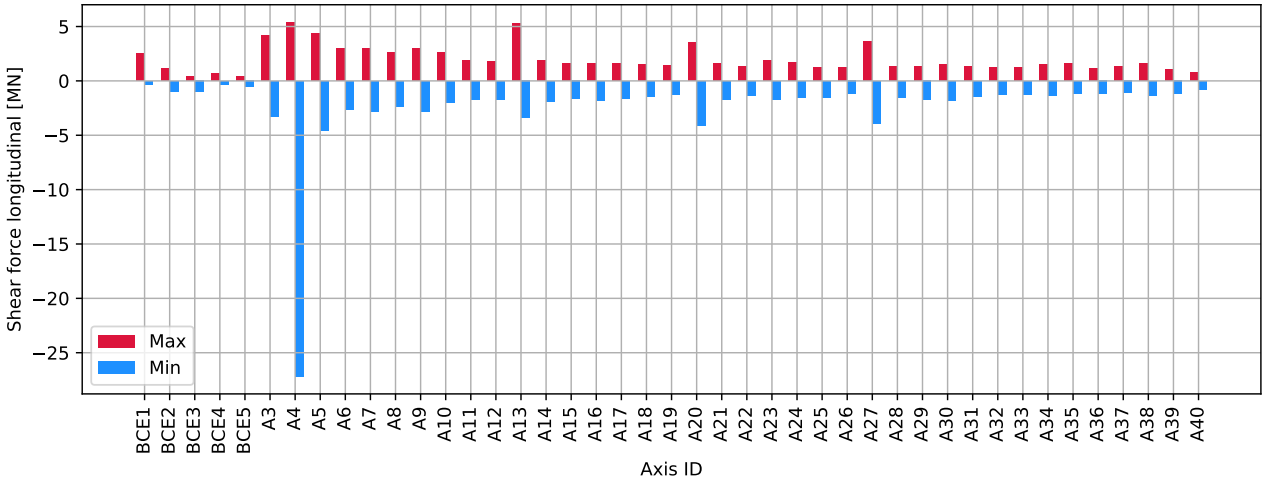

Figure 3.473: P A4 45deg - columns bottom : Shear force longitudinal [MN]

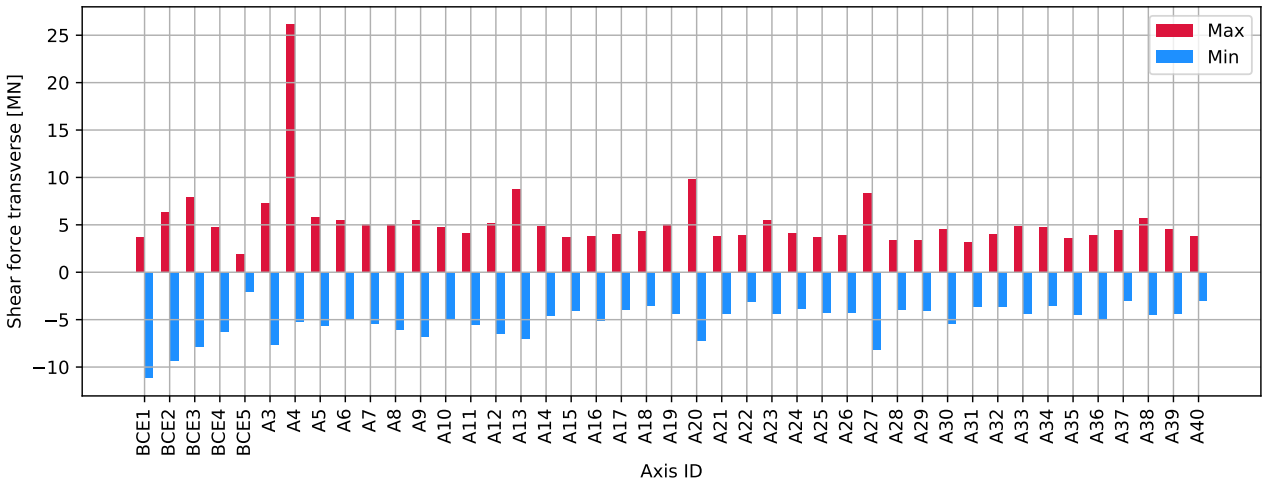

Figure 3.474: P A4 45deg - columns bottom : Shear force transverse [MN]

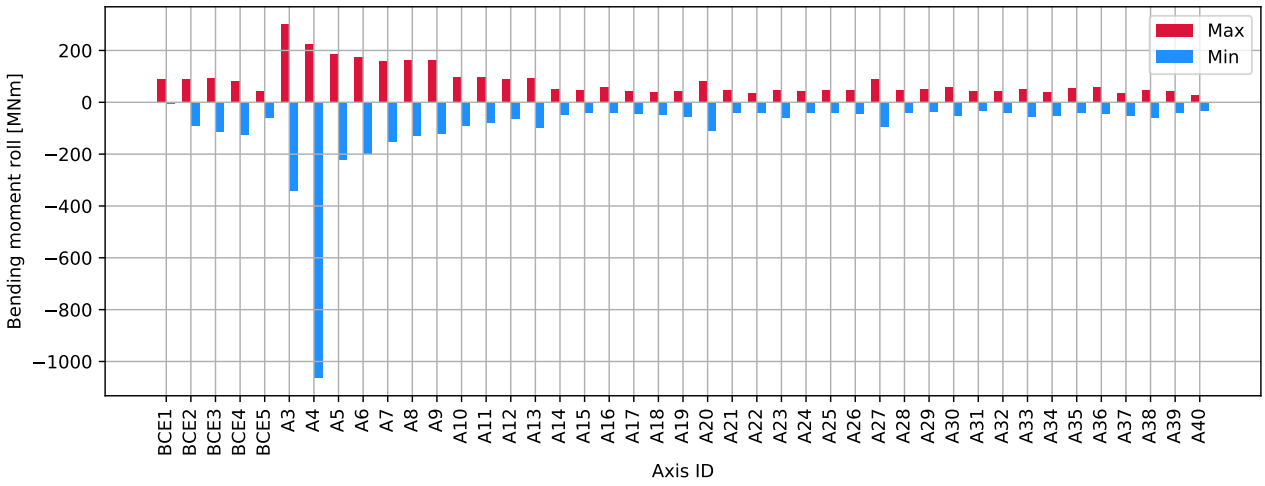

Figure 3.475: P A4 45deg - columns bottom : Bending moment roll [MNm]

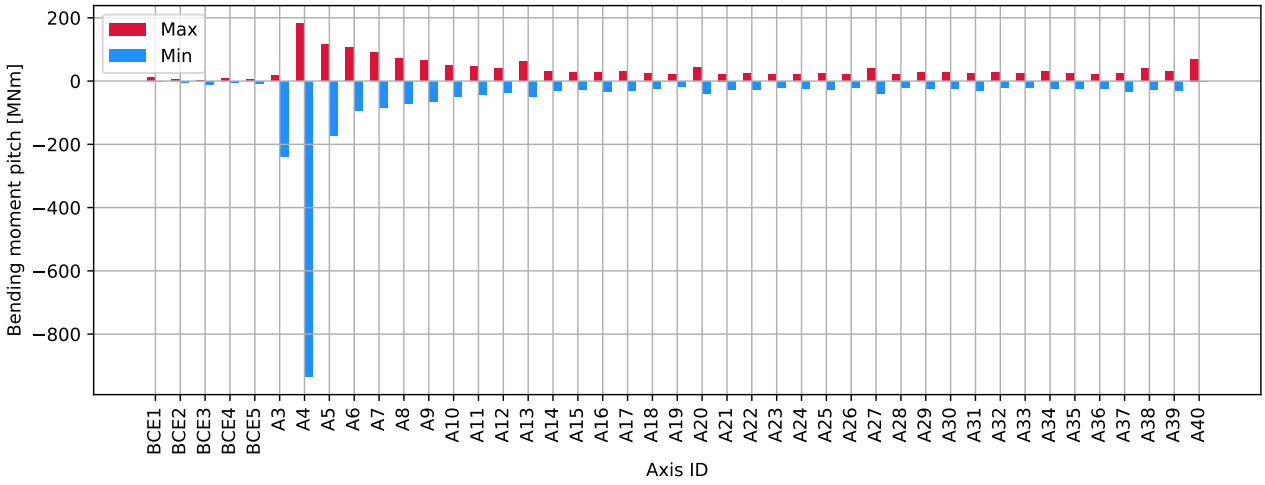

Figure 3.476: P A4 45deg - columns bottom : Bending moment pitch [MNm]

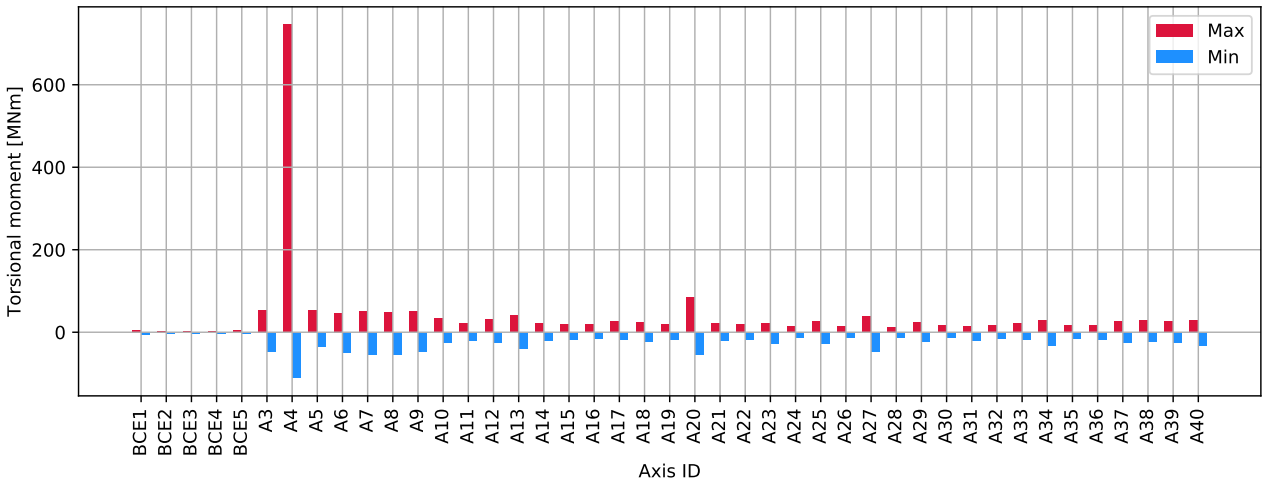

Figure 3.477: P A4 45deg - columns bottom : Torsional moment [MNm]

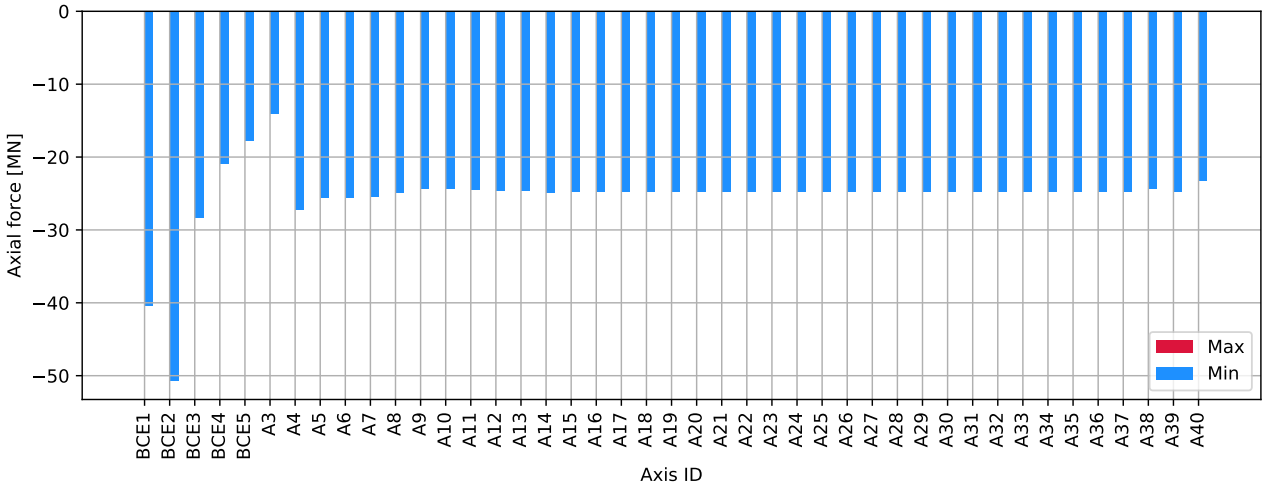

Figure 3.478: P A4 45deg - columns top : Axial force [MN]

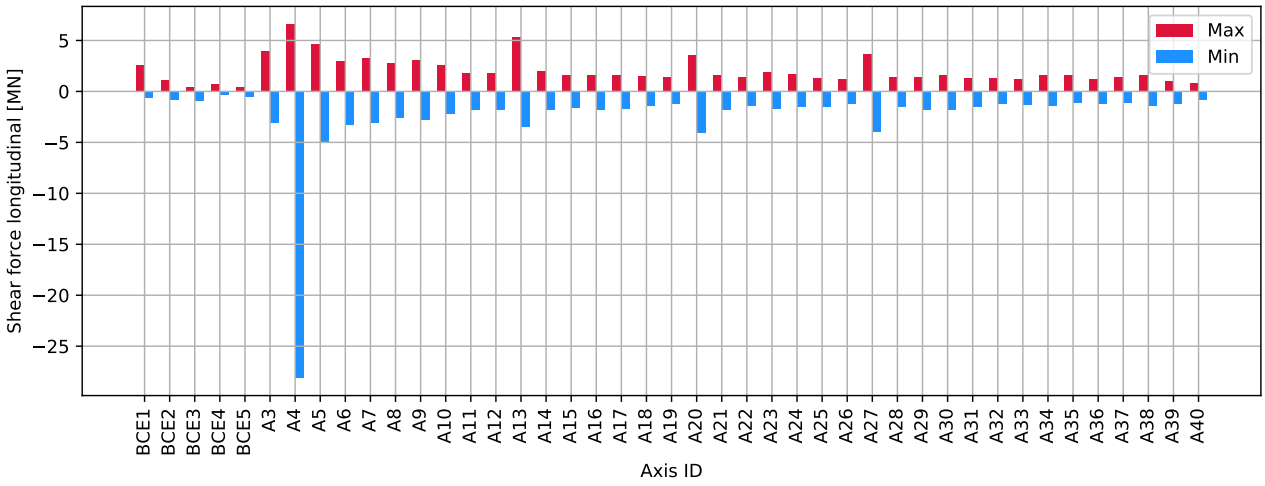

Figure 3.479: P A4 45deg - columns top : Shear force longitudinal [MN]

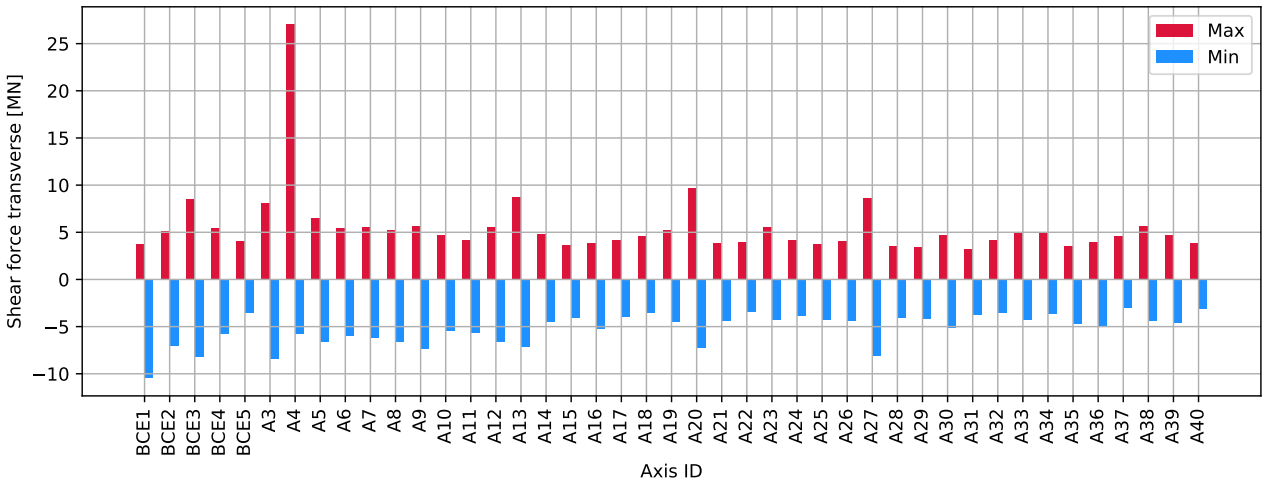

Figure 3.480: P A4 45deg - columns top : Shear force transverse [MN]

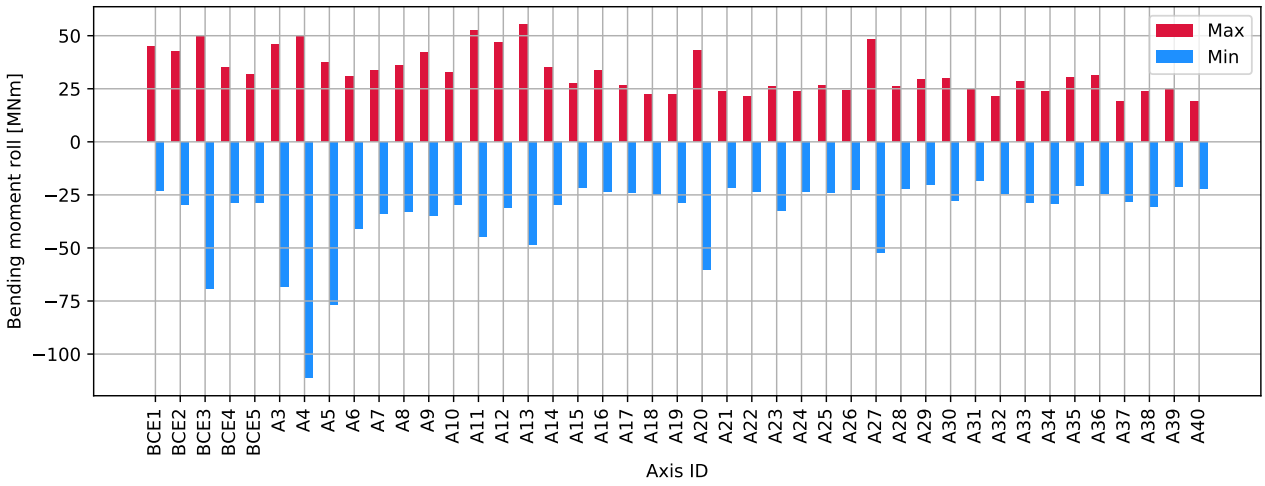

Figure 3.481: P A4 45deg - columns top : Bending moment roll [MNm]

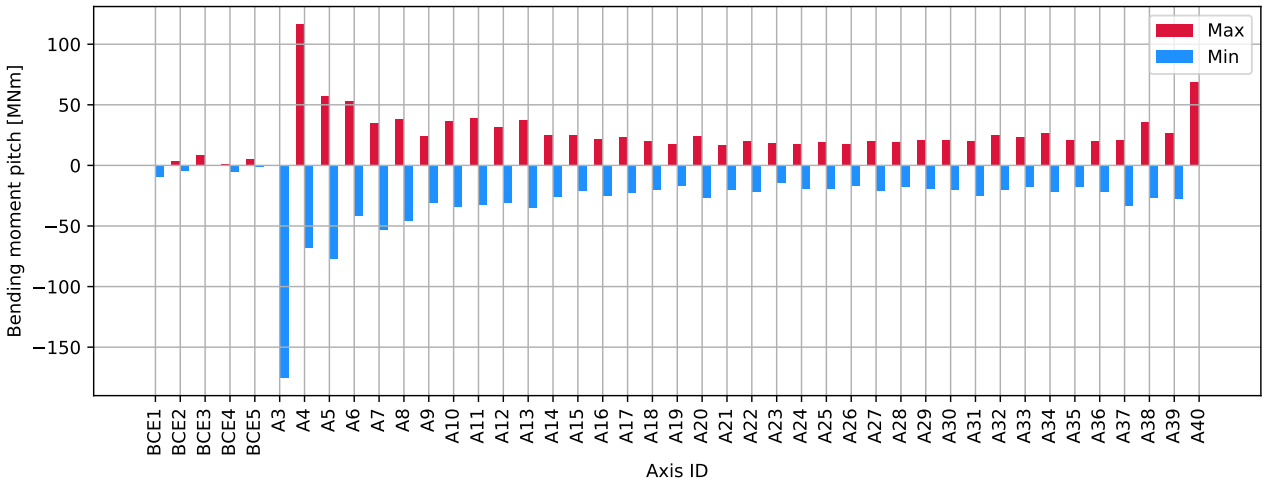

Figure 3.482: P A4 45deg - columns top : Bending moment pitch [MNm]

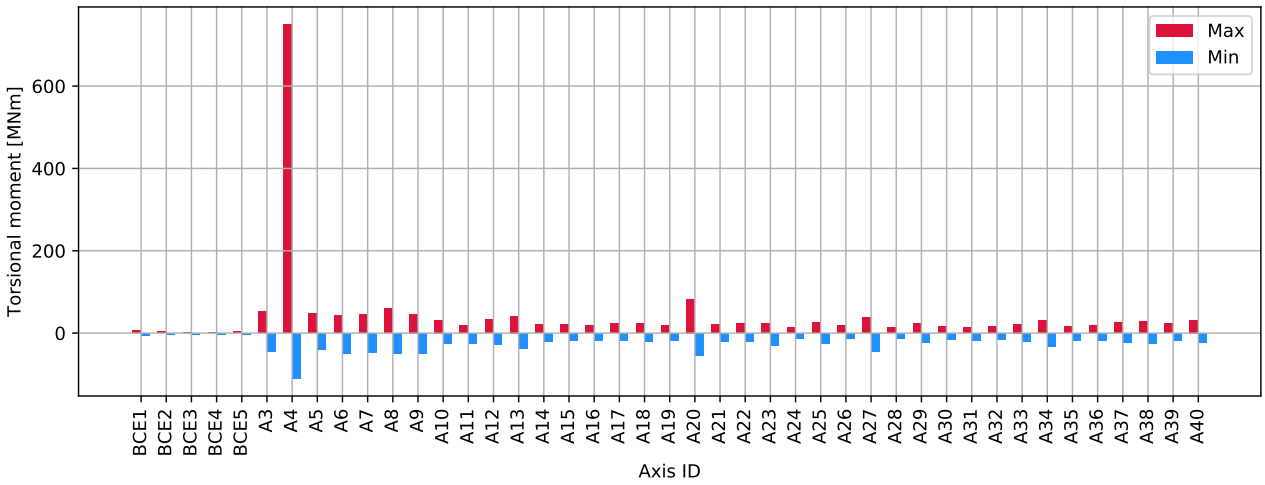

Figure 3.483: P A4 45deg - columns top : Torsional moment [MNm]

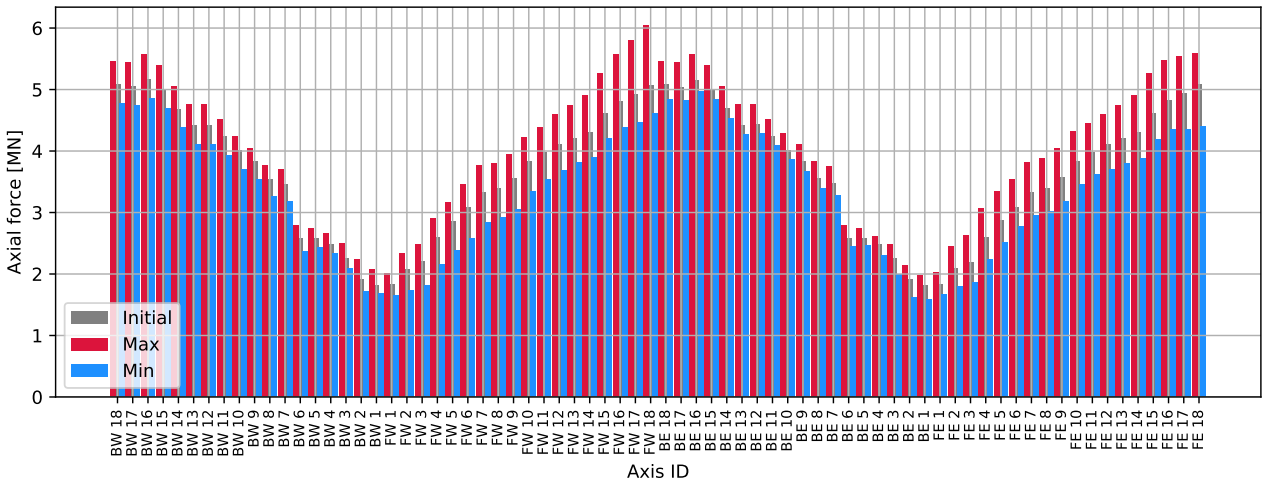

Figure 3.484: P A4 45deg - cables : Axial force [MN]

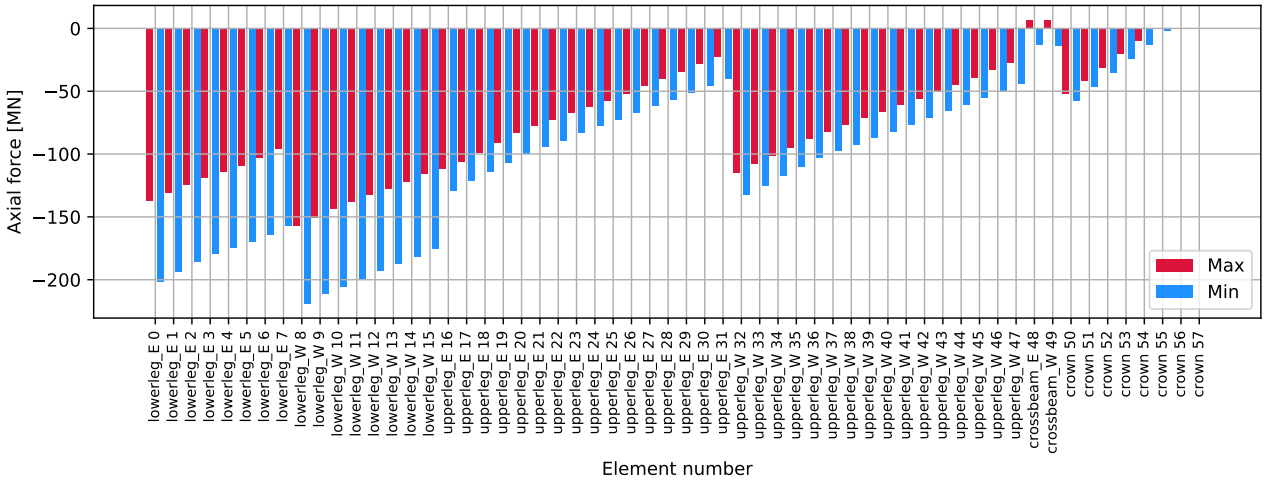

Figure 3.485: P A4 45deg - tower: Axial force [MN]

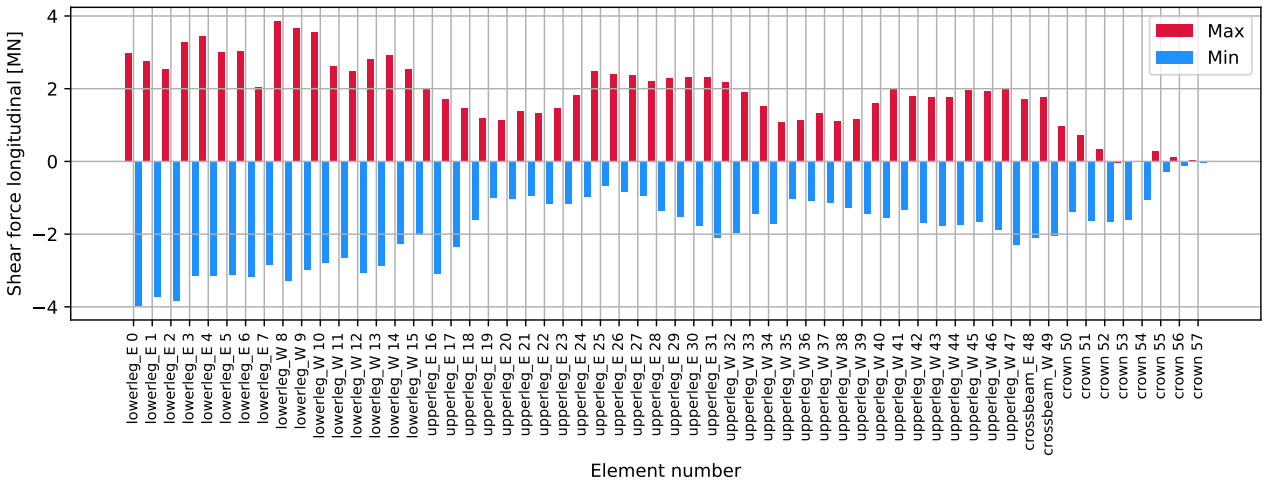

Figure 3.486: P A4 45deg - tower: Shear force longitudinal [MN]

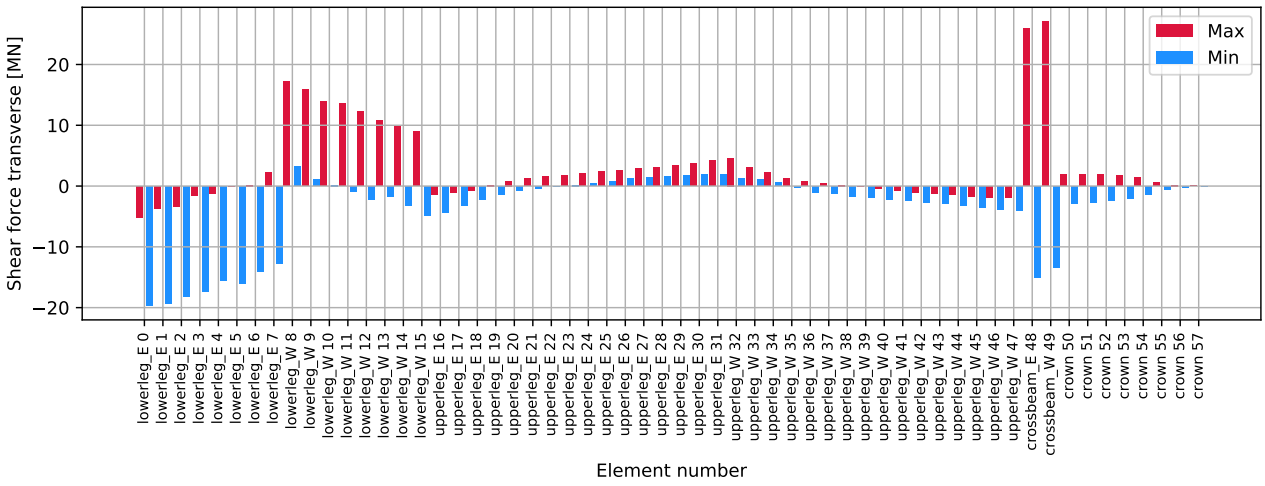

Figure 3.487: P A4 45deg - tower: Shear force transverse [MN]

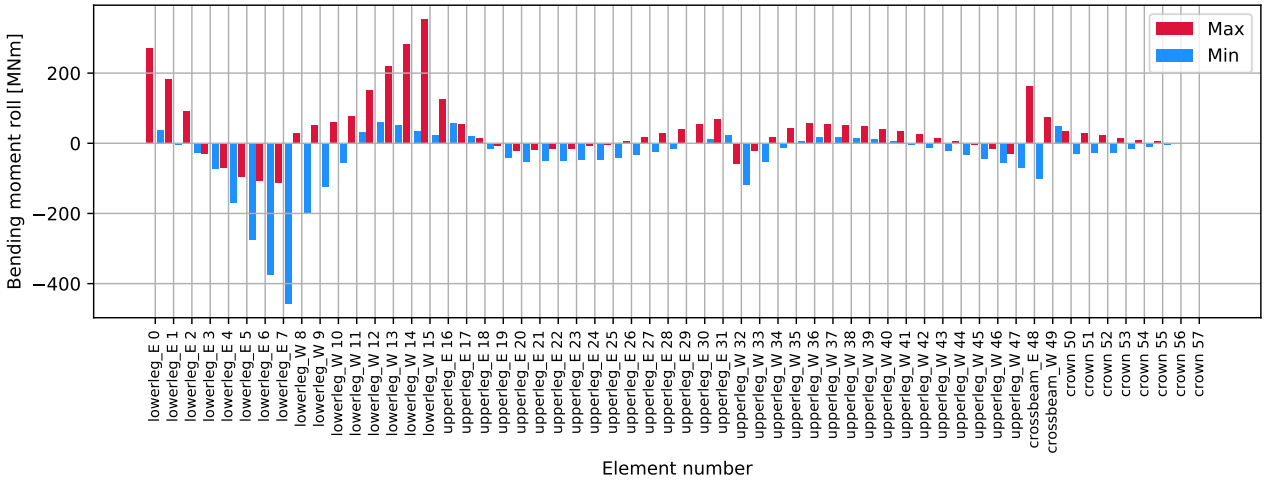

Figure 3.488: P A4 45deg - tower: Bending moment roll [MNm]

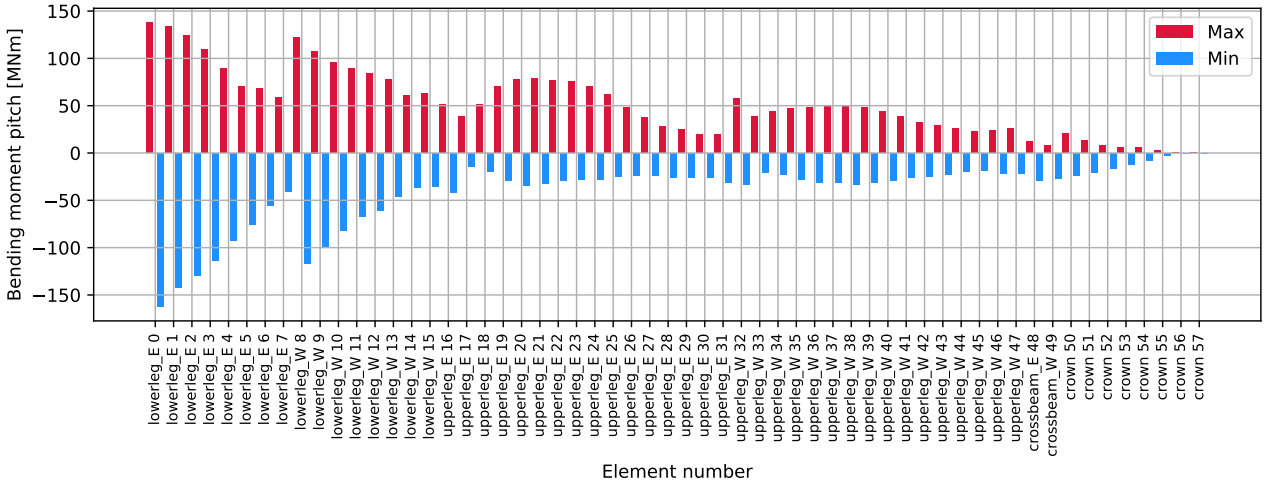

Figure 3.489: P A4 45deg - tower: Bending moment pitch [MNm]

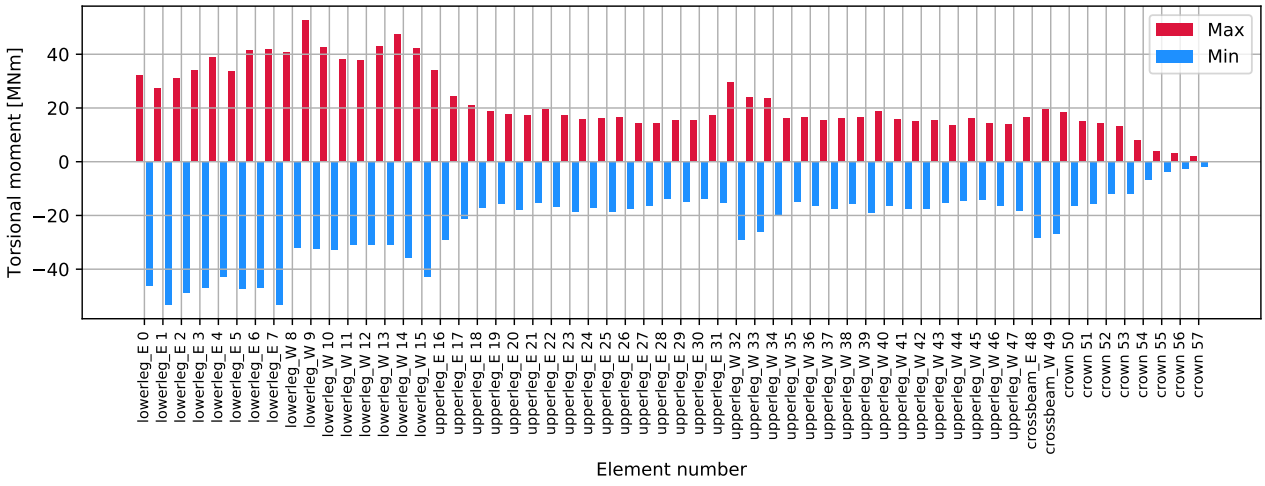

Figure 3.490: P A4 45deg - tower: Torsional moment [MNm]

3.11.3 Time series

Note : Time series are filtered using a Saviotzky-Golay filter for increased readability of the time history plots. Hence, maximum values that occur due to a rapid vibration are not shown in the plots. For maximum values, refer to the tabulated data.
All elements are numbered from South to North, bottom to top

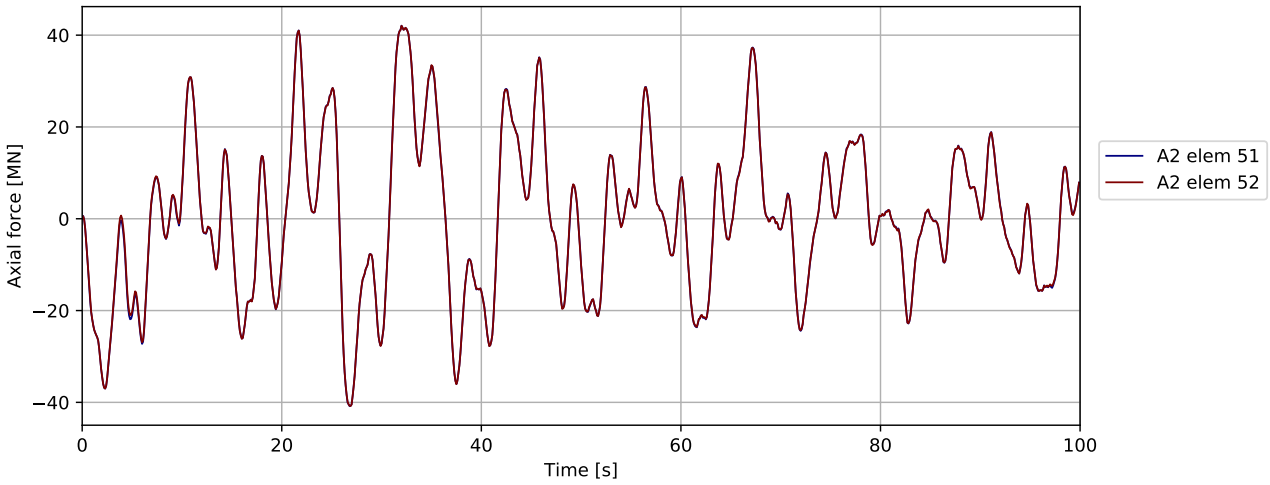

Figure 3.491: P A4 45deg - bridgegirder @ pylon: Axial force [MN]

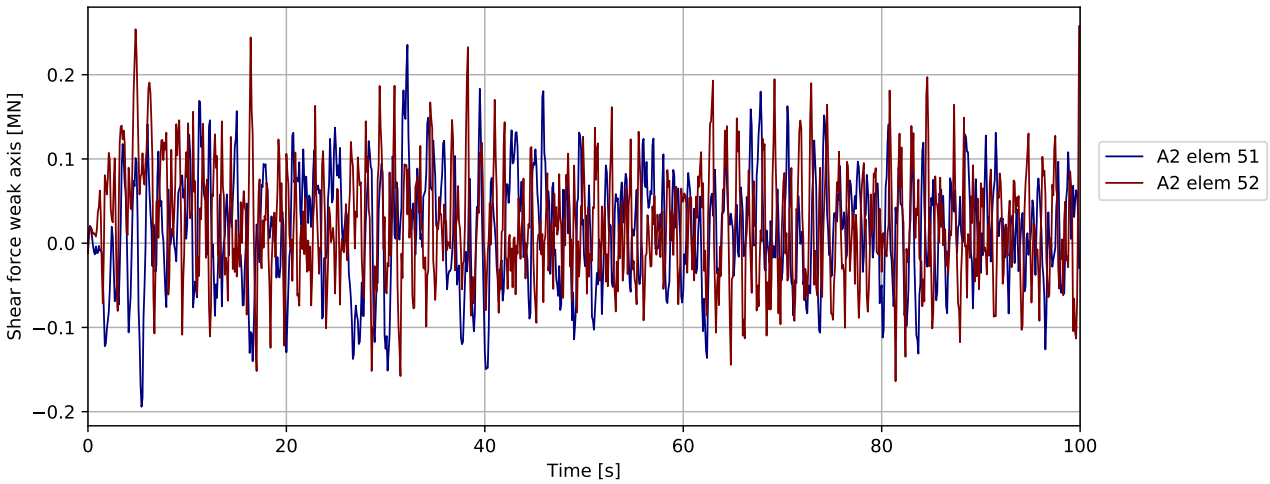

Figure 3.492: P A4 45deg - bridgegirder @ pylon: Shear force weak axis [MN]

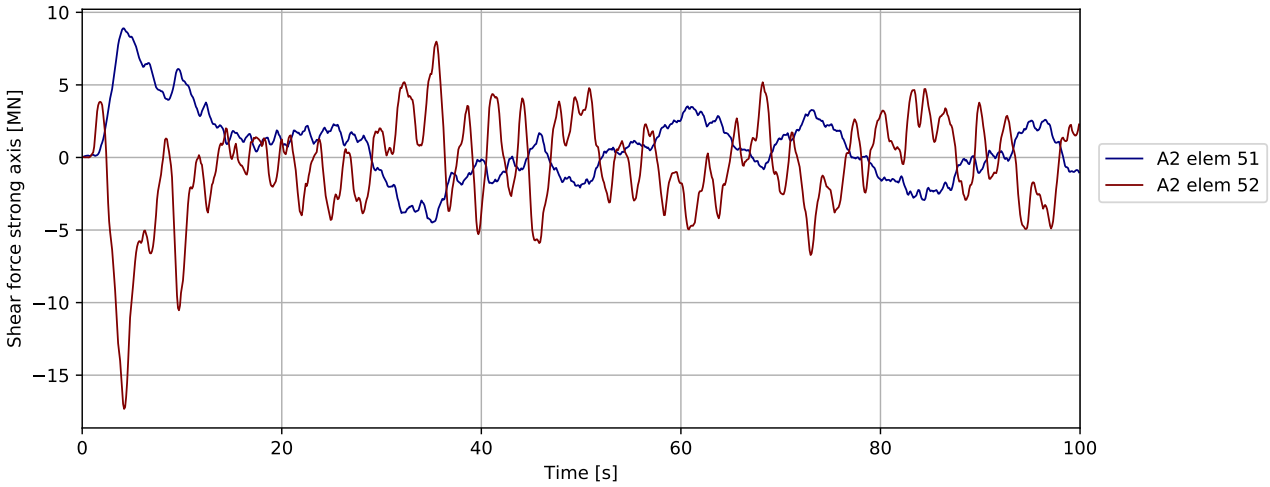

Figure 3.493: P A4 45deg - bridgegirder @ pylon: Shear force strong axis [MN]

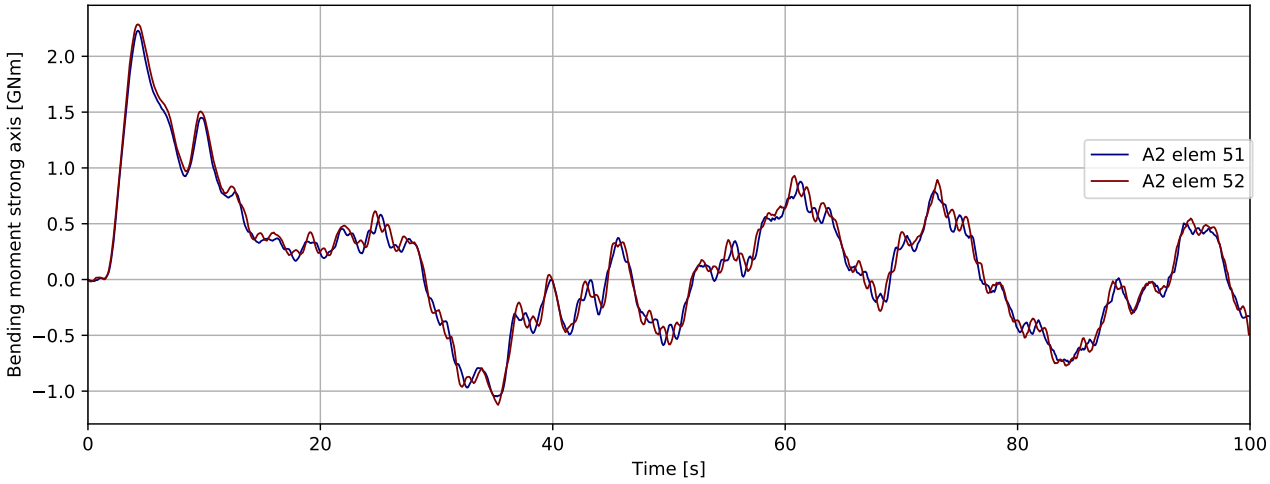

Figure 3.494: P A4 45deg - bridgegirder @ pylon: Bending moment strong axis [GNm]

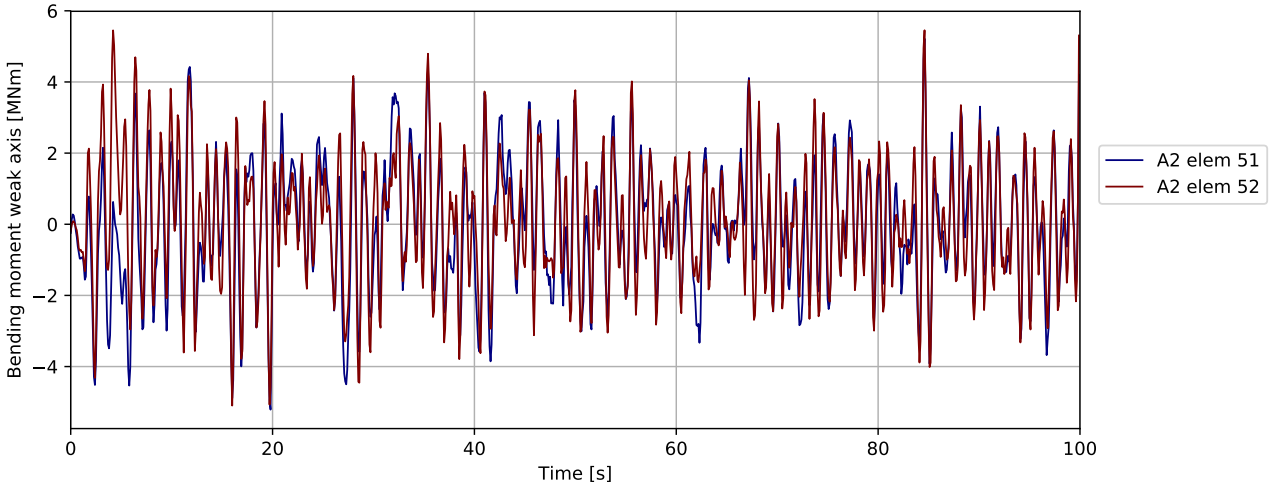

Figure 3.495: P A4 45deg - bridgegirder @ pylon: Bending moment weak axis [MNm]

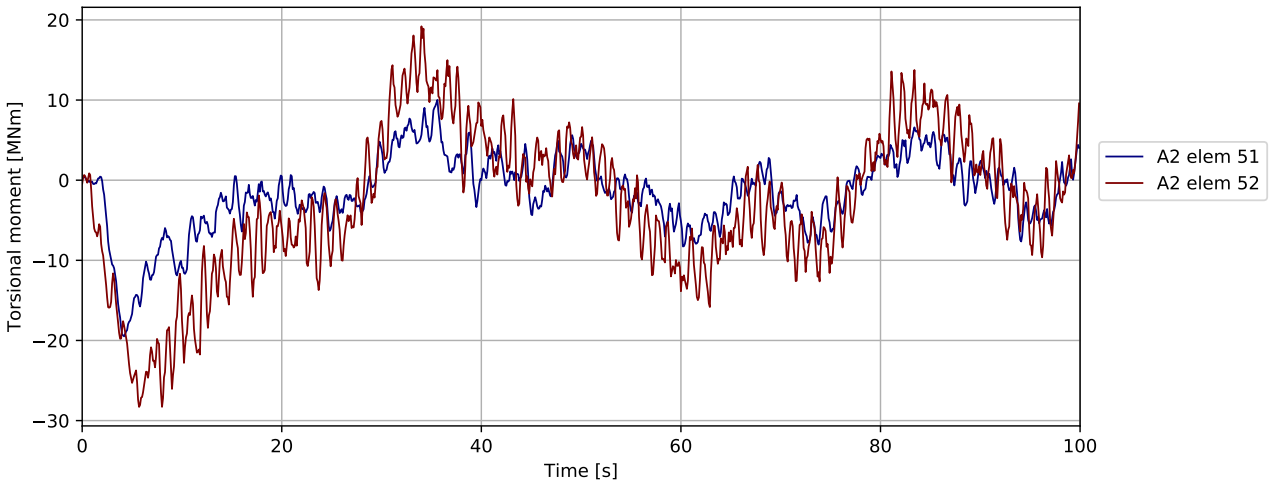

Figure 3.496: P A4 45deg - bridgegirder @ pylon: Torsional moment [MNm]

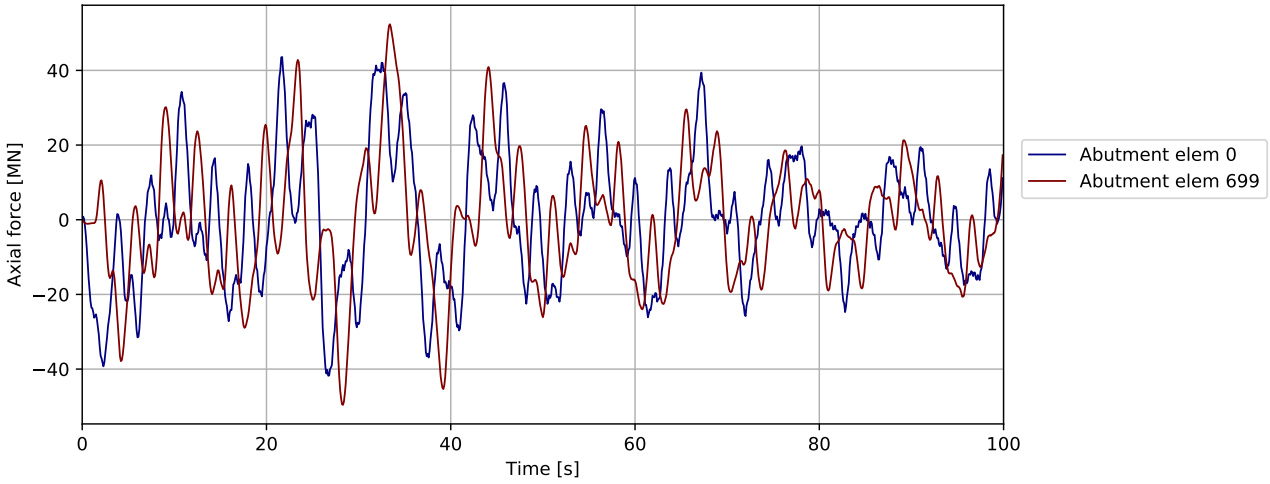

Figure 3.497: P A4 45deg - bridgegirder @abutments: Axial force [MN]

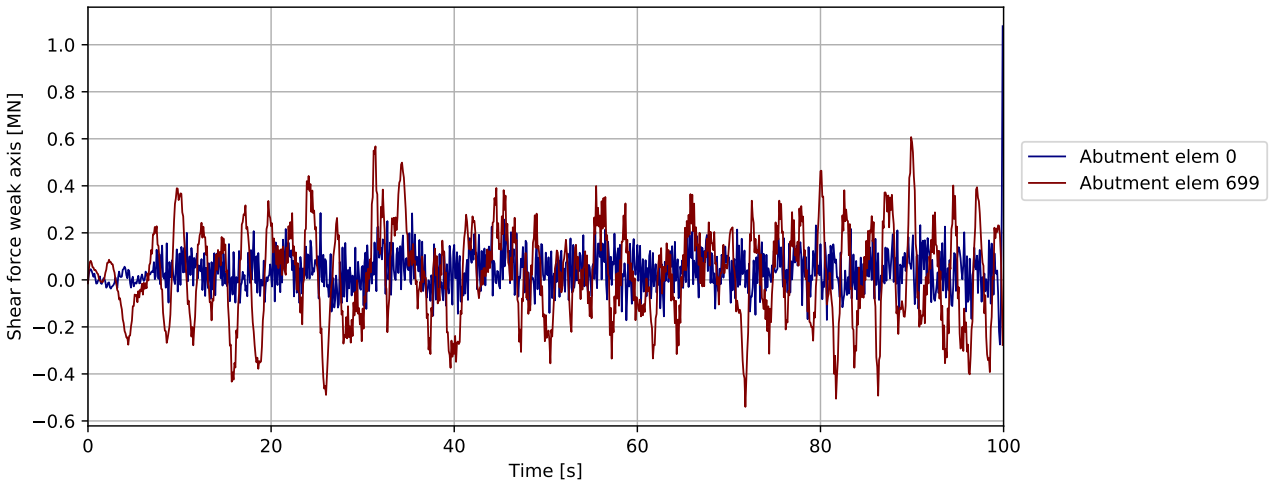

Figure 3.498: P A4 45deg - bridgegirder @abutments: Shear force weak axis [MN]

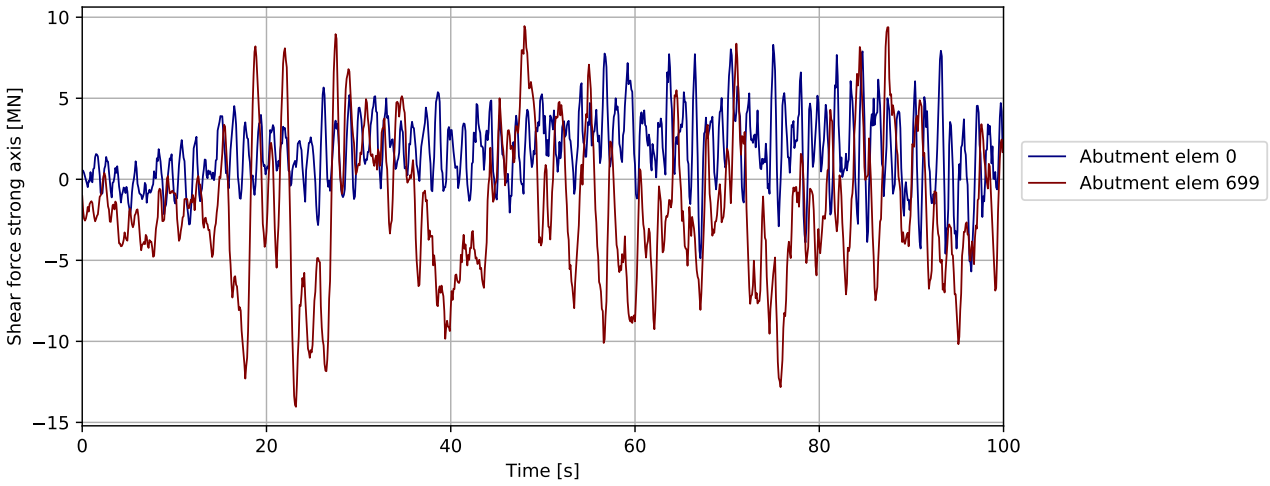

Figure 3.499: P A4 45deg - bridgegirder @abutments: Shear force strong axis [MN]

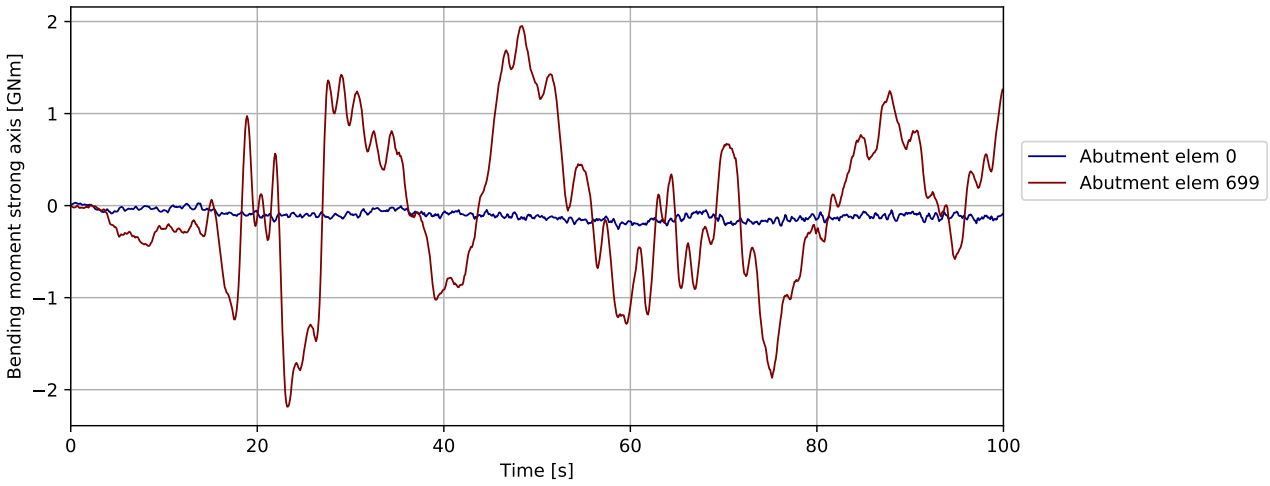

Figure 3.500: P A4 45deg - bridgegirder @abutments: Bending moment strong axis [GNm]

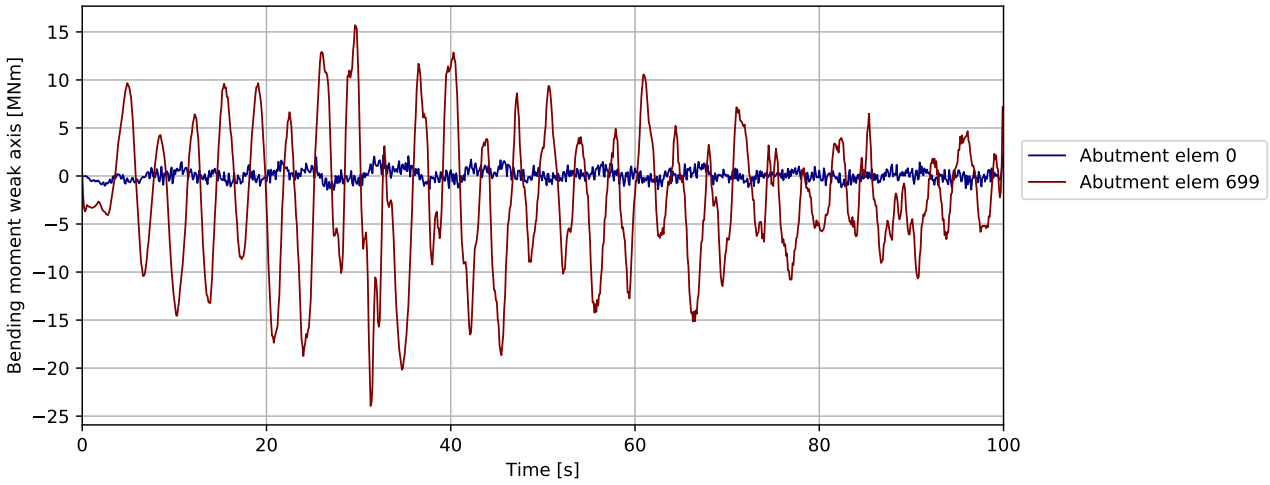

Figure 3.501: P A4 45deg - bridgegirder @abutments: Bending moment weak axis [MNm]

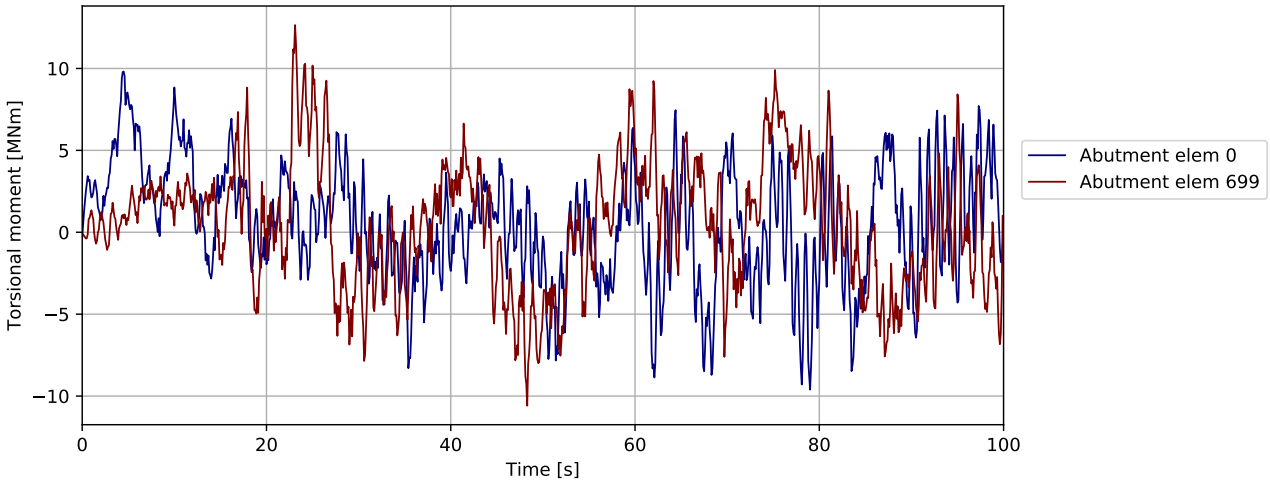

Figure 3.502: P A4 45deg - bridgegirder @abutments: Torsional moment [MNm]

Note : Compressive spring force is negative

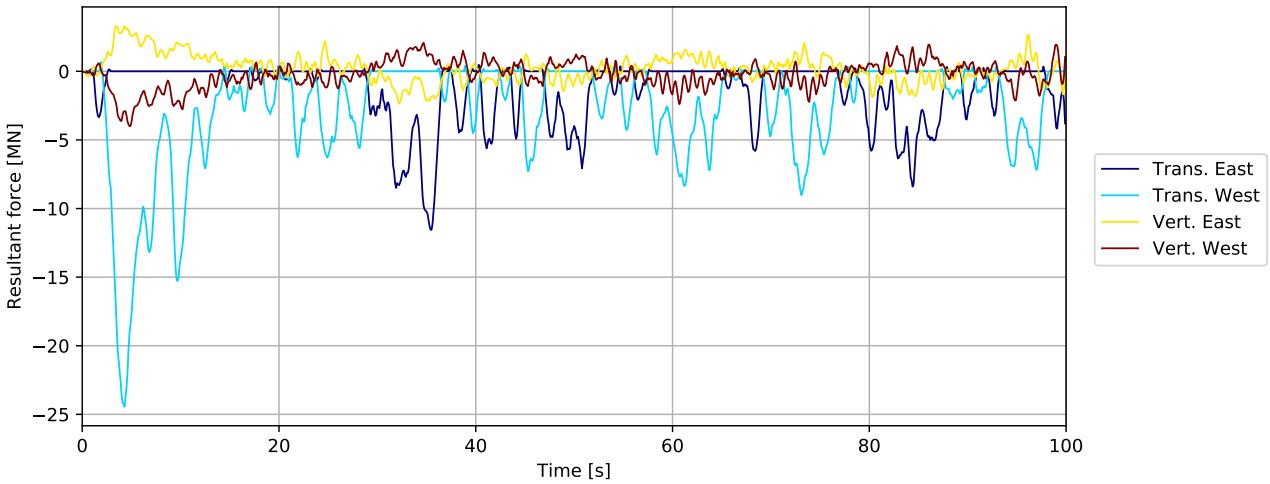

Figure 3.503: P A4 45deg - bridgegirder supports in tower: Resultant force [MN]

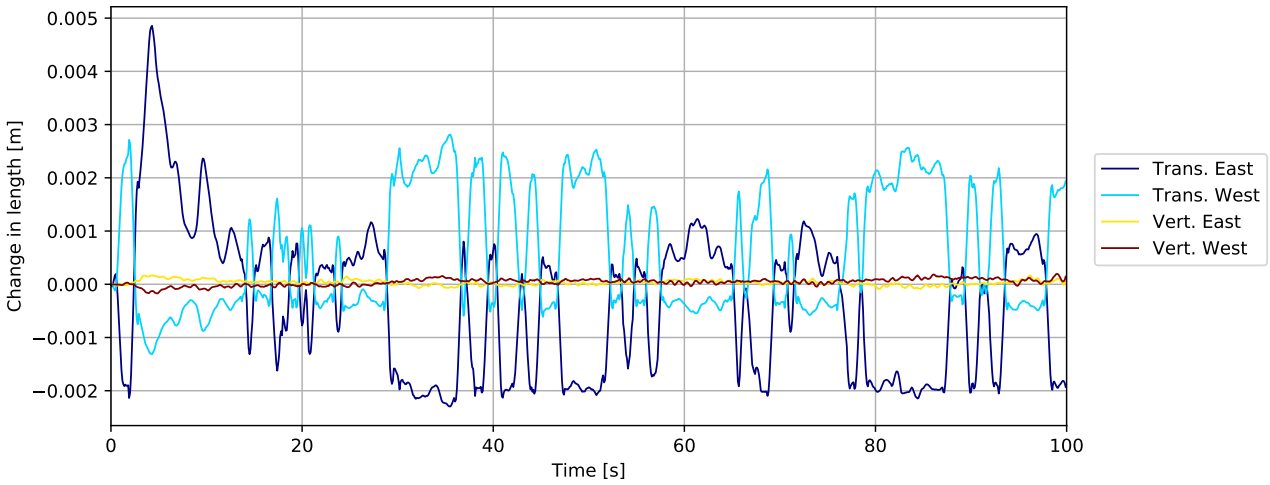

Figure 3.504: P A4 45deg - bridgegirder supports in tower: Change in length [m]

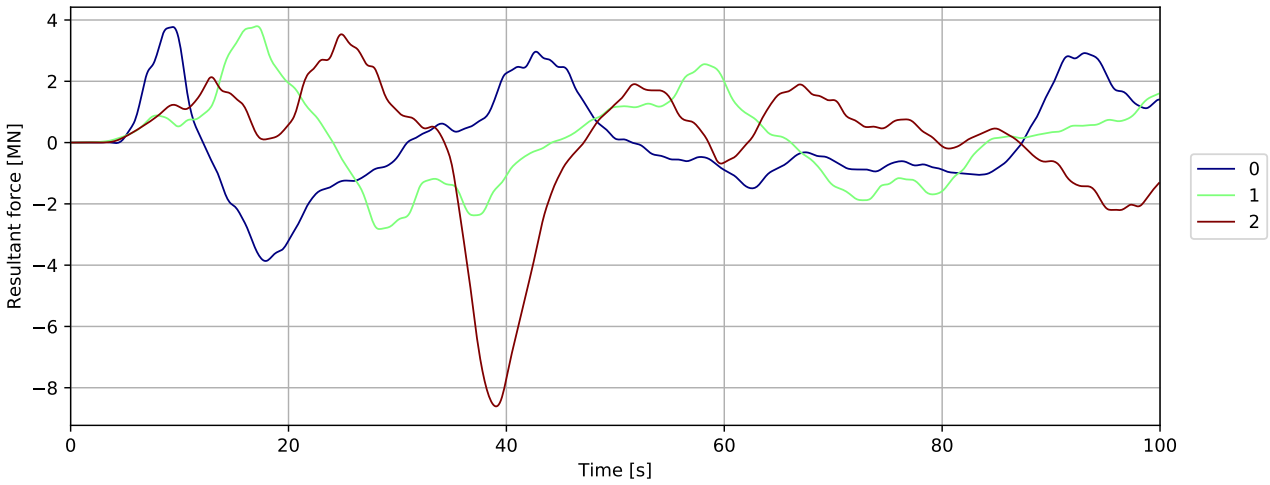

Figure 3.505: Mooring force

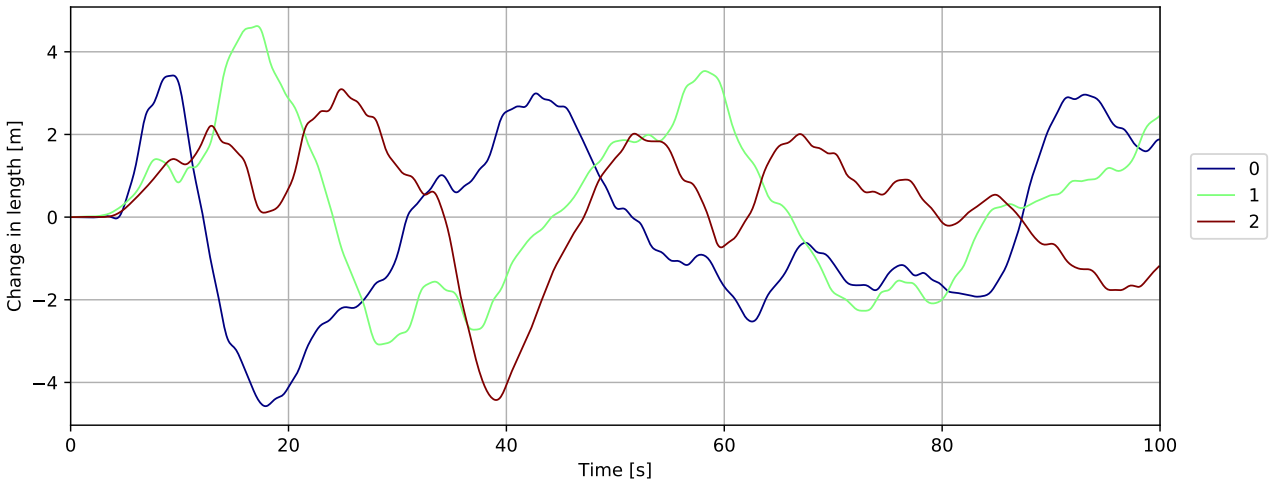

Figure 3.506: Mooring displacement

3.12 PontoonA5 45deg

3.12.1 Overall response

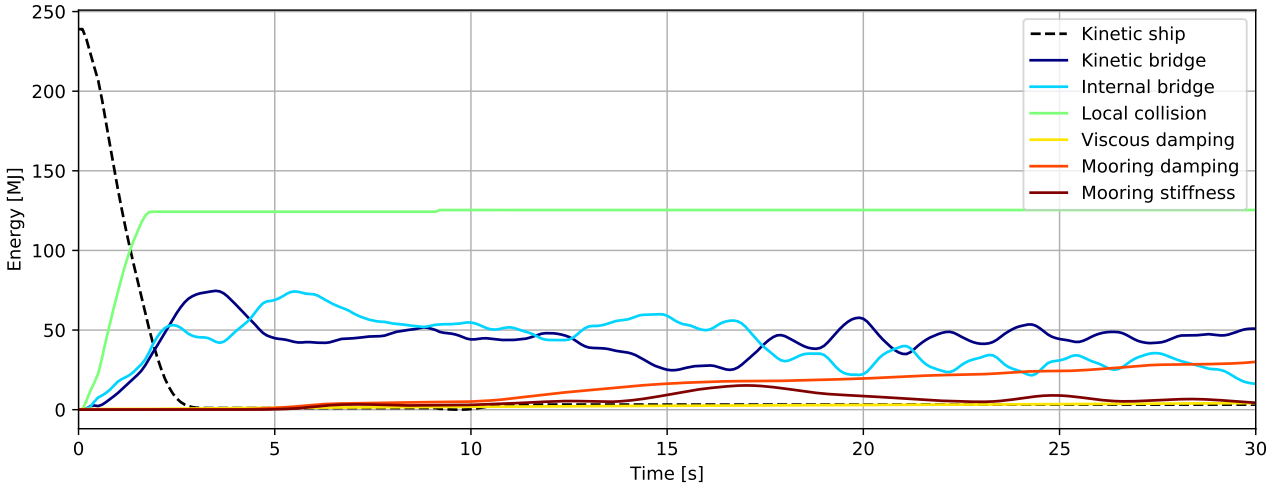

Figure 3.507: Energy [MJ] - initial phase

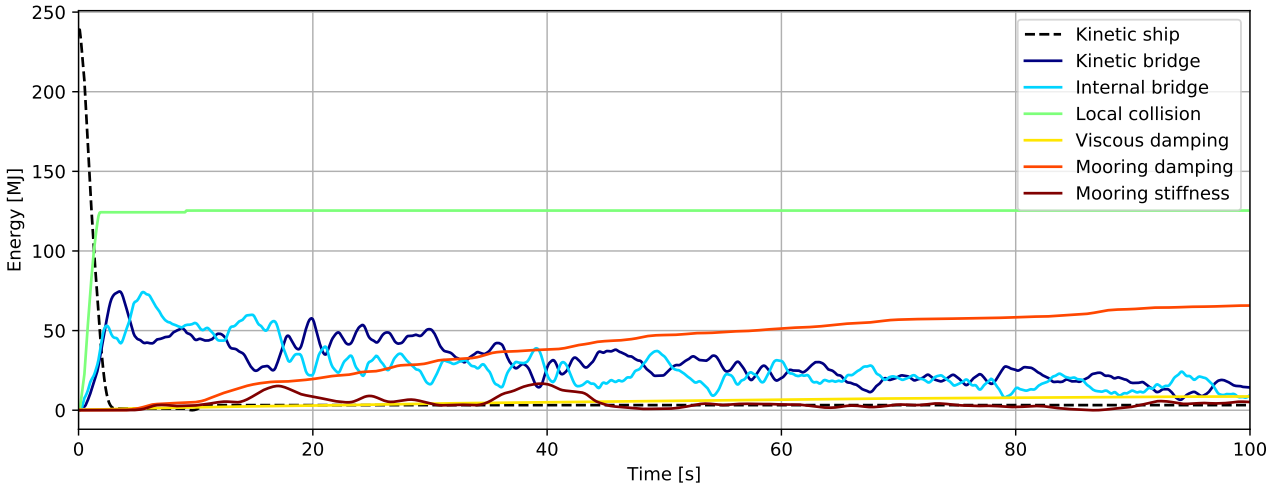

Figure 3.508: Energy [MJ]

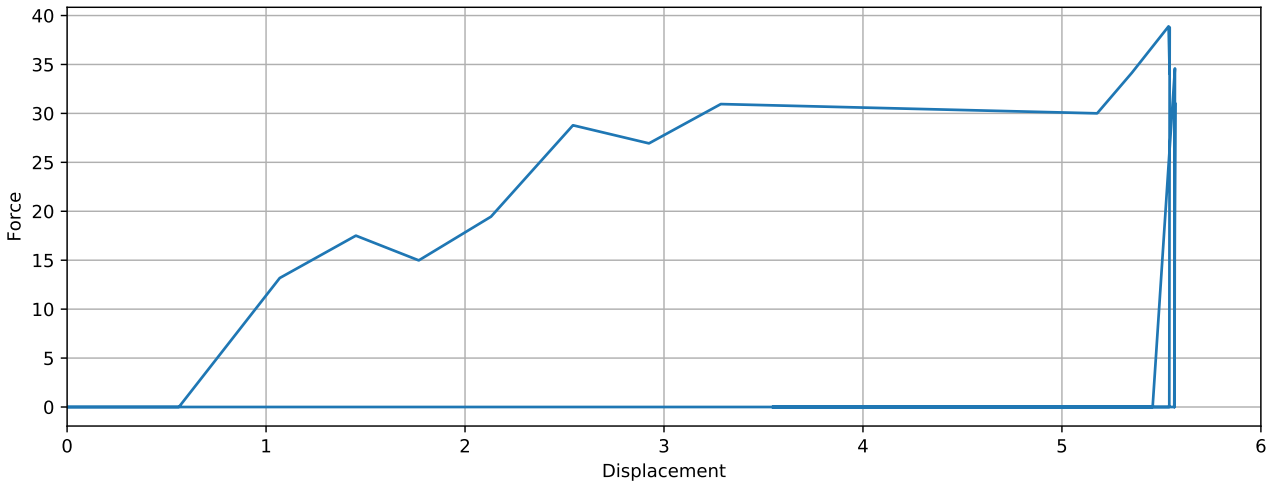

Figure 3.509: Simulated local collision force-displacement

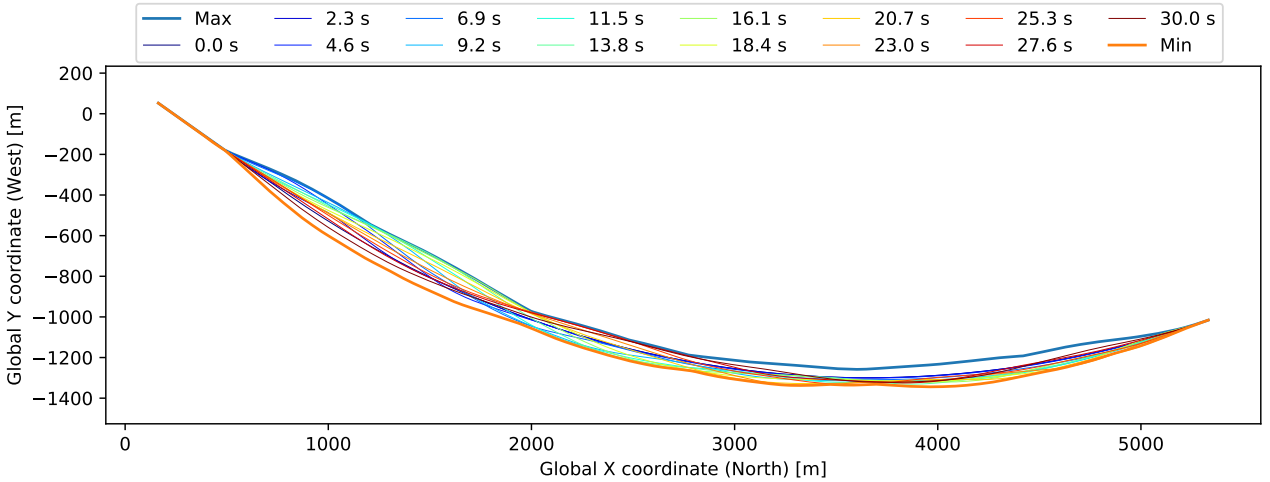

Figure 3.510: Bridgegirder deflection (10x displacment scaling)

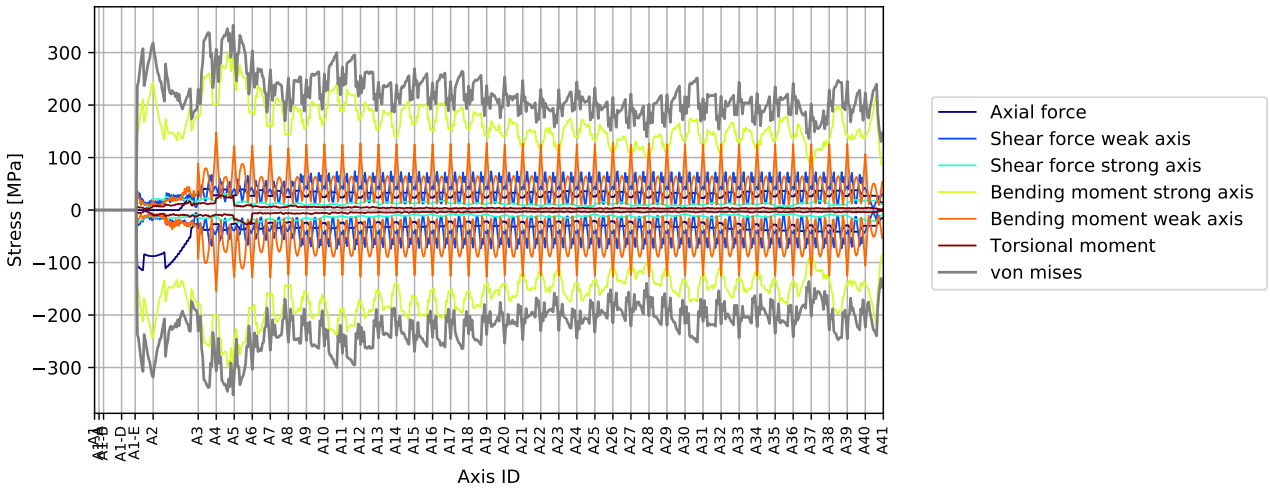

Figure 3.511: Stress envelope from all force components

3.12.2 Envelope plots

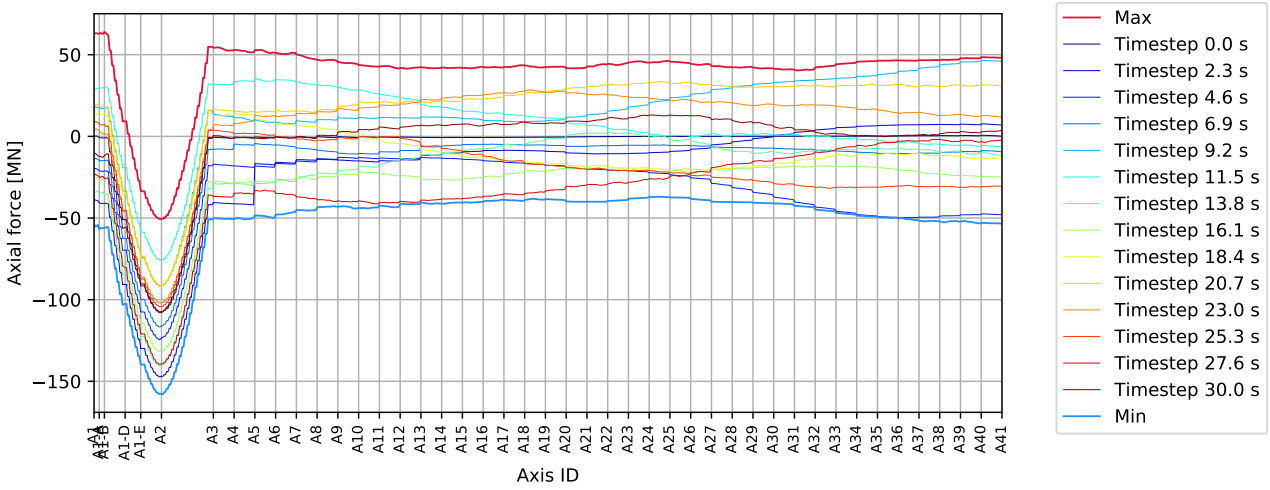

Figure 3.512: P A5 45deg - bridgegirder : Axial force [MN]

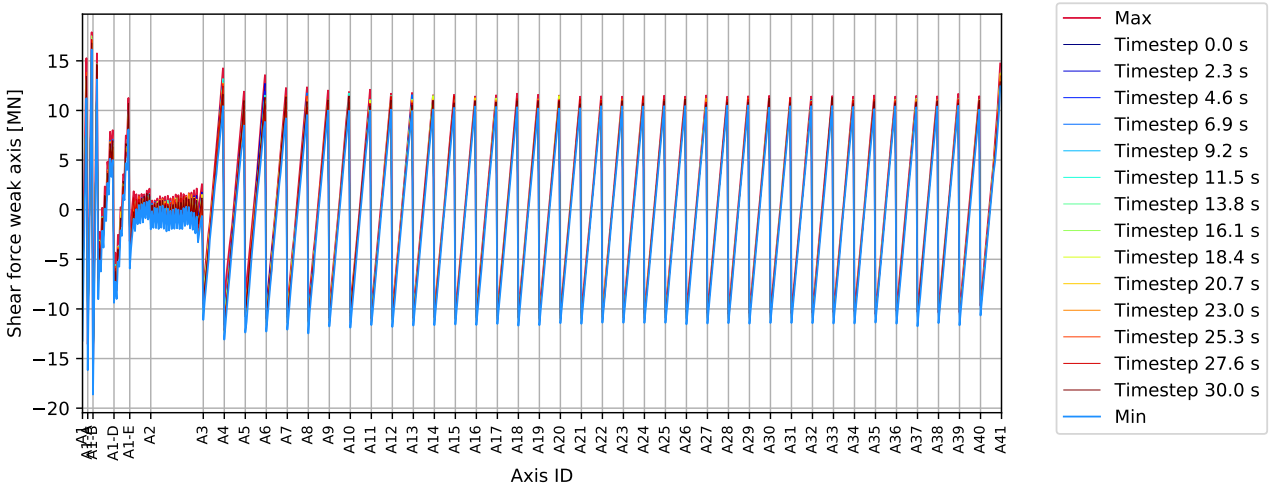

Figure 3.513: P A5 45deg - bridgegirder : Shear force weak axis [MN]

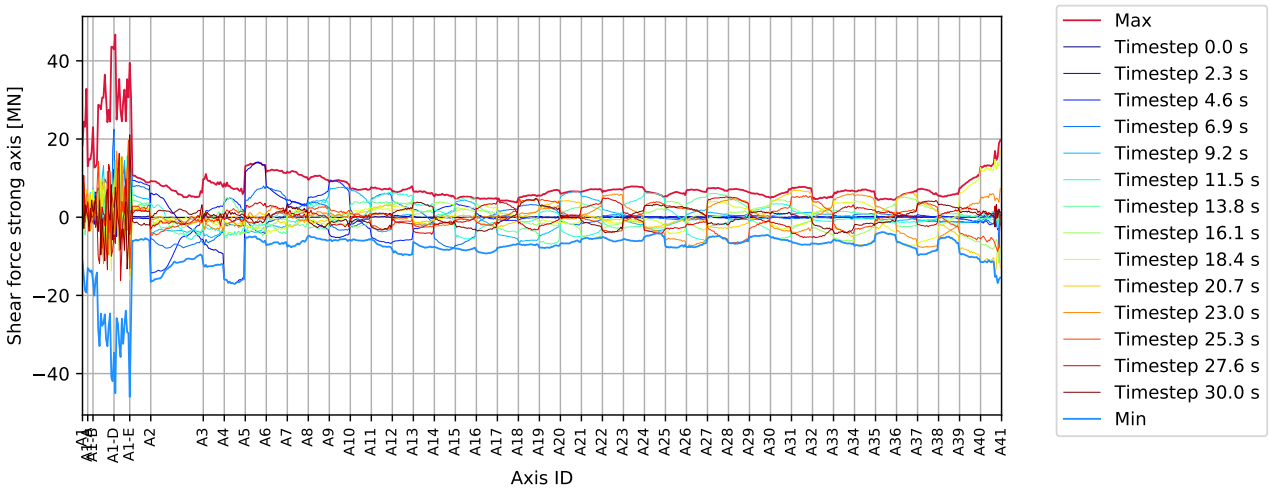

Figure 3.514: P A5 45deg - bridgegirder : Shear force strong axis [MN]

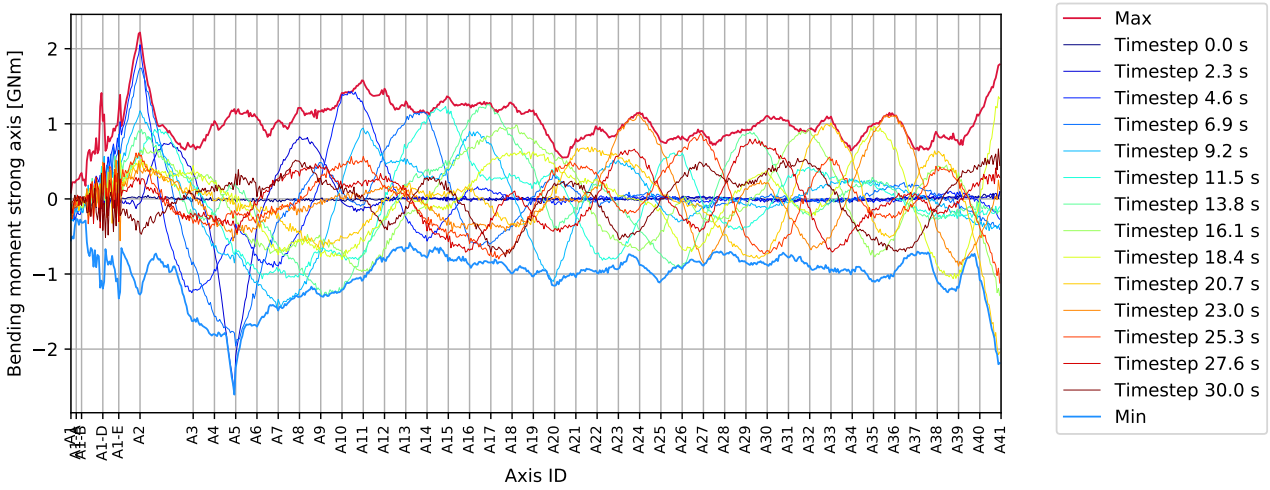

Figure 3.515: P A5 45deg - bridgegirder : Bending moment strong axis [GNm]

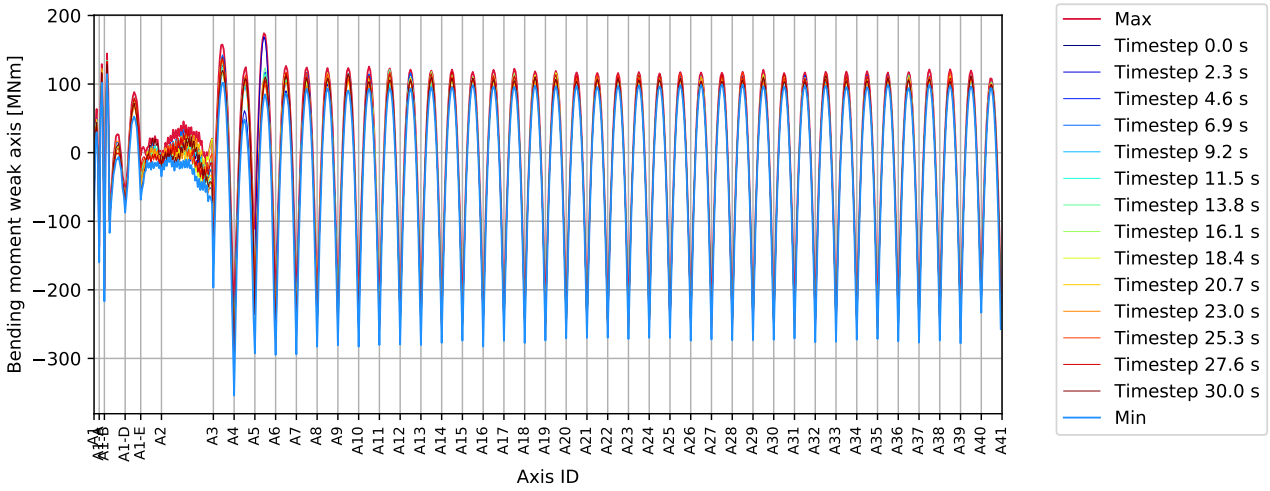

Figure 3.516: P A5 45deg - bridgegirder : Bending moment weak axis [MNm]

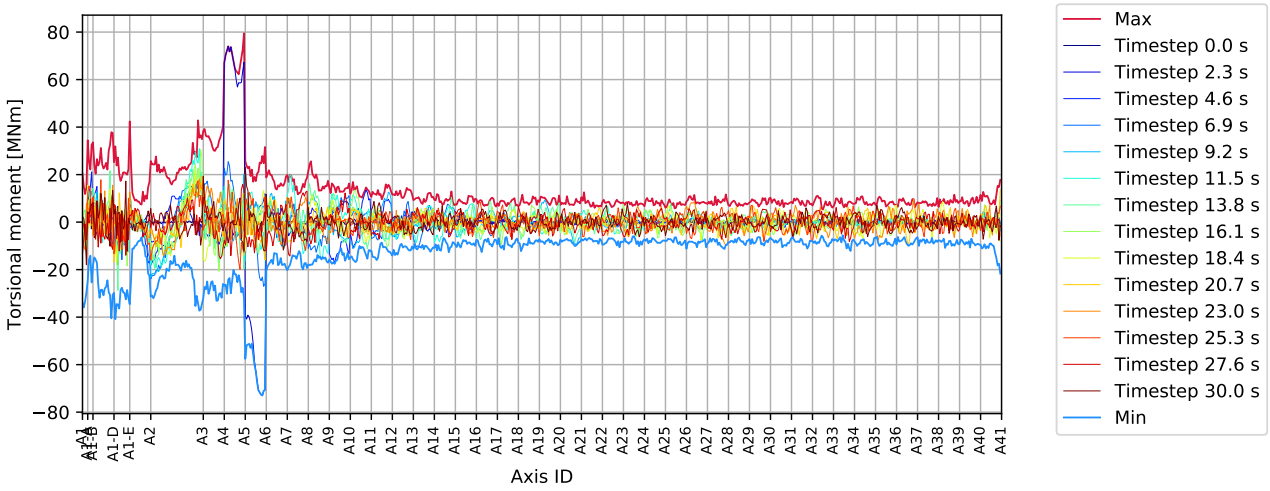

Figure 3.517: P A5 45deg - bridgegirder : Torsional moment [MNm]

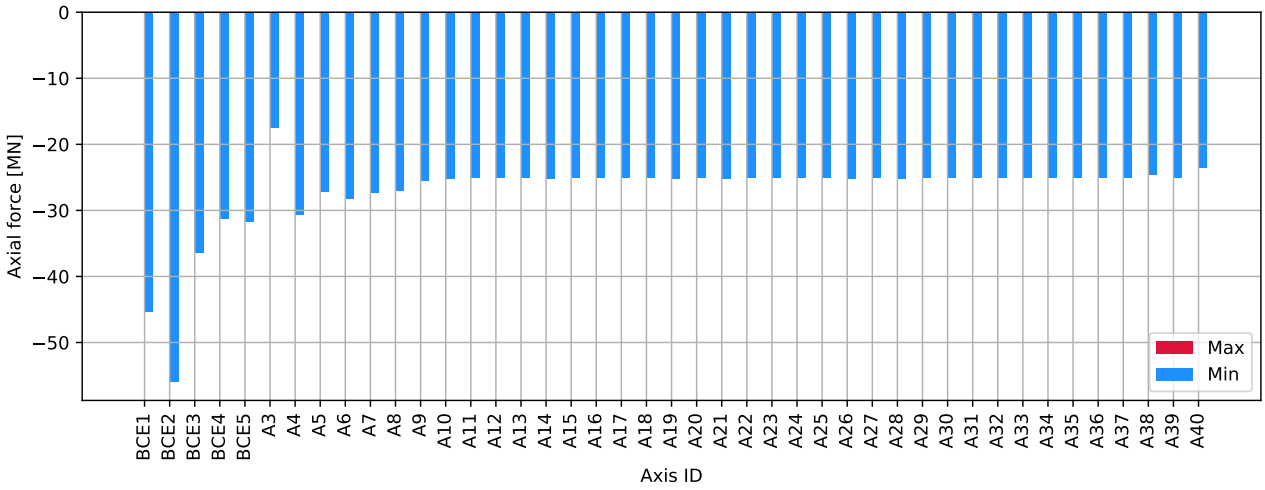

Figure 3.518: P A5 45deg - columns bottom : Axial force [MN]

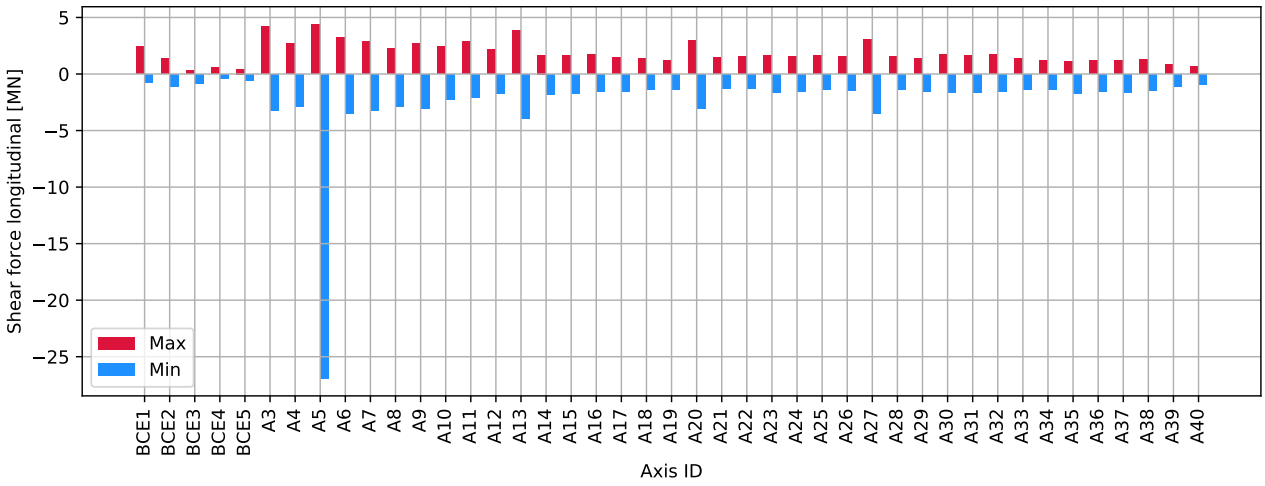

Figure 3.519: P A5 45deg - columns bottom : Shear force longitudinal [MN]

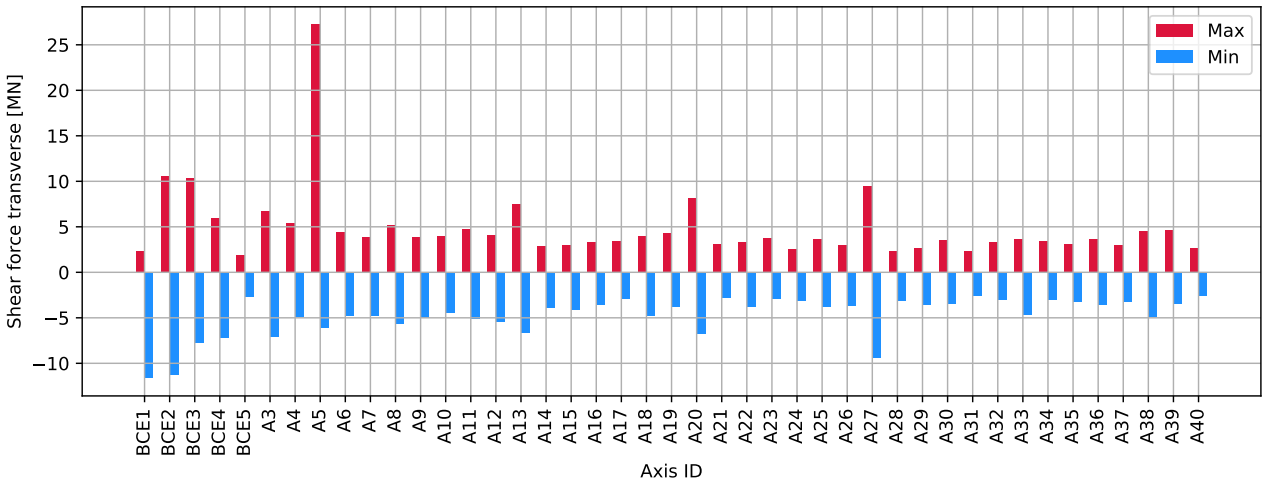

Figure 3.520: P A5 45deg - columns bottom : Shear force transverse [MN]

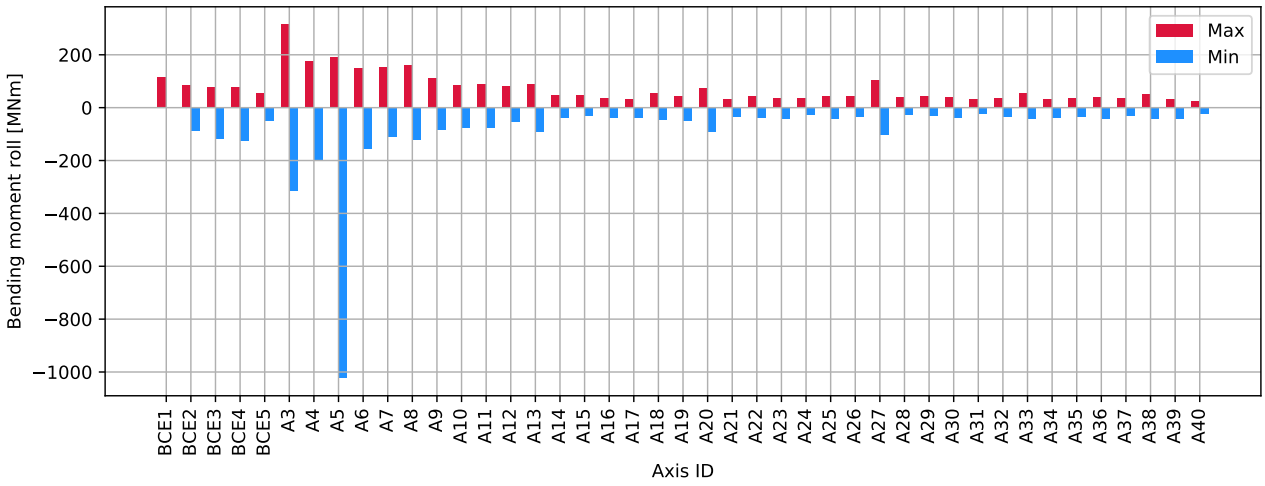

Figure 3.521: P A5 45deg - columns bottom : Bending moment roll [MNm]

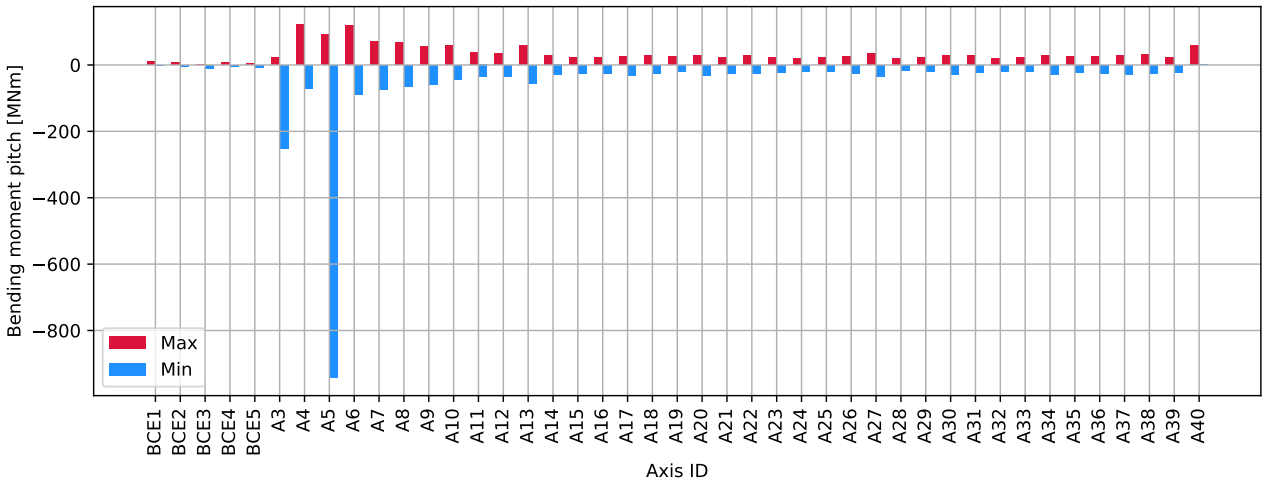

Figure 3.522: P A5 45deg - columns bottom : Bending moment pitch [MNm]

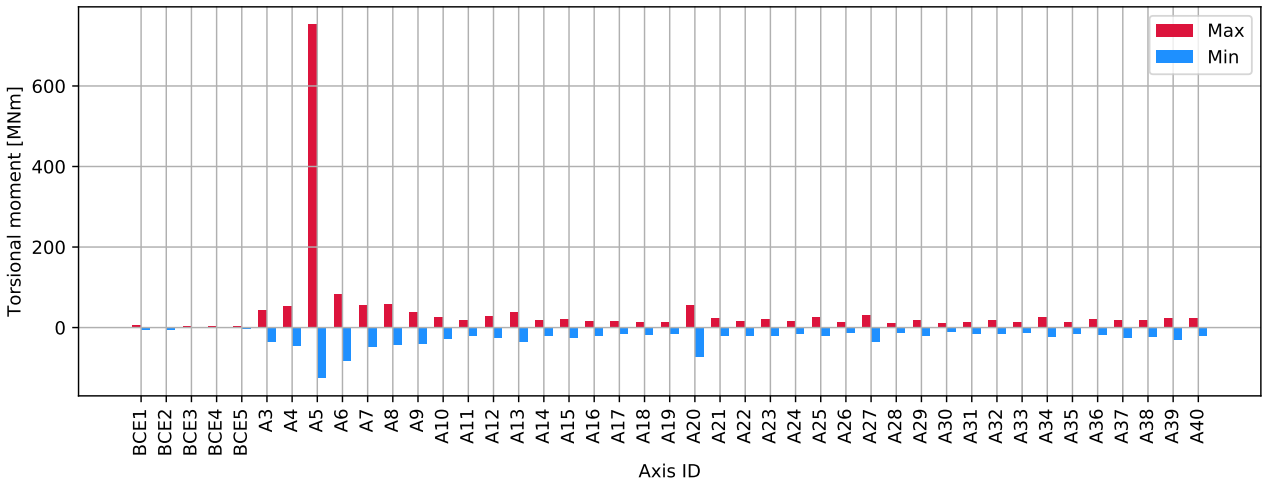

Figure 3.523: P A5 45deg - columns bottom : Torsional moment [MNm]

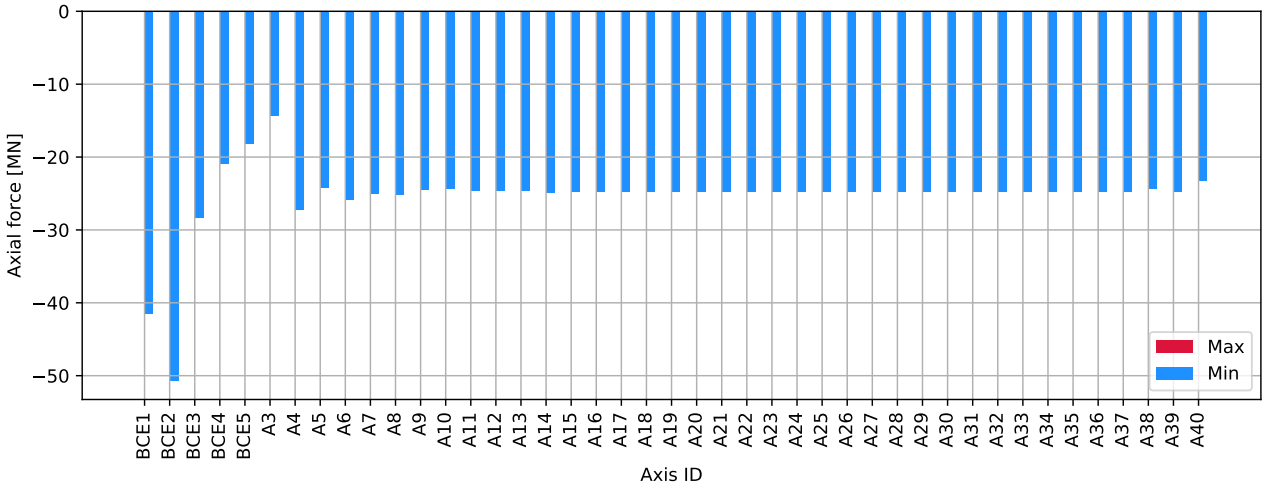

Figure 3.524: P A5 45deg - columns top : Axial force [MN]

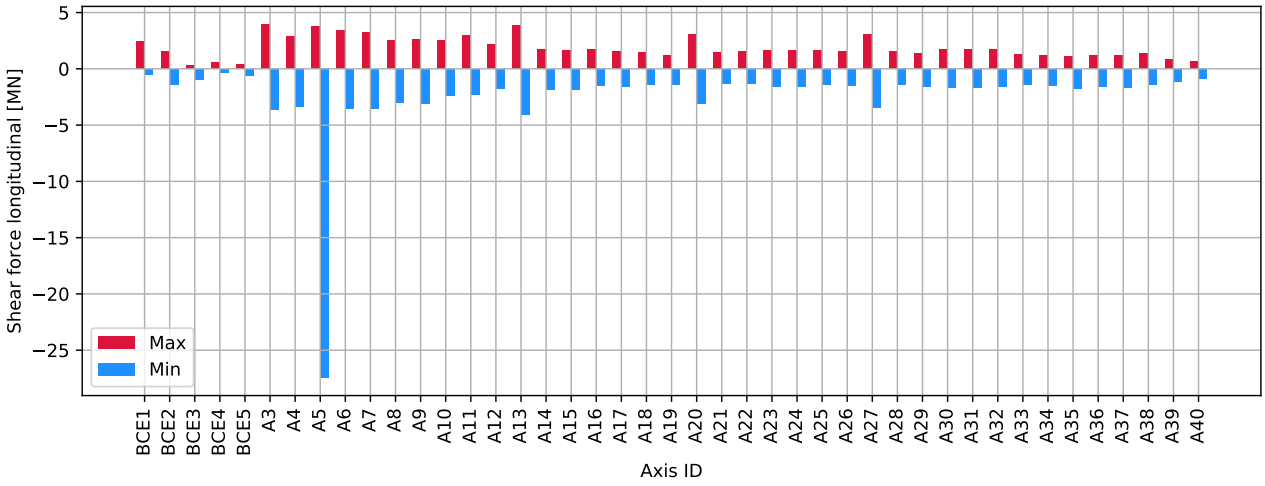

Figure 3.525: P A5 45deg - columns top : Shear force longitudinal [MN]

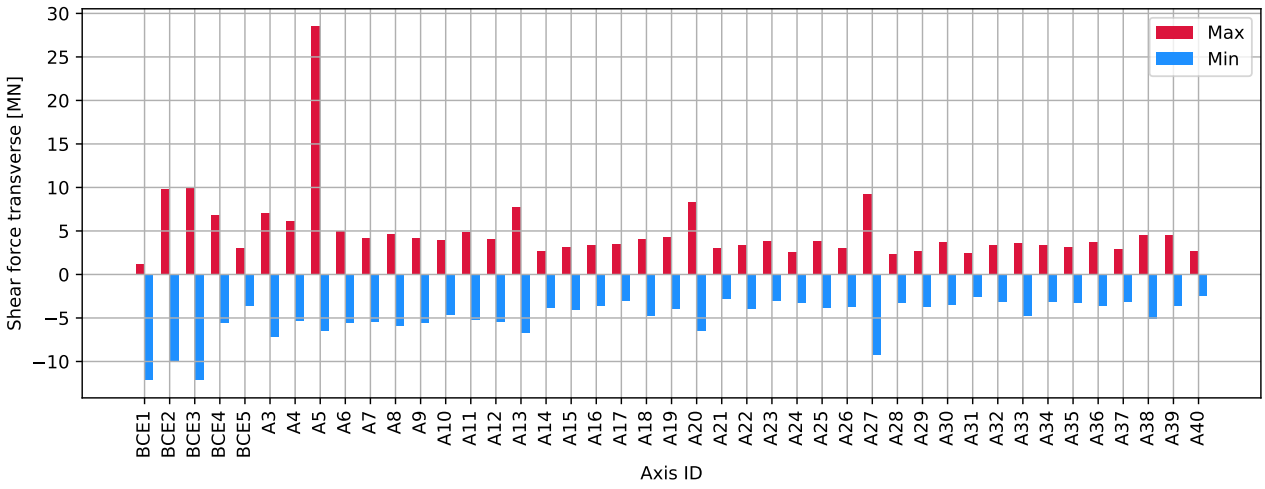

Figure 3.526: P A5 45deg - columns top : Shear force transverse [MN]

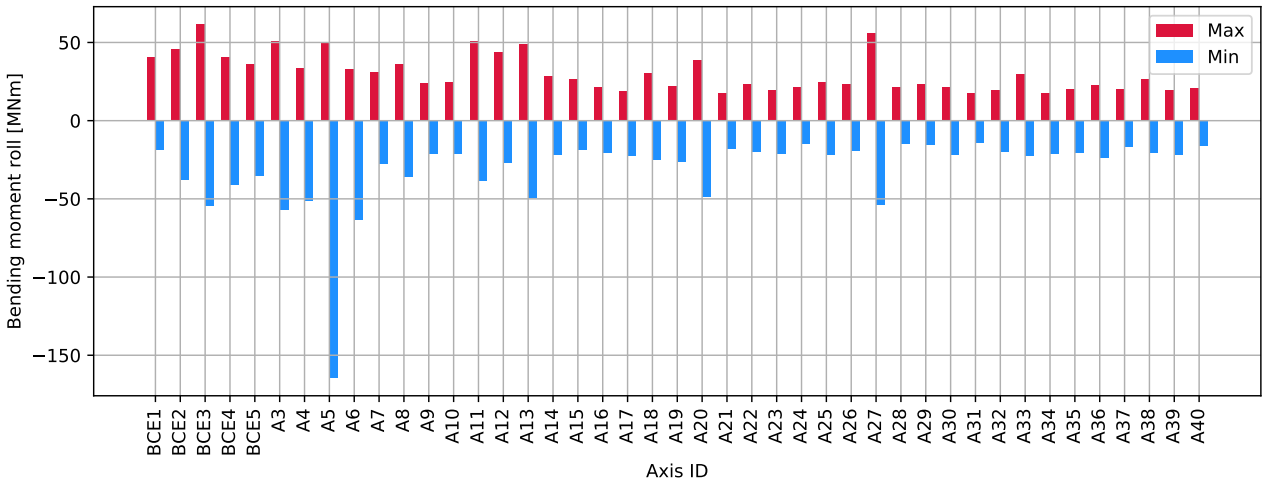

Figure 3.527: P A5 45deg - columns top : Bending moment roll [MNm]

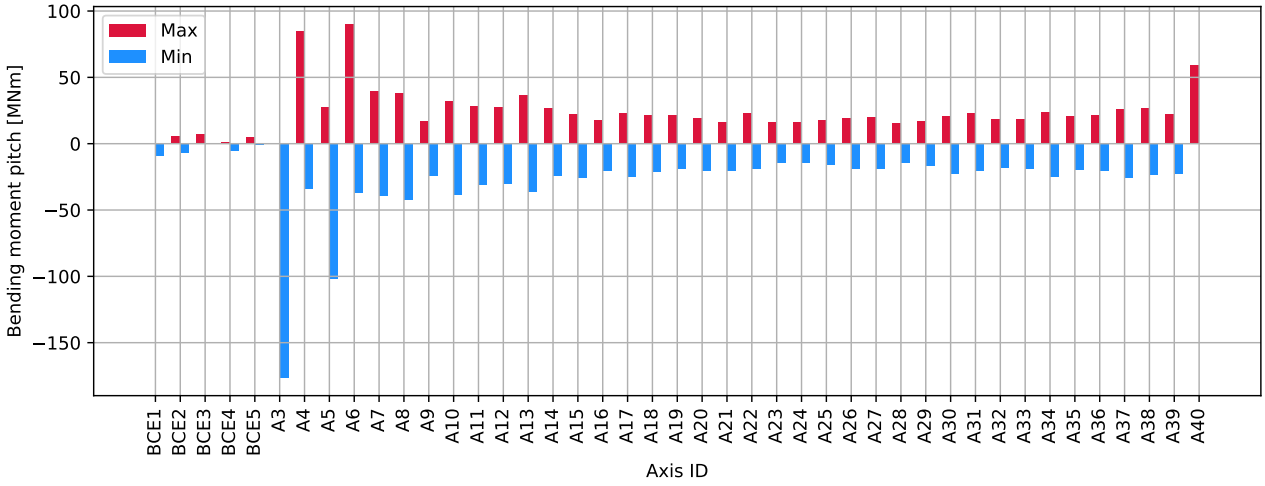

Figure 3.528: P A5 45deg - columns top : Bending moment pitch [MNm]

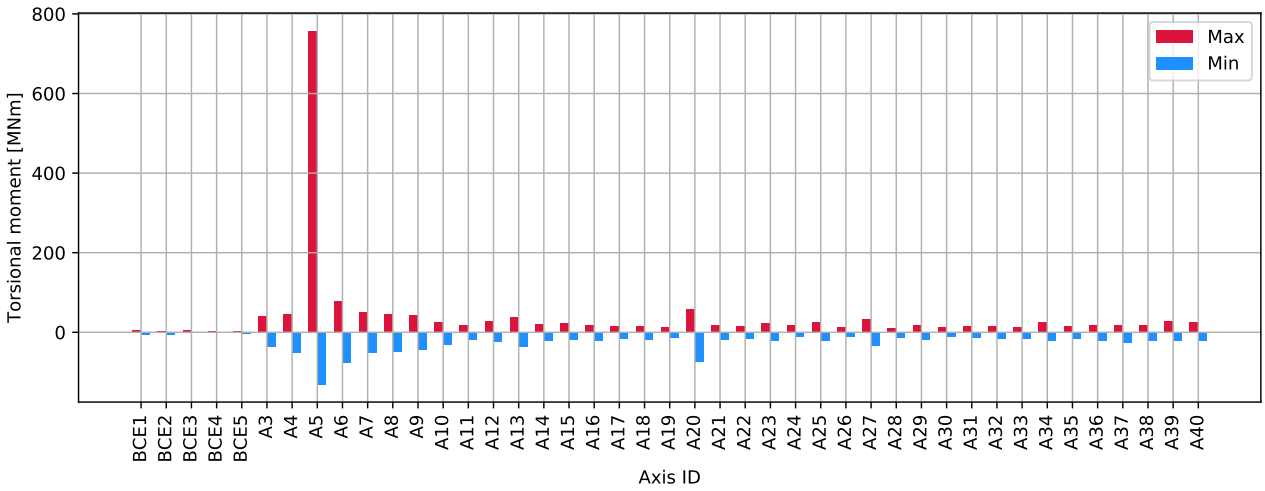

Figure 3.529: P A5 45deg - columns top : Torsional moment [MNm]

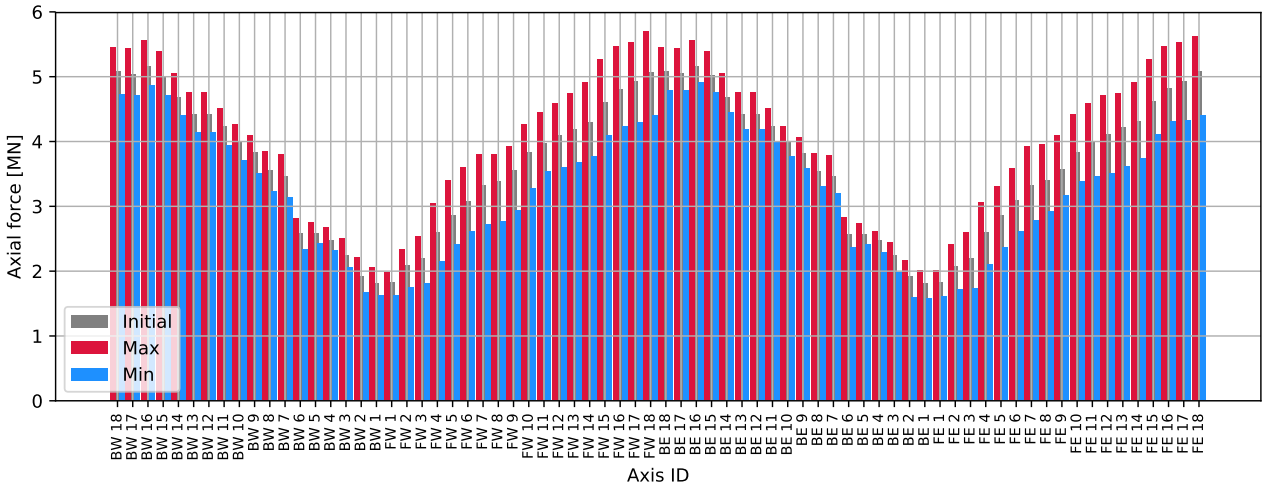

Figure 3.530: P A5 45deg - cables : Axial force [MN]

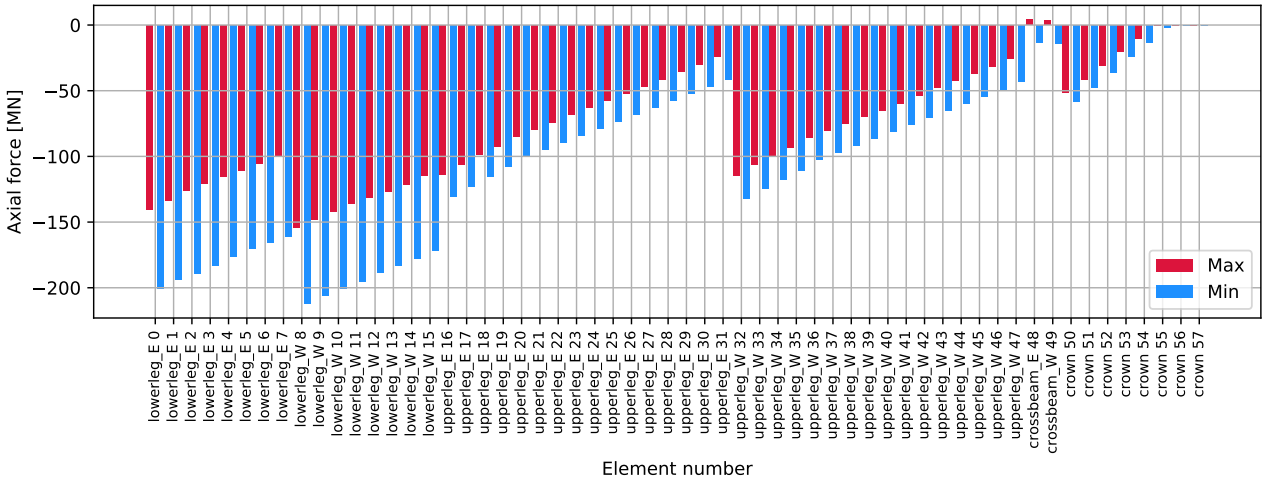

Figure 3.531: P A5 45deg - tower: Axial force [MN]

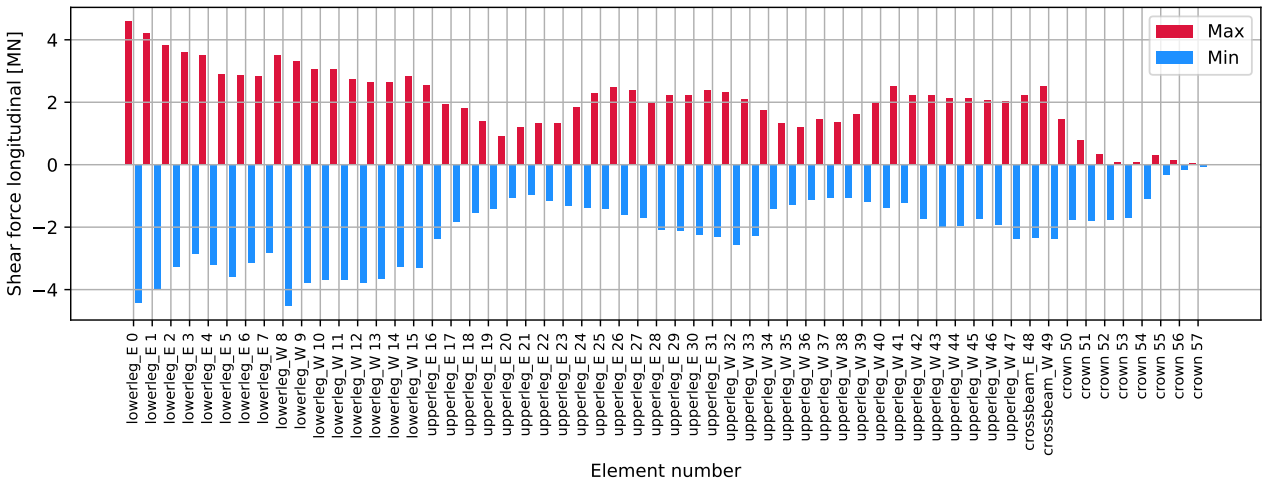

Figure 3.532: P A5 45deg - tower: Shear force longitudinal [MN]

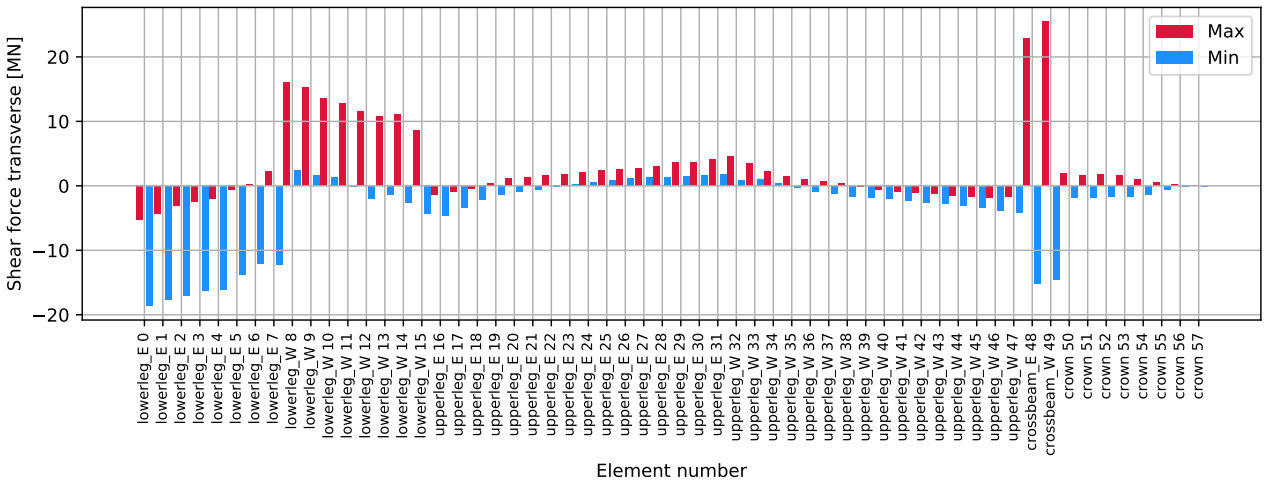

Figure 3.533: P A5 45deg - tower: Shear force transverse [MN]

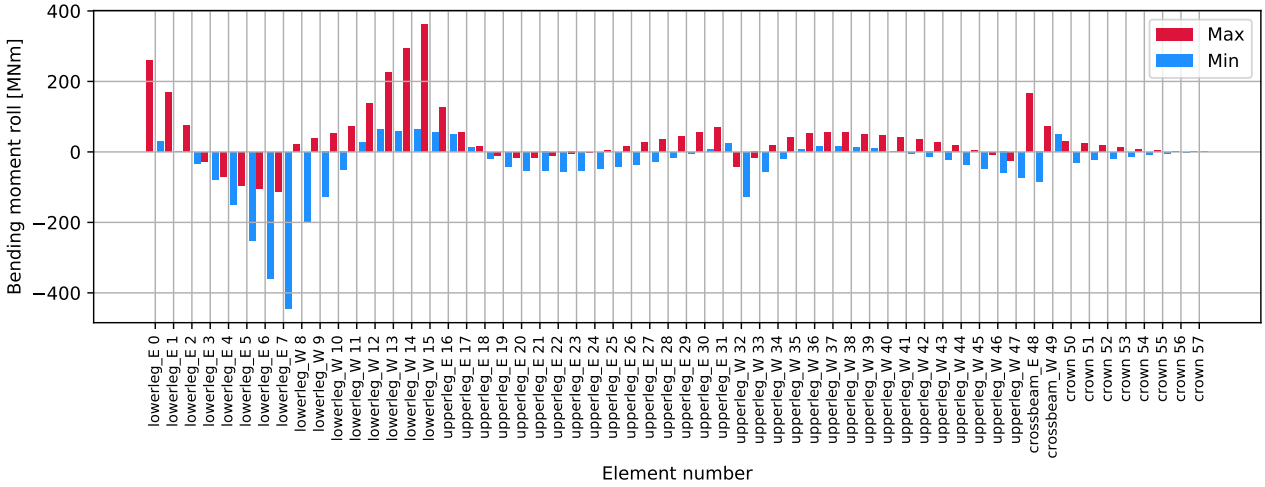

Figure 3.534: P A5 45deg - tower: Bending moment roll [MNm]

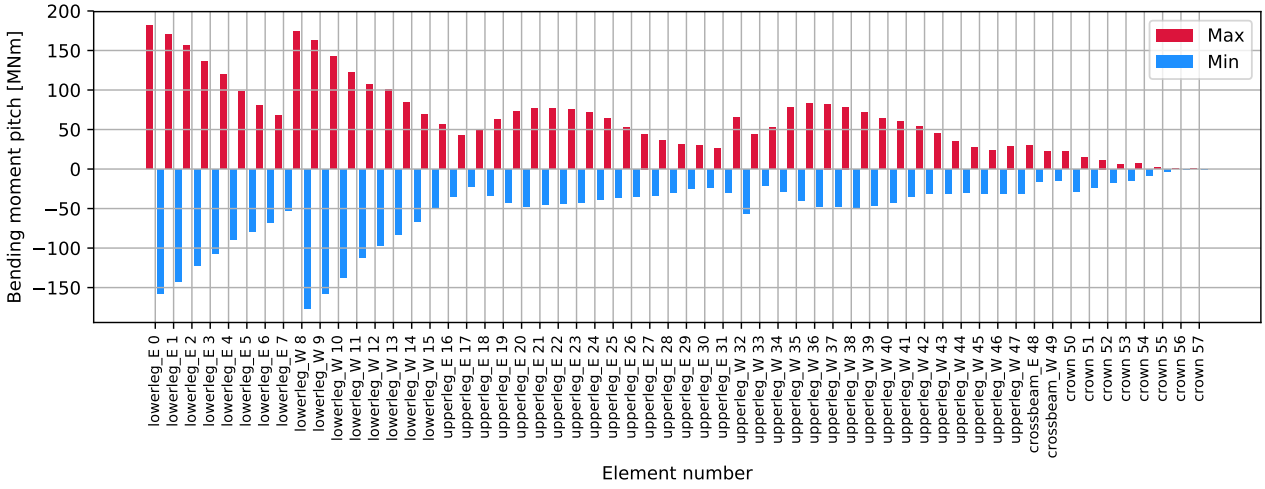

Figure 3.535: P A5 45deg - tower: Bending moment pitch [MNm]

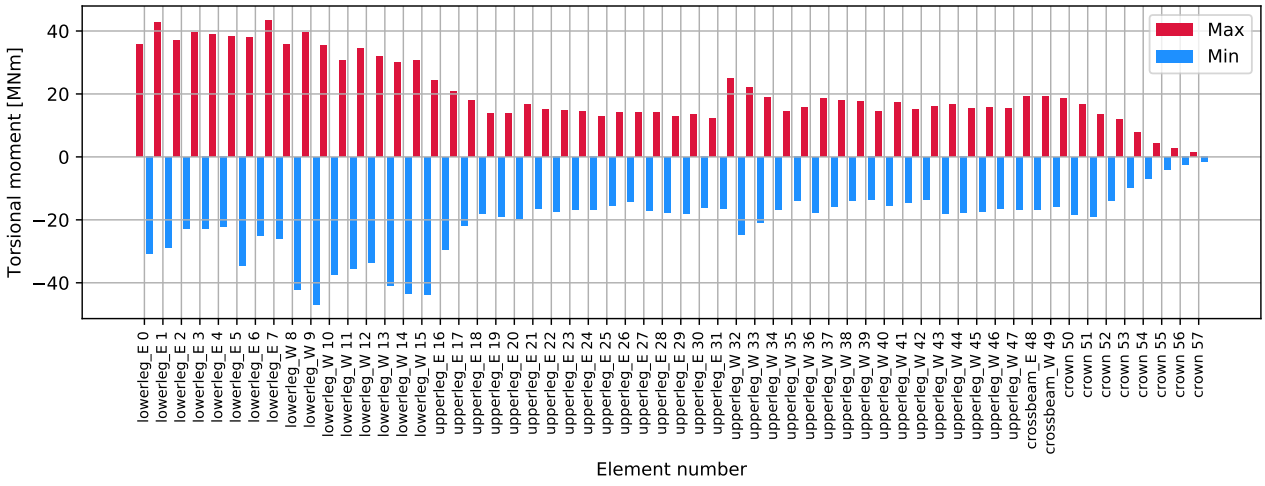

Figure 3.536: P A5 45deg - tower: Torsional moment [MNm]

3.12.3 Time series

Note : Time series are filtered using a Saviotzky-Golay filter for increased readability of the time history plots. Hence, maximum values that occur due to a rapid vibration are not shown in the plots. For maximum values, refer to the tabulated data.
All elements are numbered from South to North, bottom to top

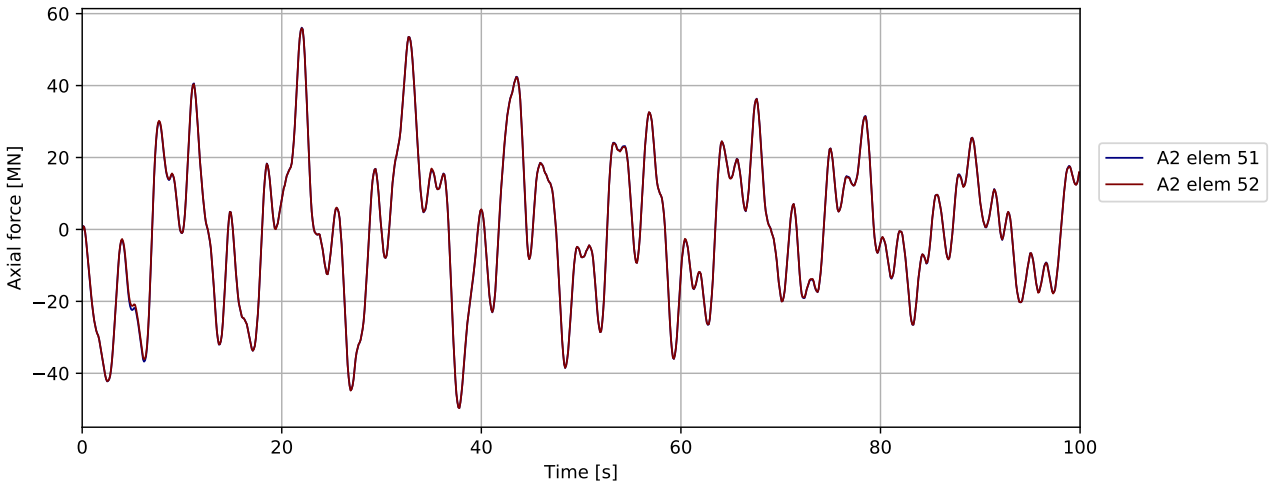

Figure 3.537: P A5 45deg - bridgegirder @ pylon: Axial force [MN]

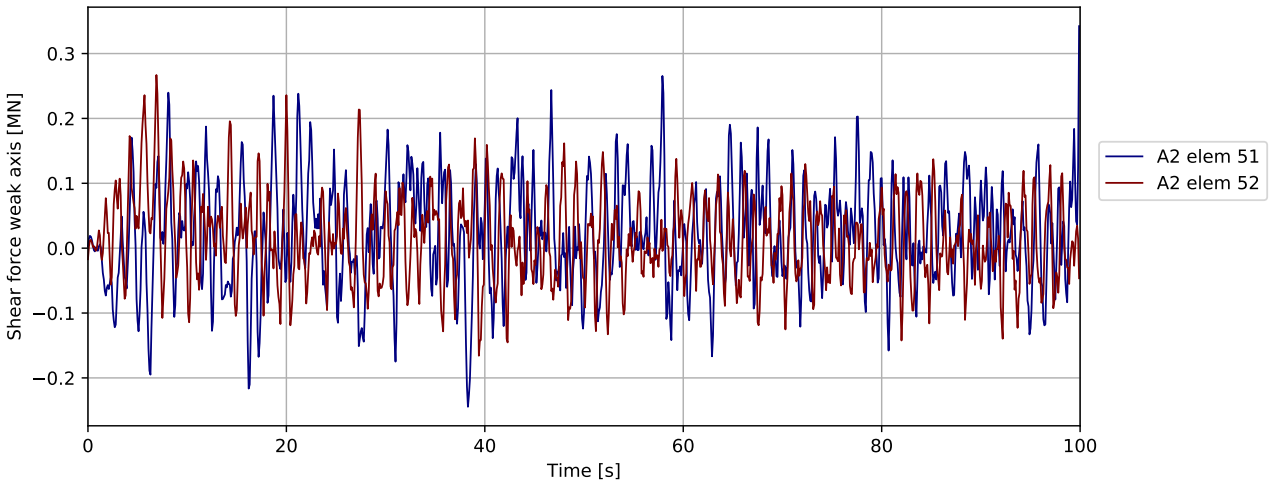

Figure 3.538: P A5 45deg - bridgegirder @ pylon: Shear force weak axis [MN]

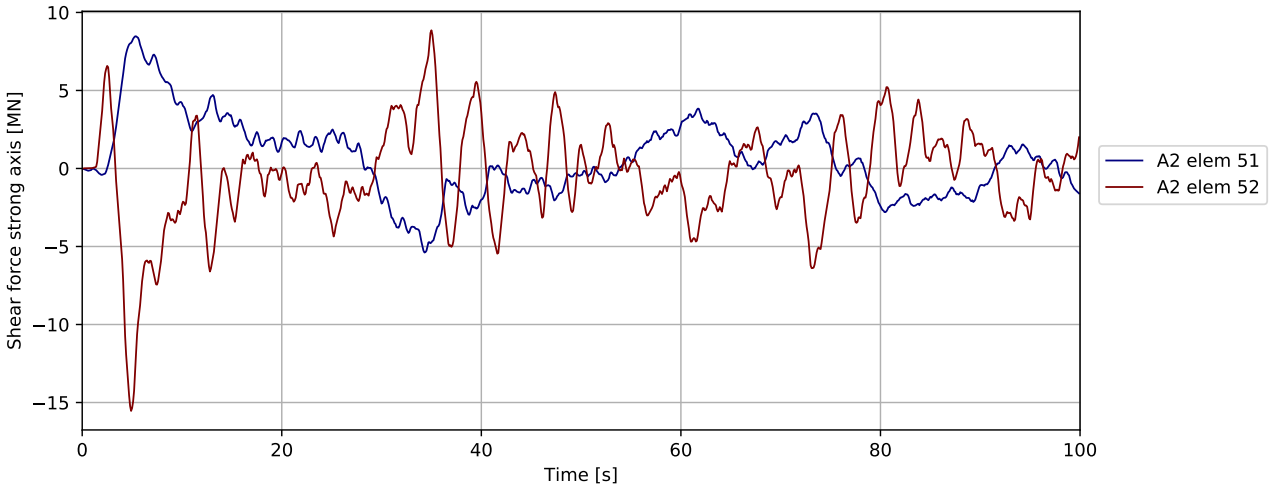

Figure 3.539: P A5 45deg - bridgegirder @ pylon: Shear force strong axis [MN]

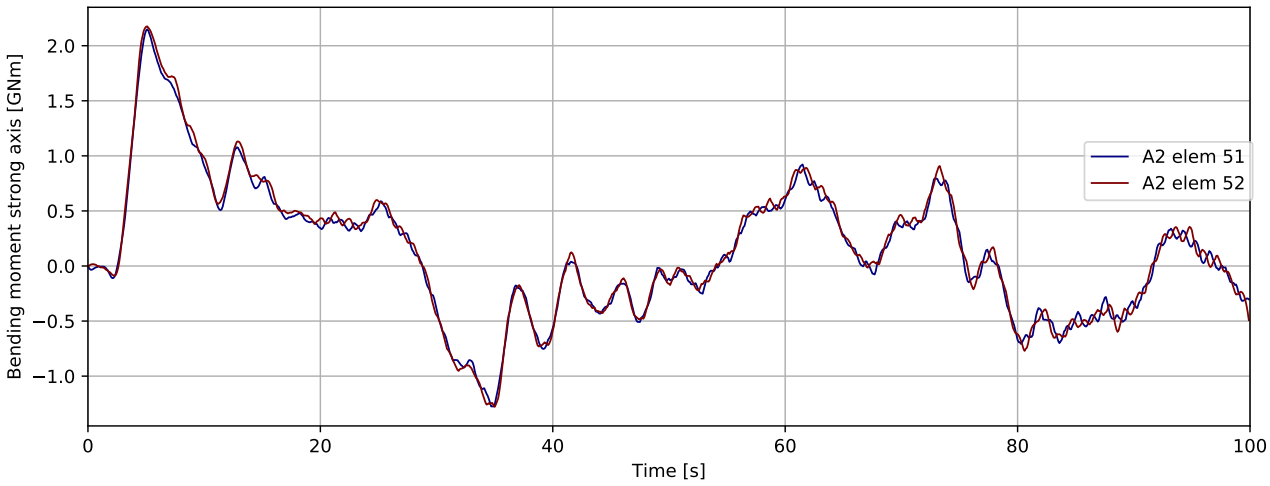

Figure 3.540: P A5 45deg - bridgegirder @ pylon: Bending moment strong axis [GNm]

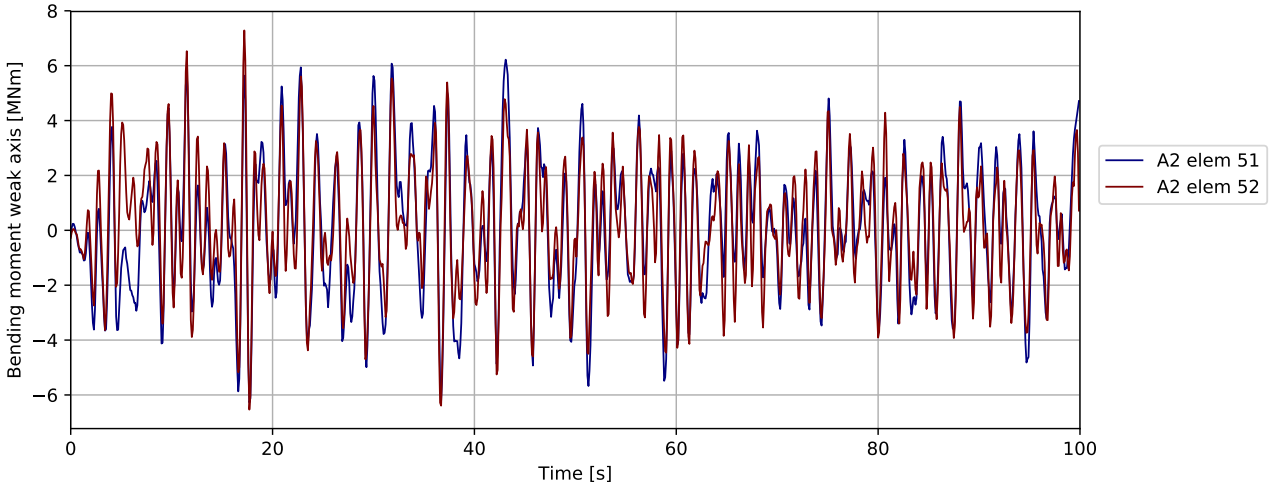

Figure 3.541: P A5 45deg - bridgegirder @ pylon: Bending moment weak axis [MNm]

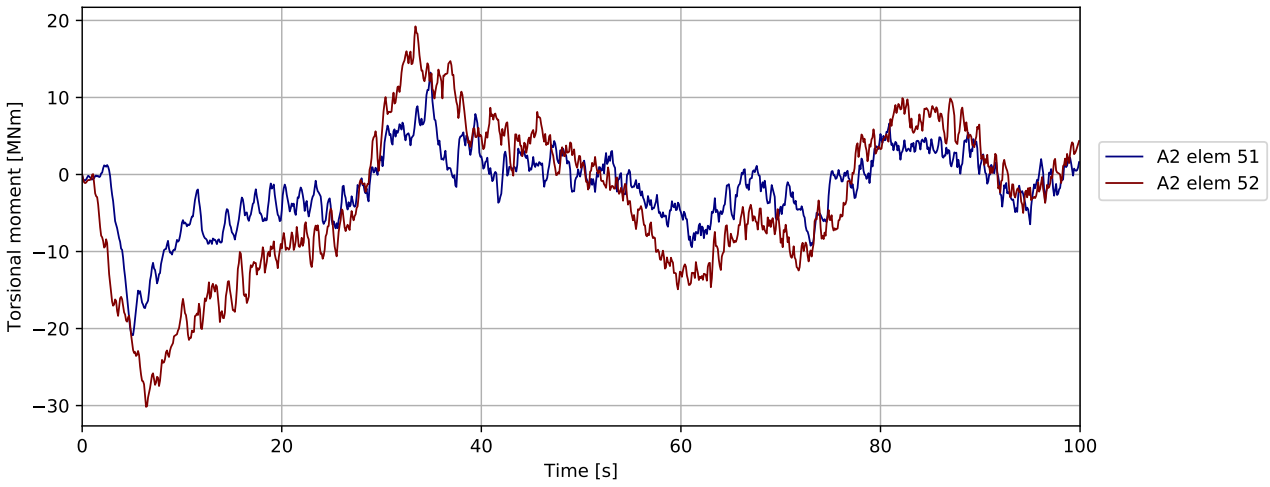

Figure 3.542: P A5 45deg - bridgegirder @ pylon: Torsional moment [MNm]

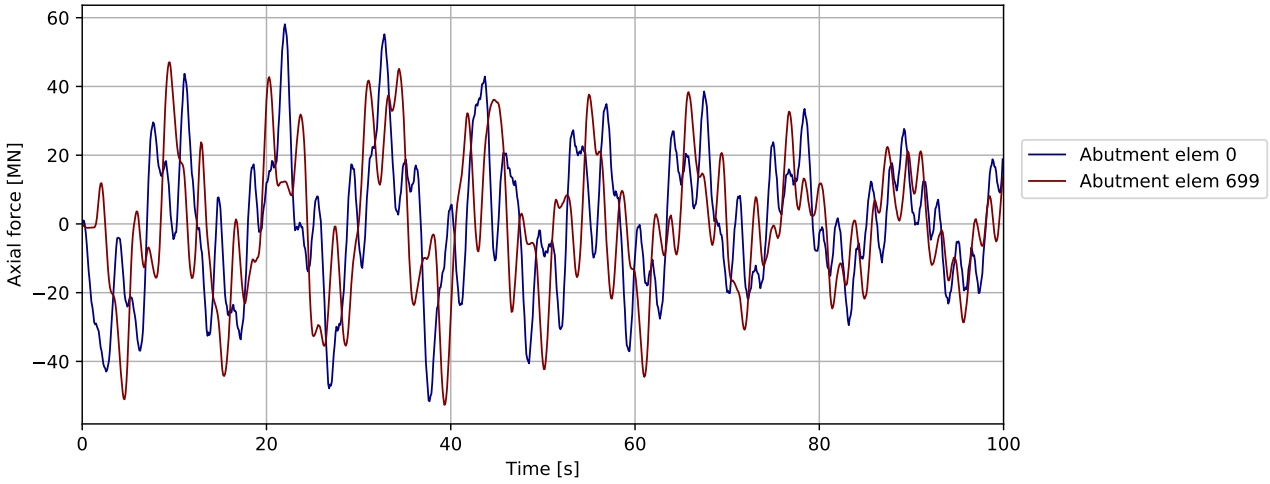

Figure 3.543: P A5 45deg - bridgegirder @abutments: Axial force [MN]

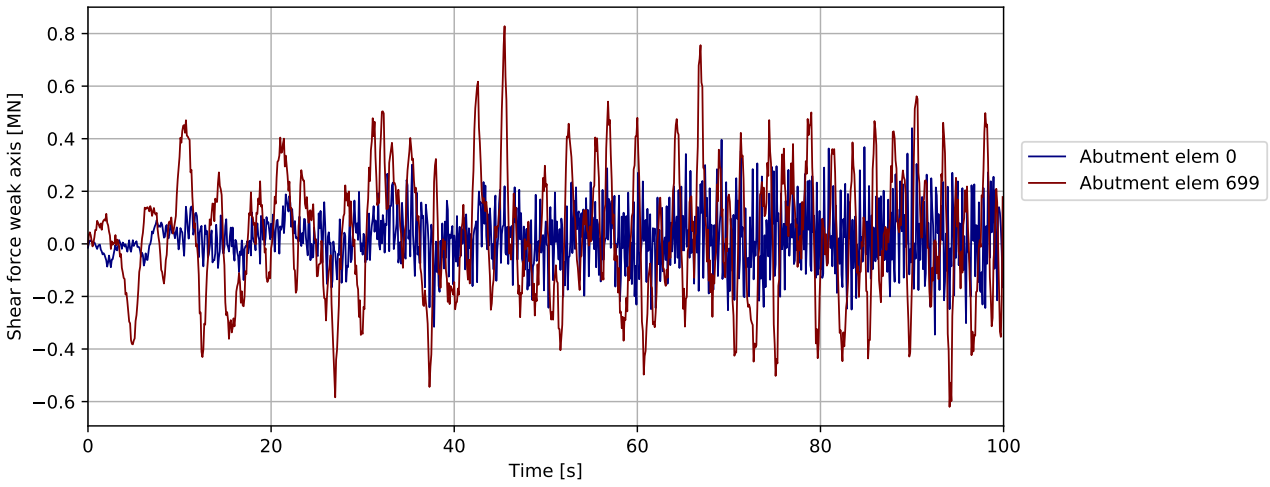

Figure 3.544: P A5 45deg - bridgegirder @abutments: Shear force weak axis [MN]

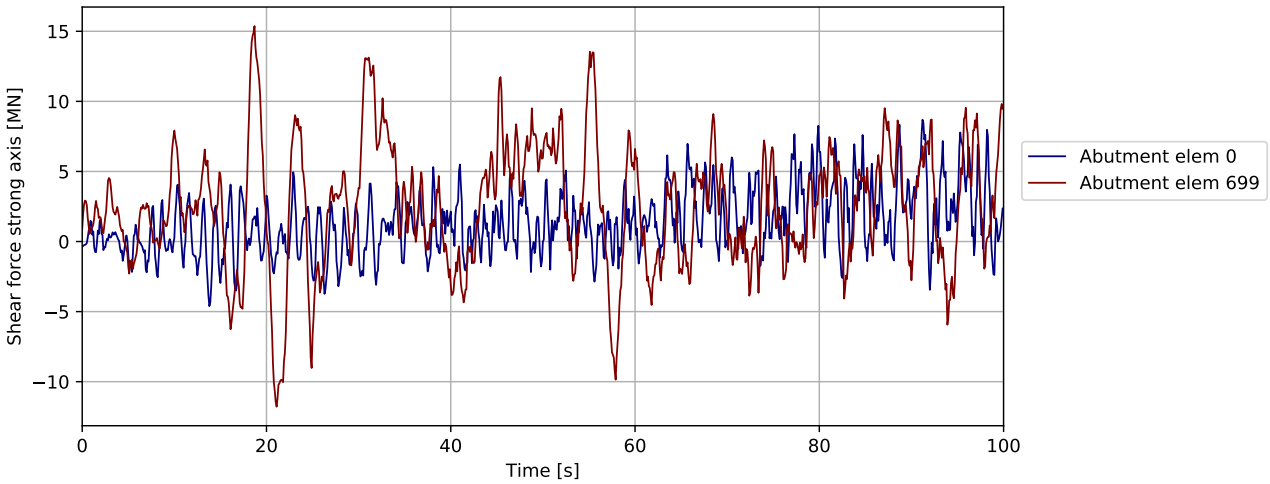

Figure 3.545: P A5 45deg - bridgegirder @abutments: Shear force strong axis [MN]

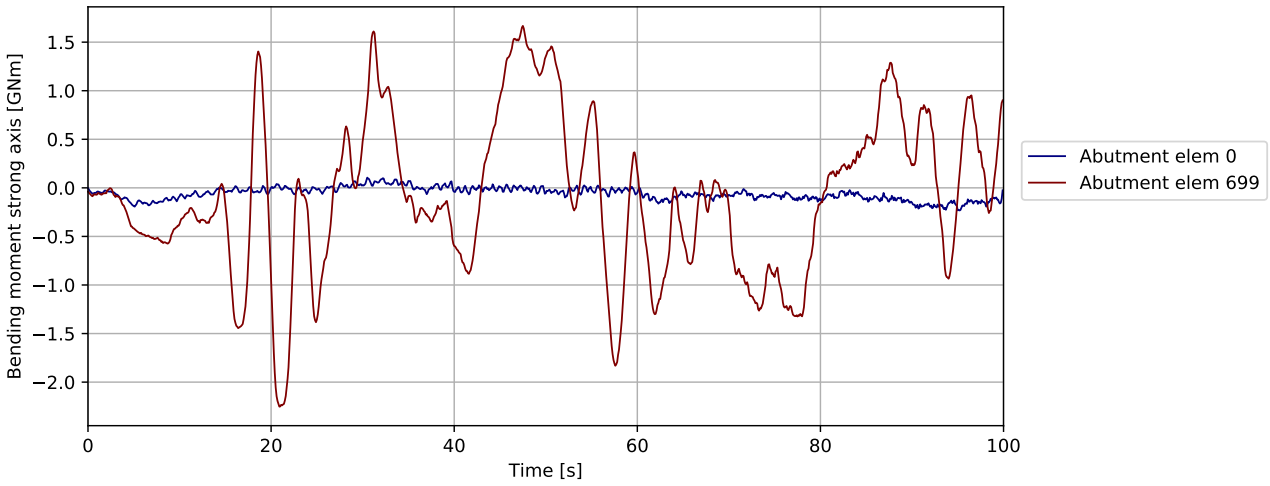

Figure 3.546: P A5 45deg - bridgegirder @abutments: Bending moment strong axis [GNm]

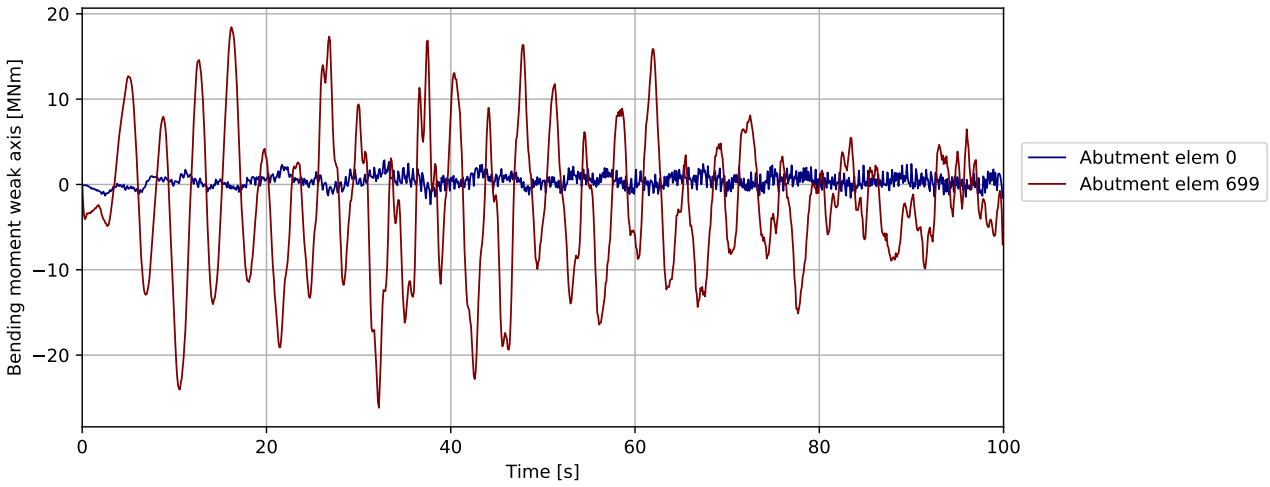

Figure 3.547: P A5 45deg - bridgegirder @abutments: Bending moment weak axis [MNm]

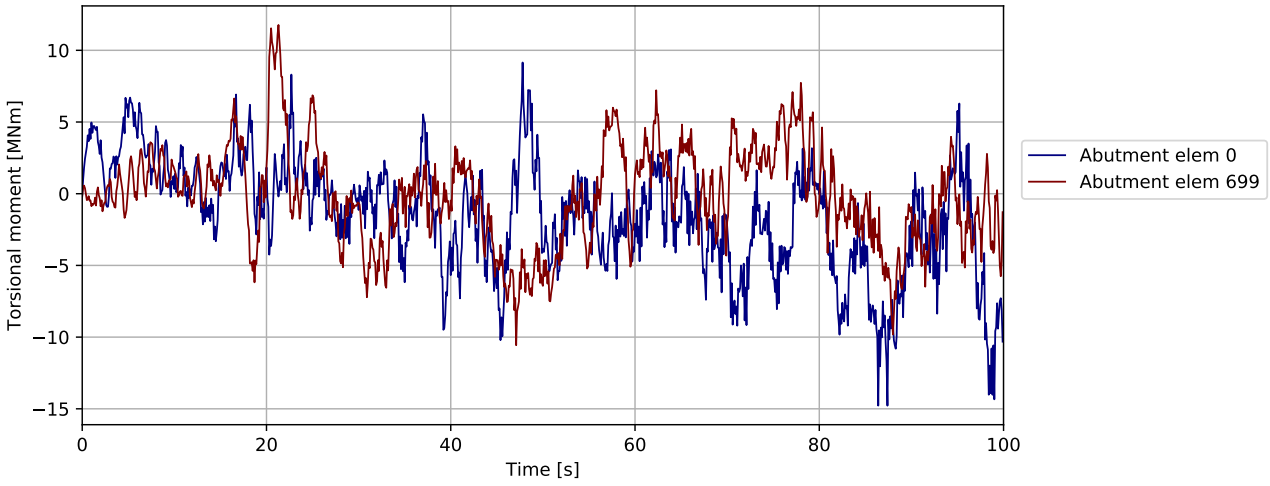

Figure 3.548: P A5 45deg - bridgegirder @abutments: Torsional moment [MNm]

Note : Compressive spring force is negative

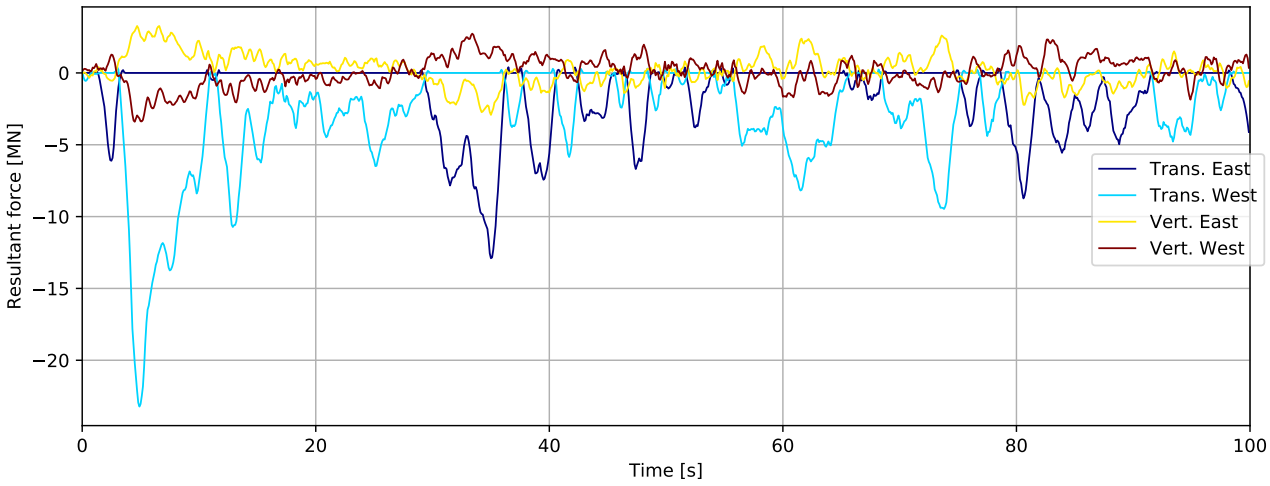

Figure 3.549: P A5 45deg - bridgegirder supports in tower: Resultant force [MN]

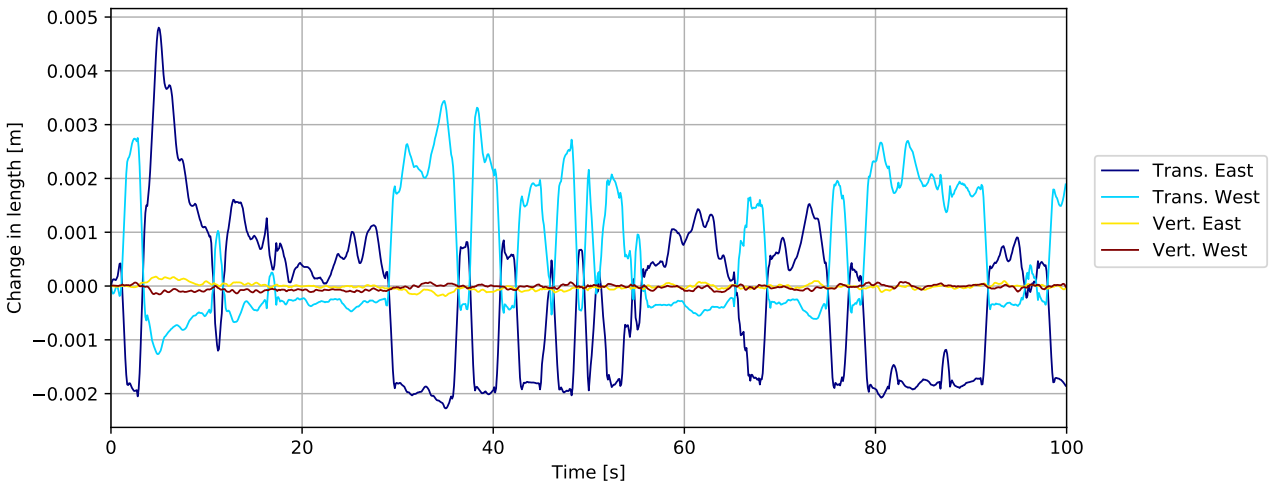

Figure 3.550: P A5 45deg - bridgegirder supports in tower: Change in length [m]

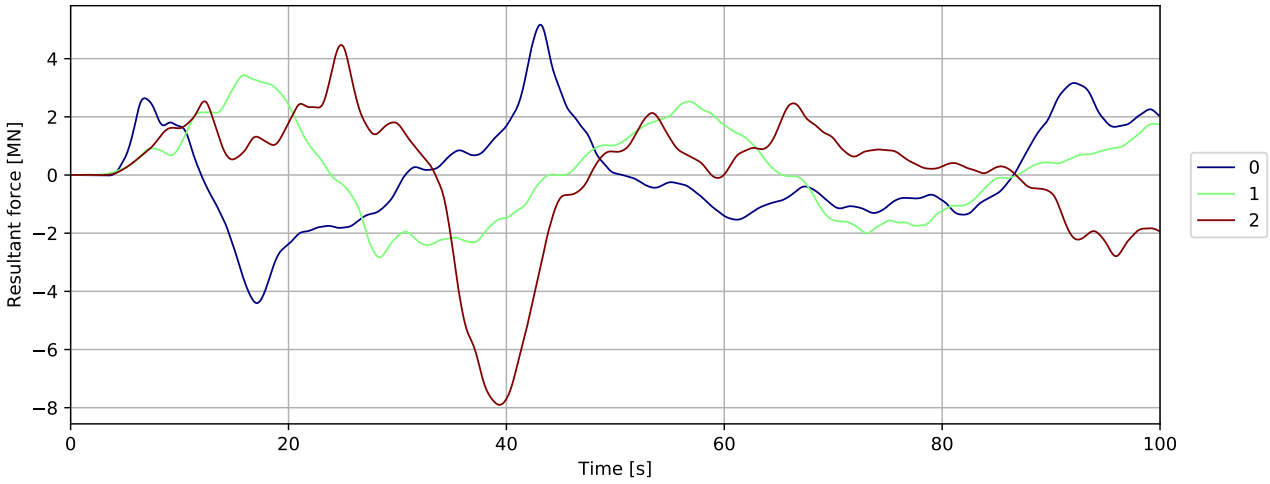

Figure 3.551: Mooring force

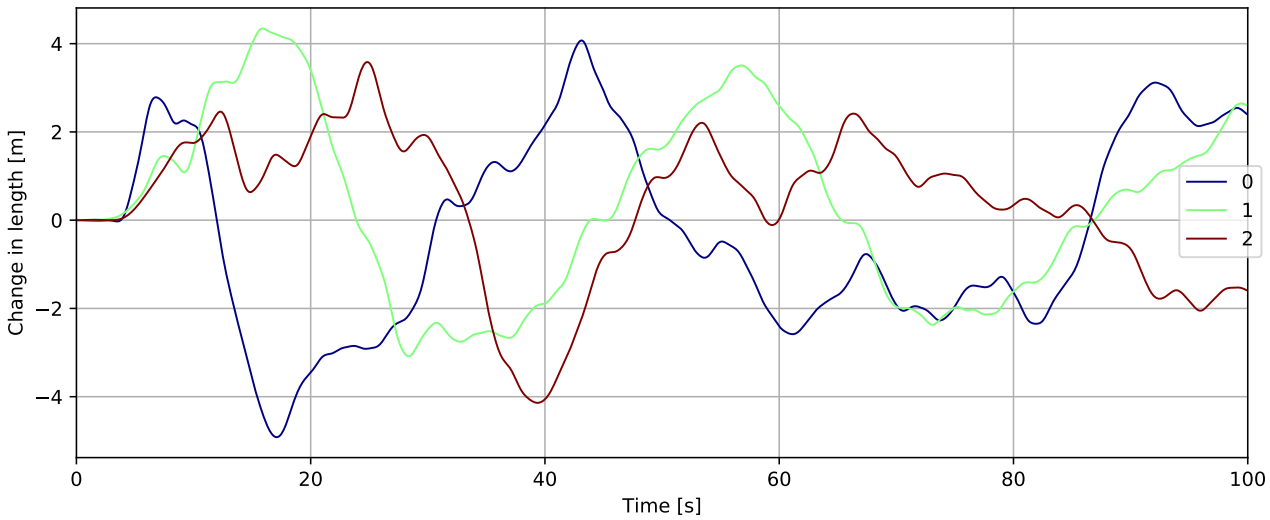

Figure 3.552: Mooring displacement

3.13 PontoonA10 45deg

3.13.1 Overall response

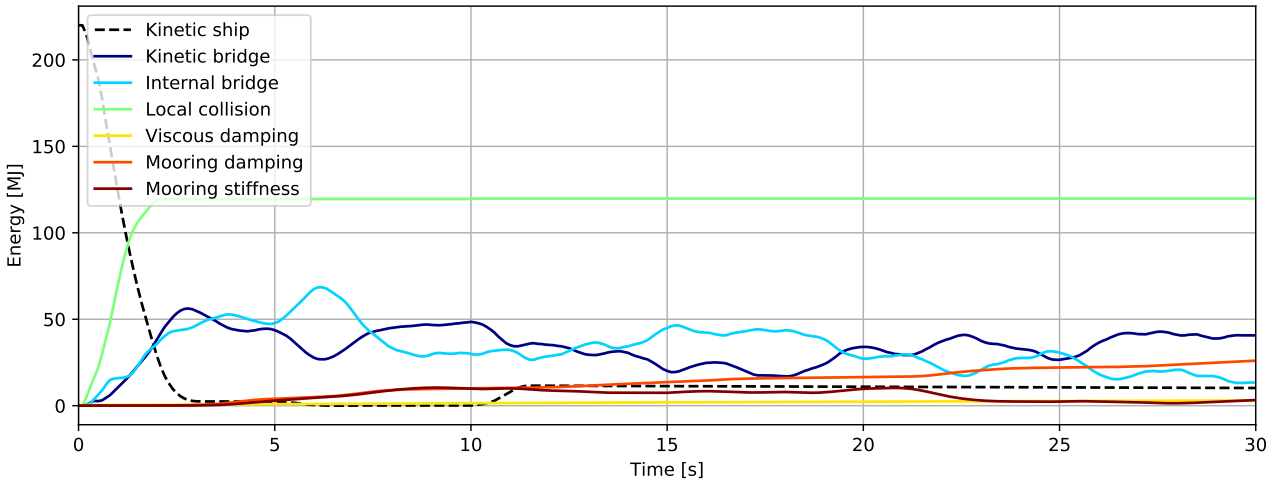

Figure 3.553: Energy [MJ] - initial phase

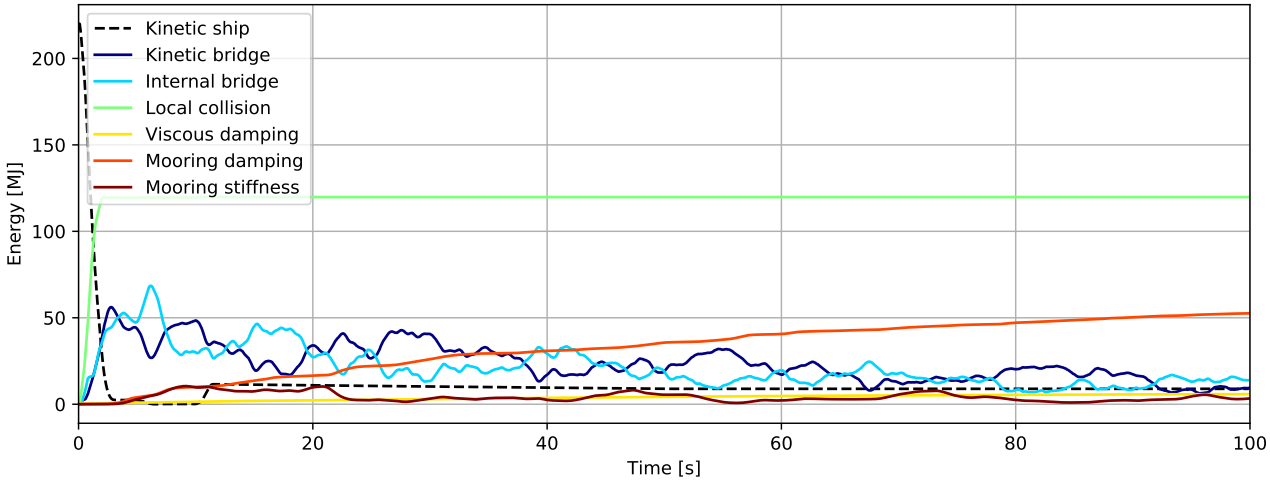

Figure 3.554: Energy [MJ]