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Indirect wave load identification using operational modal analysis

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Not present

Cost Transformation 3 – Structural Integrity and Pipeline Technology

To ensure that the wave loading is not exceeding the design basis, load monitoring must be carried out during the lifetime of the structure. Sadly, direct measurements are rarely feasible, and operators hence need to rely on indirect methods. This study focuses on indirect load measurements by analyzing structural vibrations. System identification, such as operational modal analysis is used to obtain the dynamic properties of the structures. These are consequently used in deciphering the vibrations in order to quantify the loads. Experimental campaigns are conducted on a miniature scale in a wave flume, where different loading scenarios are evaluated.

