

Dynamic design of the foundation of reciprocating machines for offshore-installations – case study

The installation of large and heavy piston machines on Offshore Constructions asks for specific requirements at the foundation-layout with respect to vibration. Due to the dynamic load reactions implied by those piston machines at the substructure of Offshore Systems, special provision have to be taken.

This paper shows how to avoid problems by applying a detailed vibration-technical design, using the example of an Offshore Project in the German North Sea: the installation of three heavy Mud Pumps, ea. 2500 hp. It will be shown, how vibration aspects are recognized within the project from the very beginning. The developed installation-concept and its specific technical implementation within or at the construction is part of this presentation.

Documented by measurements after the start-up of the machines, the success of the realized planning-work is shown impressively.

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