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Presented at the STAR Global Conference 2012

Heerema Marine Contractors (HMC) brings over half a century of specialized skills to the offshore oil and gas industry. HMC transports, installs and removes all types of offshore facilities. These include fixed and floating structures, subsea pipelines and infrastructures in shallow waters, deep and ultra-deep waters. HMC manages the entire supply chain of offshore construction, from design through to completion. Our services encompass engineering, planning, logistics, project management and execution of projects the world over.

Engineering solutions are provided on structural and marine related topics. The latter includes determining motion behavior during installation that is dominated by wave motions. Wave induced motions are analyzed using diffraction methods. However, viscous effects are not taken into account. Therefore HMC decided to use CFD to analyze viscous effects on a variety of subjects, including: ? Added mass & damping of suction piles ? Modifying a barge shape to reduce tow resistance ? Viscous damping of our installation barges ? Current loads of our crane vessels ? Thrust-efficiency to minimize fuel consumption

To build confidence in the outcome of STAR-CCM+, HMC has validated most of the CFD work with dedicated model tests. The presentation will highlight some of these validation studies to demonstrate the ability of STAR-CCM+ to be used as a virtual towing tank.

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Industries:

Marine^[2]

Products:

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STAR Global Conference 2012^[3]

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