Rig Engineering Case Study 2060

Arthit Tanker Modification to FPSO

Project description: Conversion of conventional tanker in to Floating Production Facility by installing

patented Tri Catenary Mooring System (TCMS) and export riser facility at the bow. TCMS system is

www.rig-engineering.com Tel. (+44) 1224 627200



Rig Name: ARTHIT

Rig Type: Converted Tanker

Owner name: EMAS

Classification Society: DNV

Pertinent code: DNV Modu

In Collaboration with:

Mooring Systems Ltd.

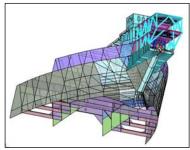
Risertec.

FEA Model



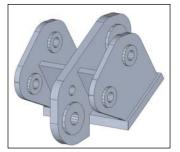
based on Mooring Systems Limited. (MSL)

Before Modification



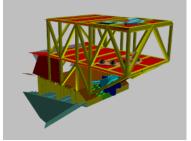
Model Plot

Results



Model Plot

Click below to see 3D model!

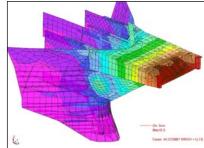


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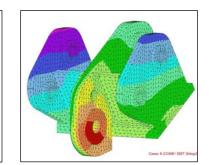




As Built



Stress Plot



Stress Plot

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R.E. scope of work

Rig Engineering has been tasked by Mooring Systems Ltd. (MSL) to assist with installing MSL Tri Catenary Mooring System (TCMS) and bow modification to allow for the handling of the chain and riser export system. Various structural modelling and strengthening has been done to accommodate the dead man anchor, surge connector, chute and gantry system for chain and export riser handling. This work was done to convert Det Norske Veritas (DNV) classed vessel, Kitty Knutsen, in to Floating Production Facility. All submittal to DNV has been done on behalf of MSL Limited and consisting of FEA, installation drawing and technical support during the entire shipyard period until the vessel successfully hook up with pre laid TCMS ground chain and the oil is in full flow. The vessel has since changed the name to ATHIT and operates in South East Asia.

Engagement Condition

- 1. As built of structure to create 3D FEA model.
- 2. Static and environmental loads of tanker and mooring system.







