RIG ENGINEERING

Rig Engineering Case Study 2552

Paul B. Loyd Junior – BOP frame modification

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Rig Name: *Paul B. Loyd Junior*

Rig Type: *semi-submersible*

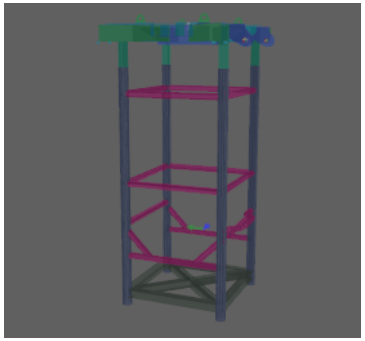
Owner name: *Transocean Ltd.*

Classification Society: *DNV*

Code design: *ASD*

(WSD method)

Click below to see model 3D!



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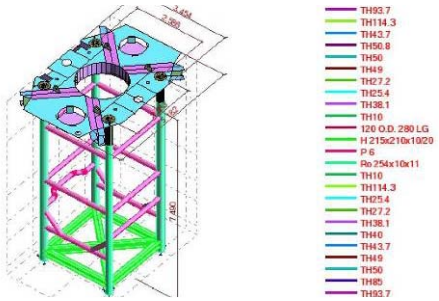
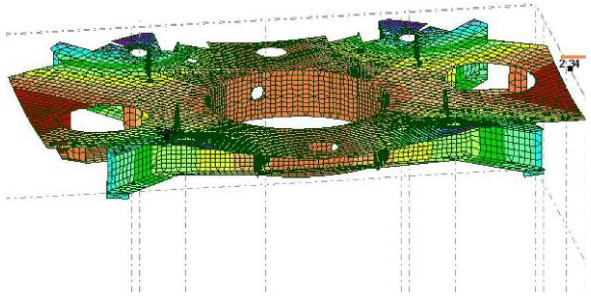
To view 3D documents

Project description: *Rig Engineering (RE) was tasked by Transocean Inc. (TOI) to undertake and provide all the necessary engineering and design services to redesign a new receiver plate for BOP in readiness for 2010 Shipyard. This new plate is required to accommodate new mini collet choke and kill stabs, improve load sharing between the upper and lower bucket framings and allow for the annular to be extracted from the top side of receiver plate instead of existing bottom entry and exit.*

FEA Model

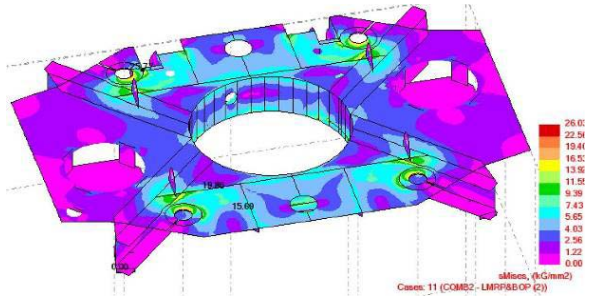


3D View of Model

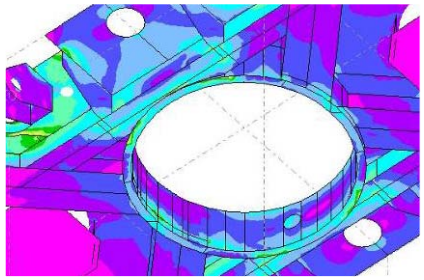


Deformation Plot

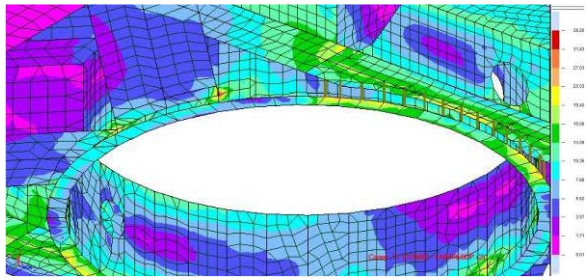
Picture of New Receiver Plate



Receiver Plate Stress Plot – Top View



Receiver Plate Stress Plot – Bottom View



Receiver Plate Stress Plot – Bottom View

R.E. scope of work

Confirmatory site survey of existing construction was done to establish as built of the receiver plate against those in subsea manual ahead of following tasks below. These were:

1) Additional modification was done on the new receiver plate to allow for the Cameron Iron Work (CIW) annular BOP to be pull through the central opening on the top part of the receiver plate.
2) To provide provision on the receiver plate to receive CIW mini collet connectors replacing existing choke and kill stab on the receiver and stab plates.
3) Provide a full set of revised BOP drawings conforming to TOI standards showing stacked up height of BOP and general description. New arrangement of frame and structural supporting system construction of the BOP was also provided.

Engagement Condition

Upload your problem to us and give us relevant input to allow us to resolve your problem, we will need:
1. As-built drawings to create 3D model
2. Weight and centre of gravity of BOP components.

Key word: Rig Engineering, Paul B. Loyd Junior, BOP Modification, Annular Spider, Spider Frame, Annular Connector, Receiver Plate, BOP frame modification, Annular BOP, Annular Bucket