

Rig Engineering Case Study 2188

Monarch Skid Beam Scantling

Project description: Some deformation has been found on the AFT drill floor skid beam on the Monarch. The underlying cause and the time frame that caused this permanent deformation are not known. Early indication

from Operations suggests that this may have been formed at the time that the rig was suffering from the effect of

LFM Server

scouring. However, there is no incident report available to confirm or give out the detailed information of this

www.rig-engineering.com Tel. 01224 627200



Rig Name: Monarch Rig Type: Jack - Up Owner name: Transocean Classification Society: ABS Pertinent code: Sname Pertinent class rule: text Code design: ASD

Click below to see model 3D!



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View 3D

phenomenon.



View 3D **Photos**



"Bubble View"



<u>Results</u>



Key word: Monarch, Jack-up, Transocean, Skied Beam, Scaling, Flange damaged, local buckling, laser scan, post process, point cloud

Stress Plot

R.E. scope of work

In order to ascertain the extent of the local deformation and possible global deflection of the cantilever and skid beam itself, Laser Scan Technique was deployed to capture the images which can later on be compared with the future monitoring of this *deformation. The advantage of the* Laser Scan is that any deformed location can be interrogated for the net amount of distortion locally or globally by slicing the images using **LFM Server**, post processing software. This was done at Rig Engineering and the extent of deformation was reported back to Transocean.

For more information about Laser Scan Technique visit <u>http://www.zf-laser.com/</u>

Engage

Upload your problem to us and give us relevant input to allow us to resolve your problem we will need:

1. As built of structure to prepare 3D model.

2. Static loads

3. Detailed information about skid beam moving system.

