RIG ENGINEERING

Rig Engineering Case Study 2101

Jack-Up Unit – Helideck Strength Verification

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Rig Name: *Jack-Up built in Dunkirk, France.*

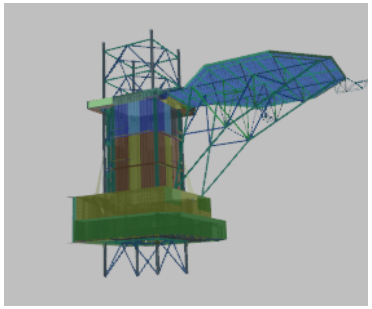
Rig Type: *Jack-Up CFEM*

Classification Society: *DNV*

Pertinent code: *CAP437*

Code design: *ASD (WSD method)*

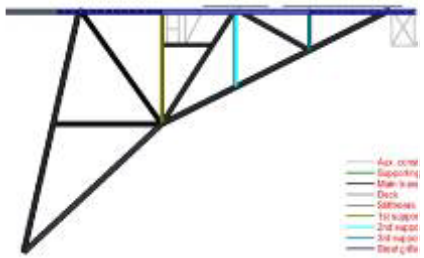
Click below to see model 3D!



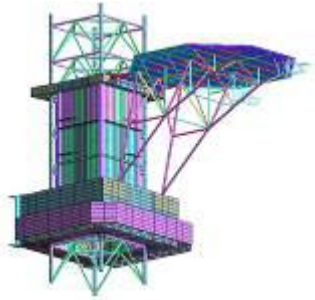
Get Adobe Reader
To view 3D documents

Project description: *Rig Engineering (R.E.) was tasked by a leading drilling contractor to carry out strength verification of existing helideck located on jack-up drilling unit. The finding was used to guide the wall thickness gauging technician to do a thickness evaluation and assess the overall integrity of the helideck ahead of class inspection.*

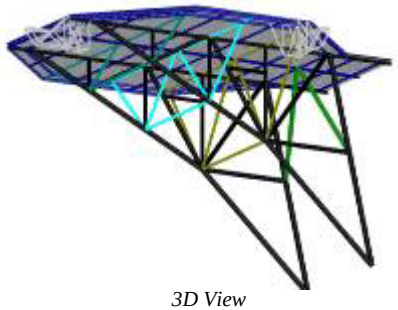
FE Models



Side View

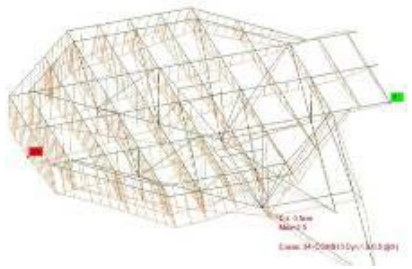


3D View

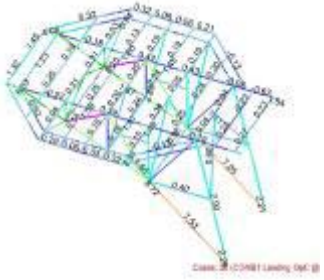


3D View

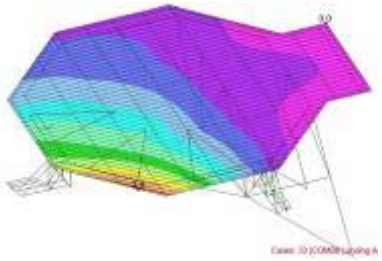
Results



Deformation Plot



Stress Plot



Deformation Plot

Photos

R.E. scope of work

R.E. was tasked to perform the following engineering tasks:

Preparation of CAD layout looking at the physical effects of landing and takeoff and various aiming circle requirements etc. (for DNV and CAP 437)

- *Conclusion of FEA model and do calibration run for current S61N set-up (for DNV).Re run analysis with new helicopter type using DNV class rule requirements.*
- *Re run analysis with new helicopter type using CAP 437 requirements.*
- *Re run on the final / agreed combination that would reflect operational requirements and some dispensation from either CAP 437 or DNV's requirements.*

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 of structure to created 3D FE model.*

2. *Static and environmental loads of rig.*

3. *Details information about type of helicopters.*

Key word: Rig Engineering, jack-up, helideck, CAP 437, helideck capacity, CFEM helideck inspection, helideck, fitness for purpose

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