

Stress Analysis of Offshore Pipelines



Stress in Pipeline



Pipeline in critical stage

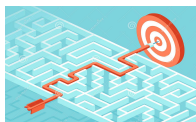


Process critical pipelines in critical stage



Challenges Faced by Shell

- Pipelines routinely undergo stress due to thermal variations, bolt up strain and pressure
- How long the pipelines can handle further stress? And if so for how long?
- Critical pipelines faced similar issues. Which is of a major concern



Solution Approach by Petrodia

- Analysis of the pipelines and visually inspecting the state of the pipelines
- Inspecting and identifying strains and load factors on the pipelines
- Carrying out stress analysis of the pipelines using the parameters and other factors modelled into the software
- Preparation of sketches as per stress analysis carried out



Results Delivered by Petrodia

- Shell has documentation and knowledge about the pipelines' condition and stress and strain
- Stress analysis will help efficient maintenance of the pipelines and will decrease downtime and increase production
- Stress analysis will help in efficient inventory management in case the pipeline or its fitting is to be changed in the future, production downtime will be reduced as spares will be readily available
- Increasing operational integrity of the plant and thereby increasing the safety standard of the plant.

