



CATS Anchor Damage Assessment

GAS



Profile:

The CATS natural gas pipeline is a 412 km 36" diameter subsea gas pipeline with a maximum operating pressure of 176 barg, and providing approximately 1 bcf per day of gas into the UK gas network (approximately 8% of UK supply).

In June 2007 the anchor of a large oil tanker snagged the buried pipeline, displacing it several meters, damaging the concrete coating and denting the pipe surface. Penspen was appointed to assist BP with assessing the severity of the damage caused and advising on safe pressures, inspection, and repair.

Penspen Services:

- Evaluate damage scenarios based on preliminary reports
 - Dent analysis
 - Bending analysis
 - Dent gouge assessment
 - Combined pressure and bending loading
- On ship assurance that all possible data was collected by ROV
- Confirm safe pressure for diver inspection
- Analysis of condition for inspection
 - Span analysis
 - Stability analysis
- Define diver inspection scope
- Analysis of damage following diver inspection
 - Fatigue assessment
 - Stability analysis
- Definition of repair requirement
- Conceptual repair definition