

# Pipeline installation engineering

## Capability statement



Once designed, it is important to ensure that a pipeline will reach the seabed in tact and with no danger of future loss of integrity due to its installation.

### Why Jee for pipeline installation support?

Our engineers have considerable experience in performing installation calculations, using a variety of pipeline software packages and manual methods. Combined with decades of subsea engineering expertise we can create a thorough contingency plan for all scenarios that could occur during operations. This gives our clients peace of mind that the installation operation will be successful.

### Our capabilities include:

- ✦ Abandonment and recovery: Analysis to find the stresses in a pipeline during abandonment and recovery or the tensions required to maintain acceptable stresses.
- ✦ Anchors and piles: Specification and analysis of holding capacities.
- ✦ Barge stability
- ✦ Bending: Pipe stresses along bends, tensioner requirements, estimation of break-over length including soil interaction effects and computation of horizontal lay radii.
- ✦ Lugs and seafastenings: Design and analysis covering shear, resistances, stiffness and optimum location.
- ✦ Pipe lifting: Design of spoolpiece and installation parameters to ensure the pipe does not buckle during installation
- ✦ Pipe pull forces: Both on and offshore
- ✦ Reeling: Full stress and strain analysis of steel pipe and coatings. Taking into account ovalisation, changes in pipe sections because of manufacturing tolerances and strain concentrations at joints.
- ✦ Ropes, winches and chains: Design, fatigue life calculations and service life estimates
- ✦ Sagbend buckling: At the touchdown point there is a high bending stress, Jee use a combination of codes and analysis to design a pipeline which is resistant to sagbend buckling.
- ✦ Steelwork: Global, local, elastic, plastic and fatigue analysis can be carried out to ensure the harsh offshore environment does not cause the structure to fail during installation.

### Proven track record

- ✦ Dolphin Energy 2007 – Pipeline design and installation procedure verification
- ✦ RSK 2006 – Pipeline installation pull analysis

---

We thank Jee for their excellent response which helped us achieve timely pipeline installation.

Jirapong Dharaphop, Senior Manager, TOA Special Projects  
Head of Task Force – Northern Arthit Development Project, PTTEP

---

### List of related services

- ✦ Feasibility, conceptual design
- ✦ Flow assurance
- ✦ Pre-FEED and FEED
- ✦ Field development studies
- ✦ Verification
- ✦ Detailed design specialist studies
- ✦ Construction support

### For more information

To find out how Jee can help manage and implement your engineering projects, please call us on +44 (0) 1732 371 371 or email [info@jee.co.uk](mailto:info@jee.co.uk).



#### Registered office

Jee Limited  
Hildenbrook House  
The Slade  
Tonbridge  
Kent TN9 1HR  
United Kingdom  
Tel: +44 (0)1732 371 371  
Fax: +44 (0)1732 361 646  
[www.jee.co.uk](http://www.jee.co.uk)

Offices: Aberdeen, Abu Dhabi, London



INVESTOR IN PEOPLE

