OCEANEERING®

oceaneering.com

Pull-in and Hang Off Systems

Providing safe, efficient and reliable performance

Pulling heads are used to raise the topside end of the umbilical into the required position on the host vessel or platform.

Within the pulling head, the topside hydraulic connections along with electrical and fiber optic pigtails are carefully stored and protected.

Following installation, the umbilical is attached to the host structure using hang-off hardware, usually comprising a split plate assembled around a collar attached to the umbilical below the pulling head, to securely position the umbilical in the required position.

FEATURES

- **Robust and proven designs**
- **Extensive range of sizes**
- **Solutions for complex projects**

2016.05-A

Pull-in and Hang Off Systems

Oceaneering is able to supply a very extensive and varied range of pulling head solutions, tailored to address host requirements and installation challenges.

Oceaneering has solutions for umbilicals that are installed in dynamic applications, such as from an FPSO vessel moored in stormy seas, or static installation on a platform with a challenging J-Tube to navigate during installation.

Size and load capabilities	Available in a range of sizes and load carrying capabilities, bespoke designs suit specific project requirements, qualified to 10,000 fsw / 3,000 msw
J Tube and I Tube requirements	Deployable in static or dynamic configurations, minimum tube diameter at any point must be determined/confirmed as pulling head is designed to suit
Winch attachment point for pull in	Padeye designed for required rating and load tested to requirements, swivel shackle may be provided, based on application
Material	Short term deployment: galvanized steel, subsea paint system and anodes can be provided, dependent on requirements
Pigtail lengths	Based on project requirements and topside clearances Length of pigtails may define pulling head case dimensions and configuration Pigtails may be coiled within the pulling case, extend axially within a bend limiter section, or be exposed by stripping back the umbilical above the hang-off point post pull-in
Hang off collar (if required, as per design)	Minimum length of 5 ft / 1.5 m is required between the pulling head and hang off collar location (if required)
Termination of strength member	Naturally aligning pyramid stab and hinge design
Split hang off plate	Suit flange located at the top of the I Tube/J Tube (hardware included as required)
Thermoplastic hose and steel tube couplings	Thermoplastic hoses: 316L Stainless Steel, Oceaneering designed JIC female swivel connectors, default (other options available) Steel tubes: Typically terminated using Autoclave or JIC fittings incorporating bleed valves for installation pressure relief and post pull in integrity tests
Electric cable and fiber optic cable sealing options	Shallow water/short term: heat shrink caps Deep water/long term: proprietary or procured cable glands or proven cold shrink/heat shrink combination
Additional features	May incorporate facility for inclusion of methanol recovery unit and/or bulkhead plate within the pulling head for tube/hose termination May support the connection of a latched Bend Strain Reliever (BSR) Design supports monitoring and pressurization, post pull in, prior to deployment of the umbilical and rapid installation as no termination work needs to be completed during install
Lifting Considerations	Weight of hardware varies from 25 kg to 3,000 kg (may be more or less, dependent on project needs)
Fixings	Typically Xylan coated high tensile steel fasteners Size and material may vary based on project requirements