Subsea Umbilical Termination Interface

A safe and proven solution to connect subsea umbilicals to hardware

Oceaneering has an extensive catalog of subsea umbilical terminations which are customized to meet each project’s unique requirements.

Suitable umbilical termination interface designs are available for armored, unarmored, and aramid fiber reinforced umbilicals and terminate the umbilical to hardware via a flange.

The interface is designed and tested to ensure the installation and operational loads are transferred from the umbilical, through the interface, and into the connecting hardware.

FEATURES

- Robust and proven designs
- Extensive range of sizes
- Safe and reliable connection method
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The components are splayed out within the termination interface and encapsulated in epoxy resin. The resin bonds the tensile members and provides a cup and cone interface to transfer the loads. Bend protection can be provided via a bend strain reliever or bend limiters, if required.

**Application**
Suitable for use with armored, unarmored and aramid fiber strengthened umbilicals

**Interface size range**
Qualified and tested designs for umbilicals sized 2.4 in to 13 in / 60 mm to 330 mm

**Overall dimensions of interface**
Varies based on project needs

**Potting of strength member**
Armor wires and/or steel tubes separated out of helix and potted in cup and cone arrangement using an epoxy resin

**Transfer of umbilical loads**
Installation and operational loads transferred through cone and into the connecting hardware

**Bend protection**
Assembly may include bend limiters or a bend strain reliever, as required by project requirements [steel, polymer, and hybrid options]

**Interface with hardware**
Via bolted flange typically with standard #150 ANSI bolt pattern

**Design life**
25 years typical, can be longer based on project requirements

**Coating and cathodic protection**
Coating per Oceaneering subsea painting specification [NORSOK M501]
If required, cathodic protection provided by attaching sacrificial anodes [per DNV-RP401]

**Fitting of the umbilical interface**
Attached to umbilical and connecting hardware at umbilical manufacturer’s facility

**Pigtail requirements**
16.4 ft / 5 m typical, but can be made to meet project requirements
Service loop of flexible components is typically required

**Lifting considerations**
Weight of hardware varies: typically from 66 lb to 882 lb / 30 kg to 400 kg

**Fixings**
Size and material vary based on project requirements
For pressure containment or critical load bearing applications, typically:
Low alloy steel bolts to ASTM A320/A320M Grade L7
Low alloy steel nuts to ASTM A194/A194M Grade 7 S3