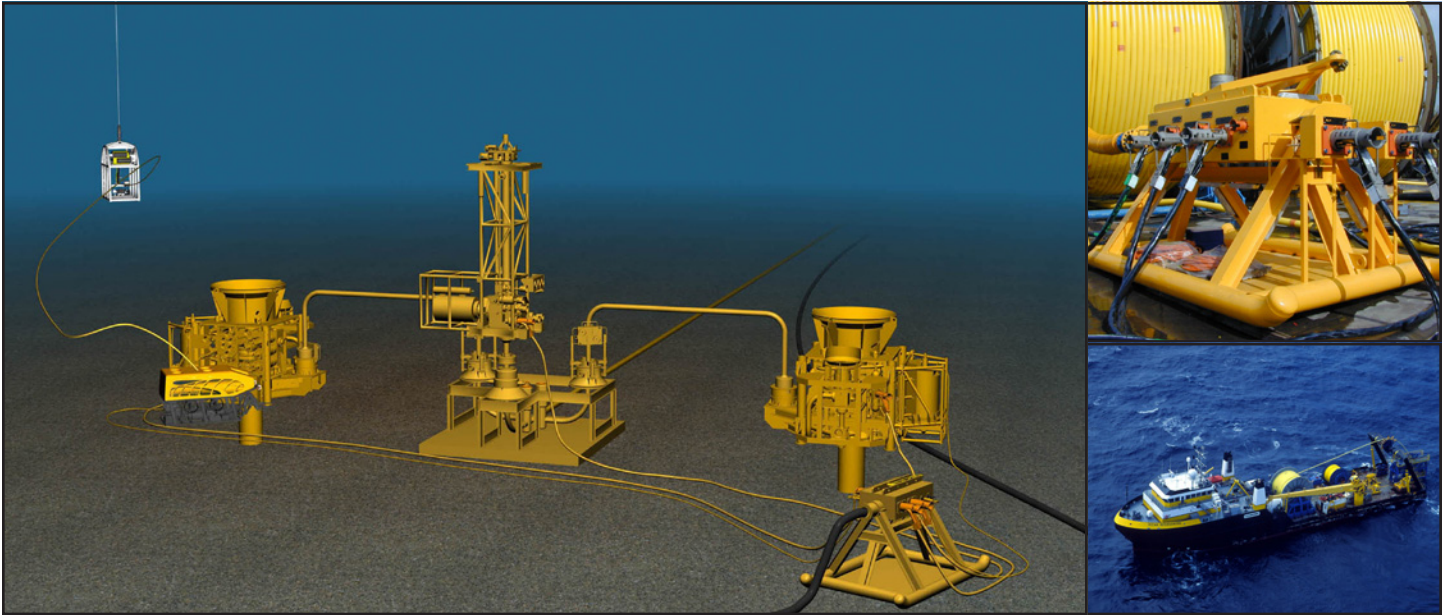


FIELD DEVELOPMENT HARDWARE



Field Development Hardware

Oceaneering manufactures field development hardware suitable for single well, simple mudline installations or larger and more demanding multi-well projects. Hardware produced by Oceaneering features built-in quality and reliability.

Surface Based Production Control System Designs

- Direct Hydraulic
- Piloted Hydraulic
- Hybrid-Electrically Piloted Hydraulic/MMS Compliant Valve Closing Times
- Chemical Injection
- Topside Umbilical Termination Assembly

Umbilical Connection Systems

Oceaneering Umbilical Termination Assemblies (UTAs) are produced in mud-mat based or stab and hinge-over styles. Each type incorporates one of the company's two patented junction plate designs. For diver operations, we offer a simple screw thread style. For Remotely Operated Vehicle (ROV) installations, we suggest our toggle latch system.

Flowline Connection Systems

Oceaneering pioneered rigid pipe jumper spoools over a decade ago. The company now offers simple flanged connector-based jumpers for diver and Atmospheric Diving System (ADS) operations, while we recommend our hub and clamp style connectors for fully ROV operable jobs. Oceaneering also produces compact Pipeline End Terminations (PLETs).

Specialized Subsea Hardware

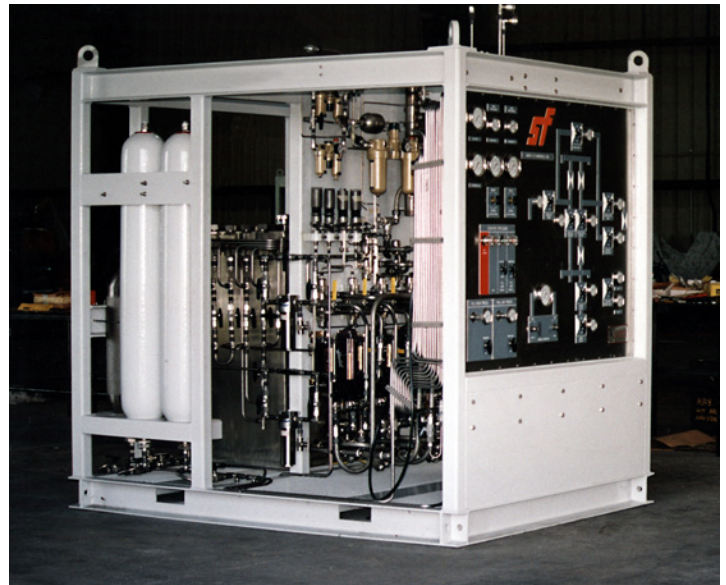
As deepwater technologies advance, subsea hardware also evolves. Oceaneering engineers new products that fill customers' general or specific hardware requirements. The patented, remotely operable and ROV reloadable subsea pig launcher is an example. The system allows operators to utilize a single flowline, while long-term flow assurance is provided with integrated pigging capability.



FIELD DEVELOPMENT HARDWARE

A partial listing of Oceaneering field development hardware products:

- Production Control Equipment
 - Electrical and Pneumatic Powered Hydraulic Power Units
 - Pneumatic Powered
 - Electrical Powered
 - PLC Controls
- Tree Related Hardware
 - Hydraulically Piloted Systems
 - Electrically Piloted Control Systems
 - Subsea Filtration Modules
 - Hotstab Filter Units
 - Junction Plate Filtration Units
 - ROV Retrievable and Tree Mounted Transducers
 - Programmable Bridging Junction Plates
 - Intervention Panels
- Chemical Injection Systems
- Topside Umbilical Termination Assemblies



Subsea Equipment Connection Systems

- Umbilical Connection Systems
 - Umbilical Termination Assemblies (UTA)
 - 2 to 25 Line Junction Plates
 - Hydraulic and Electrical Flying Leads
 - Flying Lead Deployment Frames
 - Marine Growth Covers
 - Test and Diagnostic Equipment
- Flowline Connections Systems
 - Pipeline End Terminations (PLET)
 - Rigid Pipe Jumper Spools
 - Shallow Water Flange Style Connection Systems
 - Deepwater ROV Operable Connection Systems
 - Hydraulic Connectors

