



video transcript

fly-through alder technology

human energy®

As a high-pressure, high-temperature reservoir, Alder utilizes vacuum insulated tubing technology to manage the temperature and pressure within the well. This mitigates the potential for thermal expansion and improves production reliability.

At the well head, fluids flow into an innovative type of subsea tree system – known as a vertical monobore tree. The system is an example of advanced subsea technology specifically designed to meet the temperature and pressure requirements of the Alder Field.

From the subsea tree, fluids run to the subsea manifold which includes a subsea cooling loop that controls temperature of production fluids entering the pipeline. Also part of the manifold, the subsea High Integrity Pressure Protection System manages pressure between the reservoir and the receiving facilities. There is also a corrosion monitoring system (CMS) that captures real-time data from the production pipeline and transmits onshore for analysis and evaluation. The CMS is supported by a specially designed system that uses an intelligent pig to examine the pipeline's internal diameter and thickness. The pig is sent from a temporary subsea launcher on the manifold and is recovered topside at the Britannia bridge linked platform (BLP), where condition data is downloaded and analyzed.

From the manifold, production fluids move 17-miles (28 km) through a production pipeline that uses high-performance insulation between a 10-inch inner pipe and 16-inch outer pipe – known as pipe-in-pipe. The insulated pipeline allows the Alder system to operate efficiently and effectively, and ensures Alder production fluids arrive at the platform at the right temperature for processing.

Production fluid passes through a subsea isolation valve on the seabed at the base of the riser within 500 feet of the Britannia BLP. The valve safely isolates the platform from the Alder production system.

Also employed at Alder is a 17-mile (28-km) umbilical, which merges steel tubing and thermoplastic hosing technologies. This hybrid umbilical links the field's subsea operations as it relays power, chemicals and communications between hydraulically operated subsea equipment and the Britannia BLP.