

SUBSEA GAS COMPRESSION WITH MOKVELD SUBSEA CONTROL VALVES

Mokveld is proud to have been awarded the subsea anti-surge control valves for the Åsgard Subsea Gas Compression Project.

Subsea gas compression is a technology approach that can boost recovery rates and lifetimes of offshore gas fields. Aker Solutions - at the forefront of subsea gas compression - was awarded the contract by operator Statoil to supply a complete subsea compression system for Norway's Åsgard field. The project represents a quantum leap in subsea technology, and an important step in realising Statoil's vision of a complete underwater plant.

One of the technology gaps to be addressed was the development of large fast-acting subsea control valves. Several operators recognized the unique advantages of Mokveld's axial flow design in topside severe service control applications and approached Mokveld to investigate the axial flow concept as the basis for a subsea control valve.

The technological demands on subsea equipment are very stringent and so are the qualification tests. In close cooperation with well-known subsea integrators Oceaneering, FMC and Aker Solutions, Mokveld has developed and successfully qualified an 8" / API 5.000 subsea axial control valve. The qualification program included an API 6A PR2 test, endurance testing with 500.000 cycles and hyperbaric testing simulating seabed conditions. Also a valve was supplied to the Ormen Lange Subsea Compression Pilot - extended life test - project at Shell Nyhamna.

Mokveld's efforts have now been rewarded with a first project order for 3 off 8" / API 5.000 subsea control valves with electrical spring to open Oceaneering actuators. The valves will be used in a quick-opening anti-surge control application. On surface and topside projects this application is already considered to be one of the most challenging, whereas these valves will be operating at a water depth of 250 meters! Mokveld considers this as an important step into the subsea market.

The qualified axial valve design is suitable for subsea anti-surge and separator control applications. In addition the valve design can be used for subsea HIPPS applications as per API RP170.

