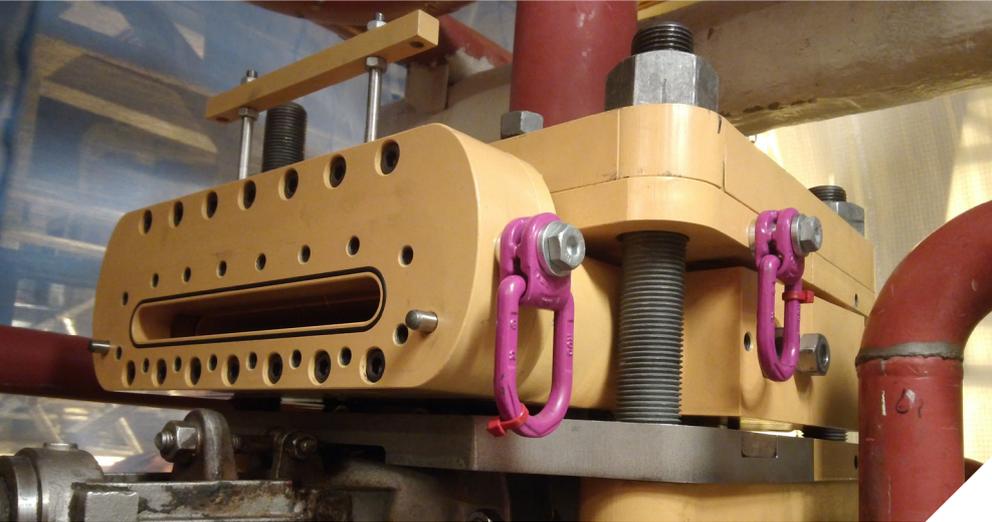


## CASE STUDY

# OFFSHORE INSTALLATION SHUTDOWN AVOIDED WITH AOGV



AT A SEMI-SUBMERSIBLE OIL AND GAS PRODUCTION FACILITY, A PASSING 4IN CLASS 150 VALVE REQUIRED URGENT ISOLATION TO PREVENT HC GAS FROM ENTERING THE FLARE SYSTEM.

FROM INITIAL ENQUIRY, IK-GROUP DESIGNED, ENGINEERED, AND ENABLED REPLACEMENT OF THE VALVE IN JUST FOUR WEEKS, WITH NO LOSS OF PRODUCTIVE TIME.

### THE SITUATION

With gas prices at a record high, the operator was looking for a solution which would allow production to continue, avoiding the major costs, risks and complex operations associated with shutdown and draining of the process inventory.

### WHAT WE DID - THE AOGV

IK Group's patented AOGV is a mechanical isolation tool which can set and retract a blind spade in a pair of flanges on a pressurised process system. The blind spade or a combination of several spades in different locations can facilitate the replacement of valves, pumps, taking a vessel out temporarily for safe entry and bringing it back on-line whilst the main process is kept in operation continuously.

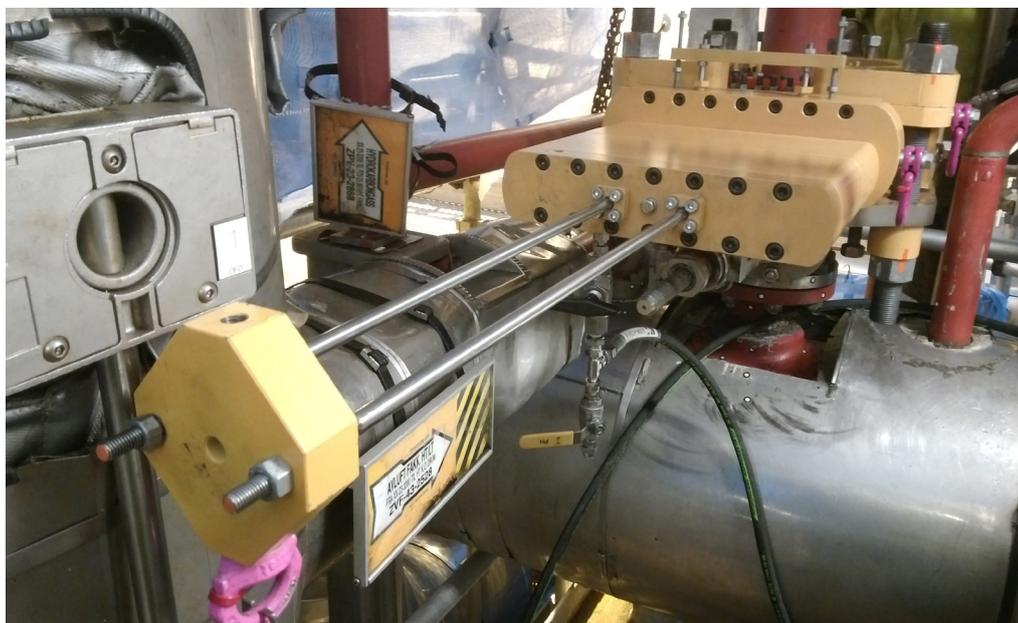
Providing positive isolation, the AOGV was identified as the solution, facilitating intrusive maintenance on a live flare system with a spade set in between the valve and pipe spool leading to the flare. The semi-submersible remained in normal operation whilst the pressurised HC line was split and the valve replaced.

### CHALLENGES

- Passing valve between the process plant and the HP flare system.
- No suitable means for isolation near the maintenance point.
- Avoid facility shutdown.

### RESULTS

- Enquiry to result in four weeks.
- Zero non-productive time.
- Zero LTI's.
- Knowledge sharing with client.
- \$15M saved from not shutting down.



### TESTING, PLANNING & PREPAIRING

One 4" ASME Class 150 AOGV was commissioned for the work scope. Prior to manufacturing and full-scale workshop testing, IK-Group planned offshore site activities, including a site survey, in collaboration with the operator.

It was found that the lower integrity clamp had to be specially manufactured to fit between the valve housing and pipe spool flange. By utilising complex area-specific 3D scans, IK-Group engineered and manufactured the integrity clamp to fit the valve flange.

The AOGV was proof tested at 1.43 times the design pressure to ensure no leakages in the event of pressure build up due to flaring.

IK-Group field engineers gave multiple presentations to the operator's offshore employees, ensuring their understanding of the technology and associated procedure.

### SITE OPERATION

IK-Group's crew was mobilised and performed a faultless operation during which a spade was set - isolating the passing valve and enabling the valve replacement. The isolation spade was set without causing non-productive time or any health, safety and environmental issues and ultimately saved the operator the cost of a significant facility shutdown.

### RESULTS

-  • Enquiry to works completed in four weeks.
-  • Zero non-productive time for the client.
-  • Zero LTI's.
-  • Knowledge sharing with client.
-  • \$15M saved from not shutting down production.