



STATS GROUP
Managing Pressure, Minimising Risk

24" Remote Tecno Plug™ | Doha, Qatar

STATS Group were recently retained by a major oil producer in Qatar to provide fast-track delivery of a high pressure isolation tool to facilitate safe and reliable isolation of a 24" pressurised gas line. With a verified double block and bleed isolation in place, valve replacement and maintenance work was successfully carried out on the connected 16" production tee.

In line with the client's standard maintenance and safety procedures, a verified double block and bleed isolation is compulsory prior to valve replacement on a live system. Conventional repairs of this type would typically require the entire pipeline to be completely hydrocarbon free and nitrogen purged to enable a safe intervention. This approach adds extensive operational and procedural requirements which have significant time, environmental and cost implications.

After a detailed site survey and piggability assessment STATS proposed the use of a Remote Tecno Plug™. In order to verify functionality for the offshore operations, all equipment was subject to a Factory Acceptance Testing programme at STATS Group headquarters in Kintore, Aberdeenshire, prior to delivery to Qatar. This fast-track project was engineered, risk assessed, assembled and mobilised within a two week window.

Once onsite, the Remote Tecno Plug™ was pigged with nitrogen from the launcher through two valves, passed the production tee and through three 90 degree bends to the set location. Once at location and hydraulically set, the Tecno Plug™ provides fail-safe and fully tested double block isolation against pipeline pressure and contents, ensuring a safe and reliable barrier prior to breaking containment.

During pigging operations the Remote Tecno Plug™ was tracked and accurately positioned using through-wall communication. An extremely low frequency (ELF) radio control system sets and monitors the plug throughout the isolation. The remote control system provides a high degree of flexibility and eliminates the need for tethers or modified pig-trap doors.

Independent testing of each seal with full pipeline pressure confirmed leak-tight isolation and the pipeline was bled down to ambient from the platform launcher to the rear of the Tecno Plug™. The annulus between the Tecno Plug™ seals was vented to ambient to create a zero-energy zone.

After a twelve hour isolation stability hold period, an 'Isolation Certificate' was issued and the Tecno Plug™ was confirmed as providing double block isolation allowing the valve maintenance to commence. The Remote Tecno Plug™ remained isolating the pipeline for three days while the valve was replaced.

With maintenance work successfully completed, the Tecno Plug™ was used as a test boundary to perform a reinstatement pressure test. This was achieved by raising the pipeline pressure from the launcher side while the Tecno Plug™ remained in a fully 'set' condition. The reverse pressure test operation created a test boundary to confirm the newly installed valve. Finally the plug was unset and reverse-pigged back to the launcher for demobilisation.

This successful delivery demonstrates STATS' ability to provide safety critical isolation services that enable urgent maintenance activity to be completed, within schedule and with minimal production outage.



STATS field technicians with Remote Tecno Plug™ following successful valve changeout