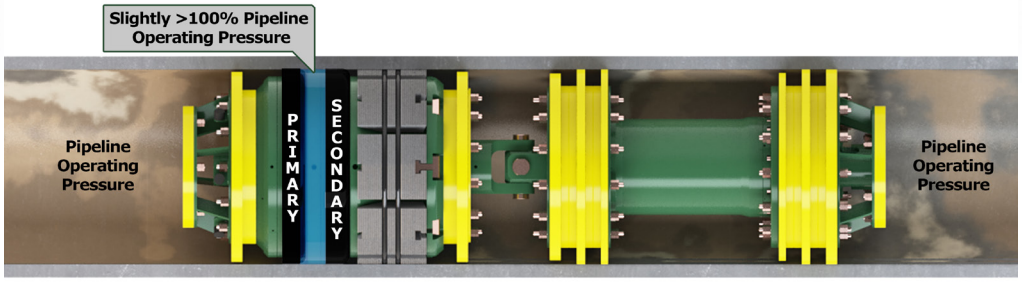
STATS GROUP
Managing Pressure, Minimising Risk

Tecno Plug®
Non-intrusive Inline Isolation

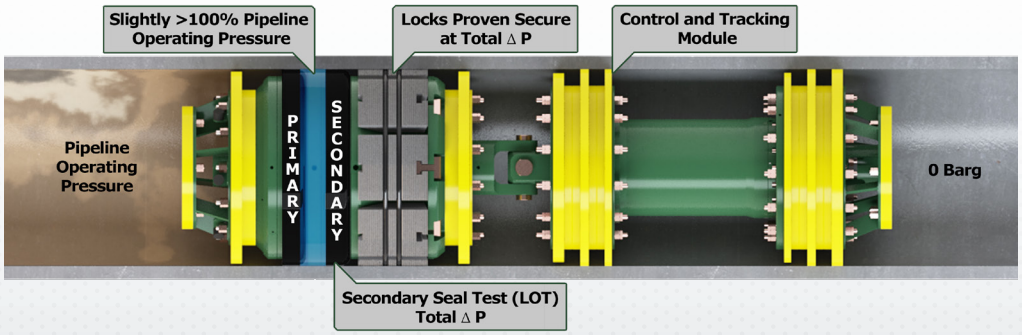
Fully Proved Double Block: Seal Test Sequence

Once the Tecno Plug arrives at the isolation location it is hydraulically activated, setting the isolation plug. Setting the Tecno Plug retracts the internally mounted hydraulic cylinder within the plug activating the locks and seals to create the initial barrier. Once the Tecno Plug is confirmed as set, the pipeline pressure inboard (portion of the pipe to be isolated) is vented generating a pressure differential across the plug module. As the pressure differential is applied, the trapped pipeline content in the annulus between the seals is compressed due to the seal compression. The other effect is that the hydraulic pressure in the actuation system drops. The remaining hydraulic set pressure once the pipe is fully vented is locked-in by pilot operated check valves to ensure it is maintained, even in the unlikely event of a loss of power in the control module. Once inboard pressure is fully vented the Tecno Plug secondary seal is tested in-situ to above the pipeline pressure, in the correct direction. This proves the integrity of the secondary seal. The annulus is then vented to the tail pressure and locked-in. This allows the primary seal to be tested to the full differential pressure. The isolation is then monitored for an extended period prior to breaching the pipeline integrity.

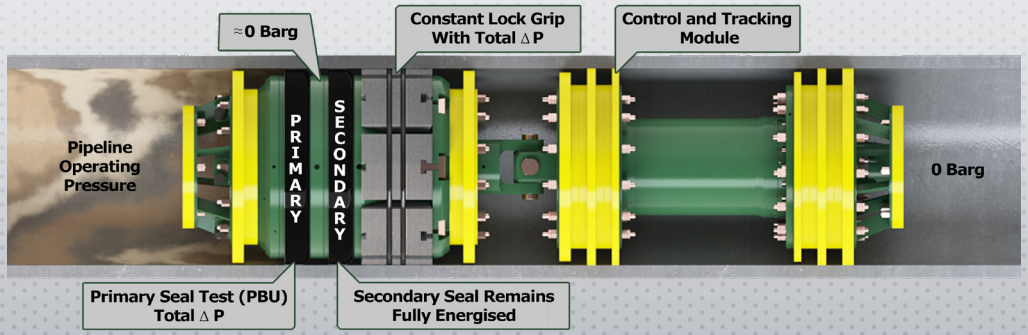
Tecno Plug® Seal Verification Cycle



Both seals are proven in-situ to full pipeline pressure and the void between the seals is bled to ambient and locked-in for monitoring.



Zero-energy zone between the seals during isolation



DNV GL Type Approval

STATS Tecno Plugs are fully certified by DNV GL to verify that the design criteria satisfies the requirements for Pipeline Isolation Plugs to provide dual seal and isolation in accordance with Offshore Standards; DNV-OS-F101 (Submarine Pipeline Systems) and recommended Practices; DNV-RP-F113 (Subsea Pipeline Repair) and in compliance with the following code; ASME BPVC Section VIII, Division 2.