Subsea Tie-In & Pipeline Reconfiguration in the North Sea

Using a Remote Controlled Isolation Plug & Hot Tapping Operation
Overview

- Tyra Redevelopment Project Summary
- Continuing Production during 2 Year Shutdown
- 26” Subsea Pipeline Reconfiguration
  - Remote Tecno Plug® Isolation
- 8” Pipeline Tie-In
  - Mechanical Hot Tap Fitting
  - SureTap® Hot Tap Machine
Tyra Current & Future Layout

Source: NTS ESIS TYRA
Continuing Production During Tyra Field Shutdown

- During the 2 year redevelopment the Tyra hub was closed in, including six satellites.
- In order that Southern fields could continue producing during the Tyra shutdown a new 26” bypass pipeline was installed, connecting them to the Dutch sector.
- Safe and efficient installation of the subsea bypass valve skid was facilitated by double block isolation of the 26” subsea pipeline using a Remote Tecno Plug®.
- During the Tyra shutdown fuel gas to Gorm was supplied via a New 8” Pipeline - the 8” pipeline was tied into the subsea pipeline using a STATS Mechanical Hot Tap Fitting and SureTap® Hot Tapping Machine.
Subsea isolation train comprised, two dewatering Bi-Di pigs and a Remote Tecno Plug® - pigged 620m from Tyra West E platform.

Remote Tecno Plug provided a safe, fully-proven double block isolation from the pressurised 26” gas pipeline (99km, 85bar) – so containment could be safely broken – allowing tie-in operation.

Divers cut the pipeline and installed a mechanical pipeline connector to tie the pipeline into the new subsea valve skid.

Upon completion of the tie-in and leak testing the Remote Tecno Plug was unset and the new 3.5km pipeline section was dewatered by propelling the Tecno Plug and both Bi-Di pigs into a temporary receiver connected to the new subsea valve skid.
26” Tecno Plug® Check Valve Piggability Assurance

- 3D Model Engineering Review
- Pigged through full-scale check valve geometry test fixture
26” Subsea Tecno Plug® Isolation

Click image to view animation
8” Subsea Hot Tap Pipeline Tie-in

- 8” Pipeline Tie-In: 24” x 8” #900 Mechanical Hot Tap Fitting
- SureTap® ST410-90 Hot Tapping Machine

Hot tap assembly deployed horizontally then rigged into vertical under the protection structure for 12 o’clock hot tap
8” Subsea Hot Tap Pipeline Tie-in

Click image to view animation
8” Subsea Hot Tap Pipeline Tie-in

- 8” The project was completed safely with no incidents
- The isolation bypass and hot tapping were both completed on time and on budget
- Project Planning, Engineering & Testing
- Project Alignment – Client, Contractor, DNV GL & Pumping Contractor all at SIT
- Lessons Learnt & Project Close Out highlighted communication and teamwork to be essential
Thank You For Your Attention Questions?

for more information visit www.statsgroup.com
Copyright & Disclaimer

Copyright
Copyright of all published material including photographs, drawings and images in this document remains vested in STATS (UK) Ltd and third party contributors as appropriate. Accordingly, neither the whole nor any part of this document shall be reproduced in any form nor used in any manner without express prior permission and applicable acknowledgements. No trademark, copyright or other notice shall be altered or removed from any reproduction.

Disclaimer
Although STATS Group believes that the Presentation and the references therein are based upon reasonable assumptions, it can give no assurance that the actual results will be as set out in the Presentation. STATS Group is making no representation or warranty, expressed or implied, as to the accuracy, reliability or completeness of the Presentation or the data referenced therein, and neither STATS (UK) Ltd nor any of its directors, officers or employees will have any liability to you or any other persons resulting from your use.

STATS Group consists of many legally independent entities, constituting their own separate identities. STATS Group is used as the common brand or trade mark for most of these entities. In this presentation we may sometimes use “STATS”, “we” or “us” when we refer to STATS Group companies in general or where no useful purpose is served by identifying any particular STATS Group company.