

MORGRIP® EPRS – SUSTAINING EMERGENCY READINESS FOR HIGH-PRESSURE PIPELINES

CASE STUDY

FOR ALMOST TWO DECADES, CONNECTOR SUBSEA SOLUTIONS (CSS) HAS SUPPORTED A MAJOR OPERATOR'S EMERGENCY PIPELINE REPAIR SYSTEM (EPRS) IN AZERBAIJAN THROUGH ONGOING SUPPLY, UPGRADES AND MAINTENANCE. FROM THE FIRST 18", 28" AND 30" MORGRIP® CONNECTORS IN 2005 TO THE LATEST 14" VARIANTS, THIS PARTNERSHIP PROVIDES A ROBUST CONTINGENCY FOR HIGH-PRESSURE PIPELINES, COMBINING DNV-APPROVED CONNECTORS WITH BESPOKE CLAMP DESIGNS.



01 // Connectors stored at customer's facility



02 // Final preparation for connectors storage

BACKGROUND AND CONTEXT

The operator stores EPRS spares in a climate-controlled warehouse and relies on CSS for regular inspections and technical advice. Since our first delivery in 2005, we have supplied MORGRIP® connectors and clamp assemblies across two development phases and adapted equipment in 2019 – 2020 to cover additional pipeline variants.

SCOPE OF SUPPLY AND TECHNICAL SPECIFICATIONS

- Supplied 18", 28" and 30" MORGRIP® connectors rated at 62 to 186 barg
- Delivered 32", 16", 14" and 6" connectors rated at 141 to 325 barg
- Provided matching clamp assemblies for each connector size
- Reconfigured 14" connectors and clamps in 2019 – 2020 for a new pipeline variant



03 // FAT process with clamp in foreground

CHALLENGES AND REQUIREMENTS

- **High Pressure:** Up to 325 barg required robust seals and materials.
- **Variant Coverage:** OD and wall-thickness changes across pipelines had to be accommodated.
- **Inspection Regime:** Bi- to tri-annual checks ensure seal integrity and minimise overhauls.
- **Storage Care:** Corrosion-inhibitor treatments and custom crates preserve parts in long-term storage.

BESPOKE ENGINEERING SOLUTIONS

- **Modular Seals:** Interchangeable cartridges cover all OD tolerances.
- **New Application:** Existing inventory was confirmed to be suitable for the customer's newest 14" pipeline.
- **Protective Preservation:** Corrosion inhibitors and humidity-controlled crates keep spares deployment-ready.



04 // Close-up of clamp closure over pipe during testing



05 // Connectors under activation and test

TESTING, MAINTENANCE AND UPGRADES

All connectors and clamps underwent full FAT at elevated pressure ratings. CSS teams have since conducted multiple on-site inspections since 2015, advising on seal recertification and performing upgrades to ensure every unit remains deployment ready.

LONG-TERM PARTNERSHIP AND READINESS

Rather than a one-off supply, CSS has become the client's trusted EPRS partner—adapting designs for new pipeline variants, delivering repeat orders during Phase 2, and refining storage

protocols. This ongoing support enables the client to mobilise emergency connectors at short notice with full confidence in their performance.

CONCLUSION

By turning standard MORGRIP® connectors into a modular, high-integrity EPRS suite, CSS equips the client to tackle everything from local repairs to full spool replacements. Our proactive engineering, DNV-approved connectors and client-trusted clamp designs set the industry benchmark for subsea solutions in the most challenging environment.



06 // Completed and coated clamp ready for storage



07 // MORGRIP® 3000 Series flange terminated connector