REDUCE COSTS & VESSEL SCHEDULE BY > 50%

on Pipeline & Subsea Services

EnerMech

Safer • Smarter • Solutions

WE UNDERSTAND THROUGH EXPERIENCE
WE DELIVER THROUGH INNOVATION

EnerMech Pre-commissioning Subsea Technologies are continually delivering cost savings of >50% on equipment and personnel, as well and a reduction in days of vessel schedule when compared to the use of a conventional vessel based approach.

01 Remote Flooding Console (RFC)

02 Bespoke Subsea Flooding Solutions

03 Subsea Test Pump Manifold (STPM)

04 Subsea Storage / Collection Tank

BENEFITS

- COST REDUCTION
- SCHEDULE REDUCTION & FLEXIBILITY
- REDUCED VESSEL POB
- REDUCED DECK SPACE REQUIREMENTS
- LESS ENVIRONMENTAL IMPACT
- OPTION TO DEPLOY SMALLER VESSEL
- REDUCES POTENTIAL WEATHER RISKS
- REMOTE SUBSEA DATA COLLECTION

BEFORE → **AFTER**

Typical Vessel Based Pigging & Testing Spread

8 MAN TEAM — DECK SPACE **300m²**

Subsea Pigging & Testing (RFC)

4 MAN TEAM — DECK SPACE **50m²**

Typical Vessel Based Pressure Testing Spread

Subsea Pressure Testing & Monitoring (STPM)

TRACK RECORD

10 years' experience

Suitable water depths from 20m to 3000m

Superior track record – over 30 successful projects delivered around the world

Over 150 subsea deployments

Numerous client testimonials for performance and reliability

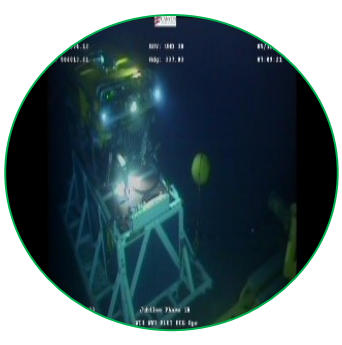
Industry leading technology

01 Remote Flooding Console (RFC)

Our remote flooding console (RFC) operates by using the natural hydrostatic seawater pressure to fill and pig subsea pipelines, using technology and hydraulically powered subsea boost pumps to avoid differential pressure.

A specific advantage is not requiring a down-line and allows for **smaller vessels** to be used for deployment and recovery and is **completely ROV friendly**. The RFC is an **effective and efficient** piece of technology that allows **for reduced crew levels, a reduction in deck space requirements and a lower thermal stabilisation time** for hydro-testing. The RFC also allows for **better vessel and schedule flexibility** as the vessel can be deployed to other tasks while the RFC is in use.

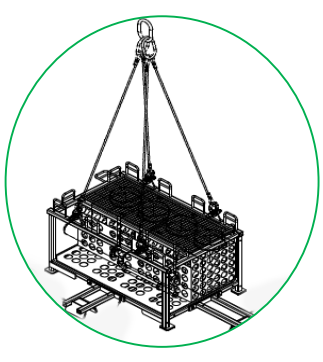
Optical Link (OL) works hand in hand with the RFC, **providing real time data** and historical data upload from the STPM to a nearby **ROV without a hard connection**, eliminating the need for vessel time as there is no need to retrieve the manifold during operations.



02 Bespoke Subsea Flooding Solutions

We understand that different situations need different solutions, and one size doesn't fit all. This is why **we engineered the RFC to be scalable**, and produced variations such as the RFC Lite and the RCF Ultra-Lite (RFC-UL) to ensure that we had a solution suitable for all of our client's needs. Our bespoke subsea flooding solutions are ideal for deep and shallow projects be it flooding during lay, flushing, fluids collection and treatment.

The RFC Lite provides all of the filtration and dosing benefits but without the integrated boost pump and instrumentation package, which makes it ideal for pipe-lay. The RFC-UL was created for chemical dosing during lay down of the initiation heads where buoyancy issues are present and require immediate flooding during lay.



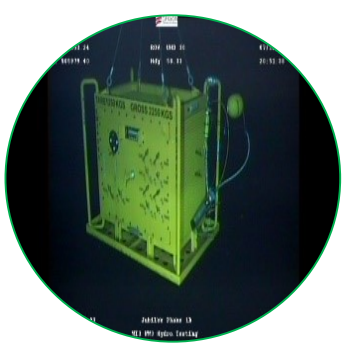
03 Subsea Test Pump & Manifold (STPM)

The STPM uses the ROV's hydraulic power to run the on-board pump and perform pipeline and umbilical hydro or leak testing **without the use of downlines**, as well as recording and monitoring multiple tests utilising its on-board data systems.

The STPM's ability to hold and depressurise subsea **without the need for a downline** allows the pipeline and umbilical to be tested without the vessel, which means the **vessel availability and flexibility is increased significantly** for other tasks as the manifold continuously logs.

Chemicals can be stored on-board for pressurisation fluid treatment, and all fluid entering the system is **guaranteed to be filtered to 50 micron.**

Optical Link (OL) also works hand in hand with the STPM, **providing real time data** and historical data upload from the STPM to a nearby **ROV without a hard connection**, eliminating the need for vessel time as there no need to retrieve the manifold during operations.

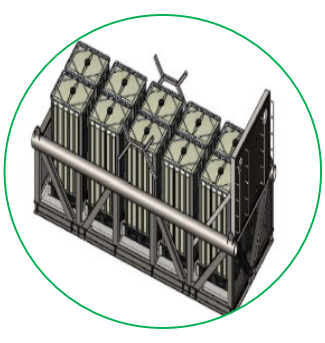


04 Subsea Storage / Collection Tank

Our team holds a record of accomplishment in **the design and build of unique solutions for subsea storage and collection tanks to suit specific client requirements.**

As an example, we have provided a bespoke subsea bladder collection tank with the ability to collect 10 different chemicals with varying toxicities that with capable of holding up to 25,000 litres and operate at 1200m water depth preventing any chemical discharges.

Similarly, we worked in partnership with a client to provide a subsea chemical basket. This particular basket featured a MEG bladder to supply the MEG to our RFC and STPM which allowed for a MEG flush and tests of subsea structures at a depth of 1500 m, this unit allows us to safely deploy fluid volumes in excess of 20,000 litres entirely subsea.



Using a combination of the above technologies can deliver significant cost savings of >50% and vessel schedule reductions of >48 hours.

These technologies can be used in combination or individually to suit specific requirements. They can also be utilised on a full project or alongside your existing contractor which will deliver efficiencies immediately.

Should the benefits and efficiencies from these technologies be of interest then please contact myself for further information and/or a video conference call where we can demonstrate the value directly.

Savings based on previously completed projects utilising EnerMech Subsea Technologies as a combination or individually. Where a surface downline is required, EnerMech can deliver the latest, lightest downlines using both composite and traditional solutions.