

THE ULTIMATE FAST-TRACK DESIGN



From left - Ståle Tønnessen, Christian Wathne, Trond Remme and Torstein Meling display their SMART awards and a sample clamp.

Only 19 days later, the brand-new design went into production. Just over five weeks from the original request, 198 of the revolutionary clamps were safely installed on the Norwegian pipeline, thanks to outstanding Subsea 7 teamwork.

“This really was the ultimate multidiscipline fast-track design project,” recalls Christian. “We were discussing specifications with the client by day and brainstorming by night. Our design and project teams later won a SMART innovation award, and we are planning on trademarking the design as part of Subsea 7’s product portfolio.

“I guess this confirms that necessity really is the mother of invention!”

Christian has some wry advice for fast-track technology developers. “Design like this is messy – it’s about constructive conflicts, not agreement! It doesn’t

happen in one discipline – it happens in the white spaces between disciplines!

“For your team, mix pragmatic thinkers with big-picture visionaries, and goal-orientated with patient. Most important of all – make the meetings no-seating.”

The elegant and ingenious 12.5kg plastic clamps were fitted by ROV and support the DEH cable at the correct distance from the pipe. Intensive testing of the clamping force and anti-rotational tension was required during the design review, and over six tonnes of plastic were required for fabrication, with one clamp being produced every 17 minutes at peak output.

To commemorate the remarkable achievement, Subsea 7’s Houston office produced 100 commemorative mini-clamps, customised as key-ring coin-holders and manufactured on its 3D printer.

Stavanger-based Christian Wathne’s brief last July was simple and straight to the point. “Produce a new design concept for a permanent Retrofit Clamp (RFC)... and by lunchtime tomorrow!”

The request to the Senior Project Engineer came on behalf of a Direct Electrical Heating (DEH) project which needed a quick-fitting clamp to lock the DEH cable to an existing pipeline.