



CASE STUDY



DeltaTek Global

Profile

Well construction specialist, DeltaTek Global develops innovative products for the oil and gas drilling industry that are intelligent and cost saving and can be efficiently implemented. SeaCure® is DeltaTek's flagship technology and is a revolutionary subsea cementing system which delivers stabbed-in, inner string cementing for subsea wells, eliminating the need for shoe tracks, improving cement placement, drill out performance and reducing the need for remedial cementing.

Launched in 2018, SeaCure® has been deployed on multiple new wells in the UKCS including the North Sea and West of Shetland, Norway, the Mediterranean, the Far East and the harsh waters of the Arctic Circle.

DeltaTek has calculated the cost-saving benefits of the SeaCure® cementing technology to be up to 80%. Furthermore, it is proven to contribute to the drive towards net zero goals with substantial reductions in cement wastage, and therefore CO₂ emissions on every deployment.

Challenge

SeaCure® can run with either a drill pipe wiper dart or a ball drop system, both of which lock in place to enable the pressure increase necessary to burst the rupture discs that allow the contents of the inner string and casing to be cleaned out through the running tool ball valve. The ball drop system requires a bespoke seat to be positioned at the bottom of the inner string within the latch in adaptor. This internal diameter restriction requires a hard wearing surface to ensure no erosion damage occurs while pumping cement; the seat has to withstand extremely erosive conditions where it can be pumping up to 3,000 barrels of cement at 8 barrels/minute for up to 10 hours.

Hardide Coatings first worked with DeltaTek in 2018 to successfully coat the pivot joint body of the ArticuLock® tool. The pivot joint comprises a ball and socket that can be subject to extreme loads of up to 400MT, 5000psi of working pressure and 30,000ft.lbs of torque while operating in severe weather conditions. The Hardide-T coated pivot joint body is now used in every ArticuLock® project.

When a hard-wearing, high-performing and reliable coating solution was required for the SeaCure® seat, DeltaTek returned to Hardide Coatings.

"The Hardide-T coated seat is now specified on our SeaCure® ball drop system where it has successfully been pumping up to 3,000 barrels of cement at 8 barrels/minute for up to 10 hours with no erosion noted during post-job inspection."

David Shand

DeltaTek

Chief Operating Officer



FURTHER INFORMATION

Robin Gillham
VP Energy

M: +44 (0)7949 292 719

E: info@hardide.com

W: www.hardide.com



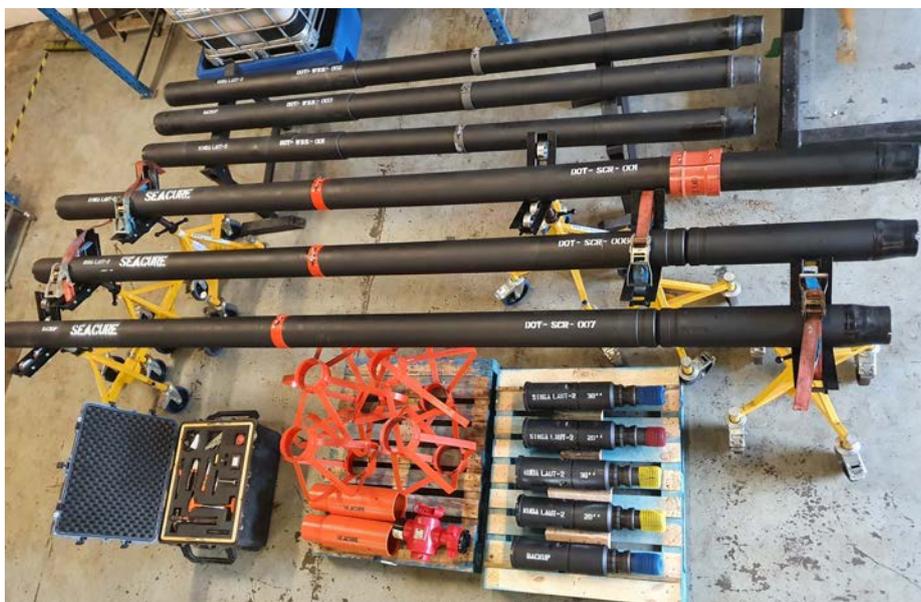
CASE STUDY



Solution

DeltaTek was working to a tight timetable for the delivery of the first coated ball seats for testing and the initial test parts were turned around by Hardide Coatings very quickly. The internal profiles of the low alloy steel seats were coated with Hardide-T, our nanostructured tungsten/tungsten carbide coating most suitable for heavy duty applications where a thicker coating up (typically 50 microns) is required. The tested seats showed no signs of wear and DeltaTek placed an order for its first batch of Hardide-coated seats. The Hardide-T coated seat has now been used successfully since March 2019 on all 16 SeaCure® jobs using the ball drop system in regions such as the North Sea, West of Shetland and the Arctic Circle. Dimensional checks are taken during the inspection process after each job and no erosion or corrosion has been identified, proving the robustness of the Hardide-T coating. DeltaTek continues to place orders for the manufacture, coating and supply of seats for SeaCure® as the technology gains traction worldwide delivering up to 70% 'Wait on Cement' time savings, reduced carbon emissions and contribution to net zero goals.

David Shand, Chief Operating Officer at DeltaTek said: "Following the impressive performance of the Hardide-T coating on ArticuLock®, we had no hesitation in contacting the Hardide team to discuss our requirements for the SeaCure® seat. The seat faces extremely prolonged and erosive operating conditions downhole and we can't afford failure. The Hardide-T coated seat is now specified on our SeaCure® ball drop system where it has successfully been pumping up to 3,000 barrels of cement at 8 barrels/minute for up to 10 hours with no erosion or corrosion noted during post-job inspection."



FURTHER INFORMATION

Robin Gillham
VP Energy

M: +44 (0)7949 292 719

E: info@hardide.com

W: www.hardide.com