bin wel-lok™CRT

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Eliminate Gas Migration in Cemented Annuli



APPLICATION

The Wel-lok[™] CRT (Cement Repair Tool) was developed to eliminate sustained casing pressure, or casing vent flow, in cemented annuli. Unlike traditional methods of perf and squeeze or perf and wash, this tool does not require any surface pumping pressure to squeeze or circulate the sealing material into place. The tool is also run rigless on electric line, sealing through casing perforations, so section milling is not required. The bismuthbased alloy has no porosity and solidifies to create a seal in minutes as opposed to hours with traditional cement and resins, eliminating the possibility of a micro-annulus being formed to allow future gas migration. If full bore access is required, it can be milled out and still maintain a gas tight seal in the annulus.

WEL-LOK[™] -AN OVERVIEW OF THE TECHNOLOGY

The Wel-lokTM technology consists of utilising a modified thermite chemical reaction heater to melt bismuth-based alloys downhole. The melted alloys have a viscosity similar to water, and a specific gravity 10 times that of water, allowing them to flow into the smallest areas of a wellbore without the need of any surface pumping equipment. As the alloys cool and solidify, they expand to provide a seamless gas tight seal that is non-corrosive and not affected by H_2S or CO_2 .

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Features

WEL-LOK[™] CRT FEATURES

- No mechanical parts
- Electronically activated
- One trip operation
- Differential pressure ratings up to 10,000 psi
- Available in a range of sizes to suit API & non API tubing and casings
- Temperature ranges up to 160°C

KEY BENEFITS OF USING WEL-LOK[™] WSO FOR INTERVENTION

• Can be used even in damaged and corroded tubings and casings

- Creates a gas tight barrier without the need to pump from surface
- Non-corrosive and not affected by H₂S or CO₂
- Can seal in cased or open hole
- Millable to achieve a full bore
- Non-porous and solidifies in minutes as opposed to cement and resins
- Eliminates the need for expensive interventions and unreliable cement squeezes
- Reduced corporate liability

As world leaders in the use of bismuth based alloys and thermite in the downhole environment BiSN has a portfolio of products aimed at tackling some of the most difficult issues faced by the oil and gas industry. We pride ourselves in building a responsive long term working relationship with our customers and working closely with them to provide innovative solutions. This innovative development in well sealing technology is breaking the mould of traditional sealing solutions and attracting attention from the major players in the oil and gas field. See our website for further information about us and our investors.