wel-lok™ TDAP

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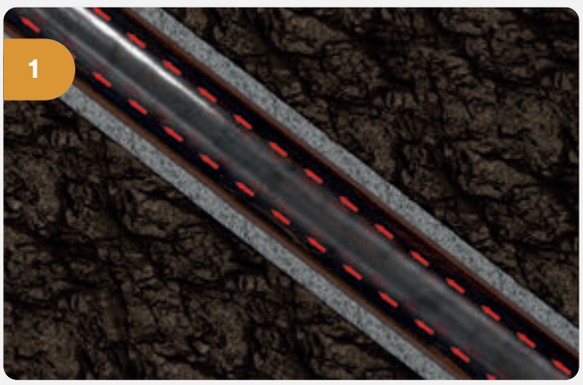
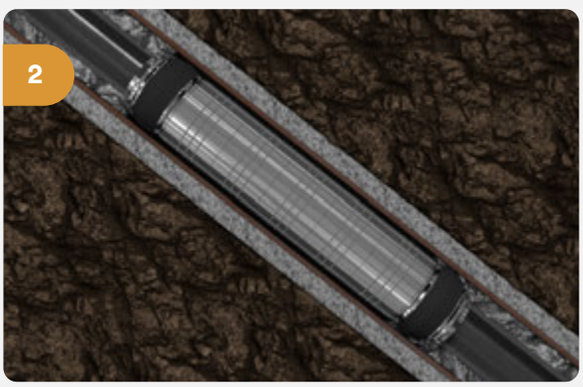
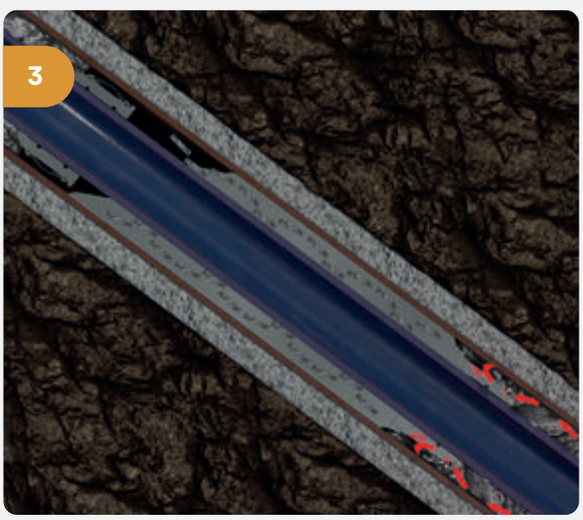
Reduce Gas Migration in the Annulus of New Wells





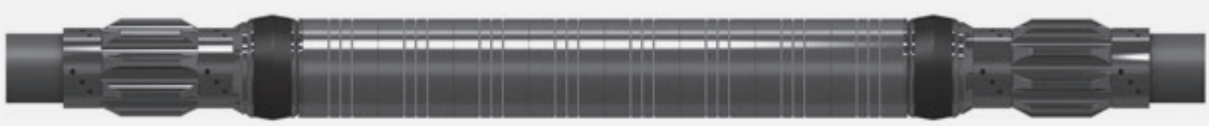


APPLICATION

The Wel-lok™ TDAP (Thermally Deformable Annular Packer) was developed as a preventative tool to be run as part of the original casing string. It is run on an inner casing string and cemented into place. After cementing, the TDAP™ is set by running a chemical reaction modified thermite heater inside the casing to melt the alloy and create a gas tight seal in the annulus, eliminating the possibility of future casing vent flow when the cement in the annulus ultimately degrades and develops micro-annuli. If utilised in the design of the well, this tool can eliminate future expensive interventions and unreliable cement squeezes required to address surface gas pressure through cemented annuli.

WEL-LOK™ - AN OVERVIEW OF THE TECHNOLOGY

The Wel-lok™ 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 $C0_2$.



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Features

WEL-LOK™ TDAP FEATURES

- Seals the annulus with advanced metal to metal technology
- Gas tight seal without the use of elastomers
- Utilises modified thermite chemical reaction heater to quickly melt bismuth based alloys
- The melted alloy has the viscosity of water allowing it to flow into the area requiring sealing including micro-annuli in cement
- Produces a seamless, gas tight metal to metal seal as the alloy expands when it solidifies
- No mechanical moving parts once set
- Available in a range of sizes to suit API & non API casings
- Electronically activated

KEY BENEFITS OF USING WEL-LOK™ TDAP FOR COMPLETION

- Non-corrosive and not affected by H_2S or CO_2
- Reduced downtime and costs for interventions
- Reduced impact on the environment
- Enhanced corporate responsibility
- Reliable sealing solution
- Extends the life of the well providing a long term seal
- Reduced contingent liabilities
- Easy to deploy in a single trip intervention
- Temperature ranges up to 160°C

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.