Provide a Seal in Through Tubing Applications, Wells with Restrictions & Large Diameter Casings

Application

The Wel-lok M2M MXD™ (Maximum Drift) has been specifically developed for rigless through tubing applications. This tool has a smaller OD and higher expansion ratio than some of the other Wel-lok M2M™ tools but uses the same technology to create metal to metal (M2M™) seals. Unlike conventional through tubing tools utilising a petal basket and cement or inflatable packers, the MXD™ offers a gas tight seal up with up to a 10,000 psi differential pressure rating and can be deployed in a single trip. Utilising bismuth alloy pellets, deployed inside a bailer, eliminates restrictions of the volume of alloy that can used to create a seal.

Wel-lok M2M™
An Overview of the Technology

The Wel-lok M2M™ 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 H₂S or C0₂.

For further information:
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**Wel-lok M2M MXD™**

**Wel-lok M2M MXD™** Features
- Slim tool profile design to negotiate restrictions
- High expansion ratio capability for sealing in large diameters
- Utilises modified thermite chemical reaction heater to quickly melt bismuth based alloys
- Gas tight seal in large diameter casings without the use of elastomers
- Easy and quick to deploy in a single trip intervention
- Wireline set

**Key Benefits of using Wel-lok M2M MXD™ for Rigless Intervention and Abandonment**
- Reduced intervention costs
- Long lasting reliable sealing solution despite restricted access
- Extends the production life of the well
- Non-corrosive and not affected by $\text{H}_2\text{S}$ or $\text{CO}_2$
- Reduced environmental impact
- Temperature ranges up to 160 °C
- Available in a range of sizes to suit API & non API tubing casings

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**BiSN Wel-Lok M2M MXD™ Dimensions**

<table>
<thead>
<tr>
<th>Casing Ranges</th>
<th>Tool OD (in) (A)</th>
<th>Left in Hole Length (ft) (B)</th>
<th>Tool OAL (ft) (C)</th>
<th>Tool Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 1/2” - 7”</td>
<td>2.125</td>
<td>12.5</td>
<td>28</td>
<td>600</td>
</tr>
<tr>
<td>4 1/2” - 7 5/8”</td>
<td>2.875</td>
<td>12.5</td>
<td>28</td>
<td>750</td>
</tr>
<tr>
<td>5” - 9 5/8”</td>
<td>3.5</td>
<td>12.5</td>
<td>28</td>
<td>950</td>
</tr>
</tbody>
</table>

* in development

* final length depends on well conditions, additional 2.5 ft on OAL for running tool

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As world leaders in the use of bismuth based alloys and thermitic 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.

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