TAM INTERVENTION SCAB LINER SYSTEMS

For Isolation of
• Water Producing Zones
• Horizontal Zones
• Screen Damage
• Casing Damage
• Perforations

TAM INTERNATIONAL
Inflatable and Swellable Packers

ISO 9001: 2000
For decades, TAM International has manufactured inflatable packers and accessory tools and more recently, swellable packers. This expertise is apparent in our system of utilizing two or more inflatable packers to selectively isolate sections of the well. These Scab Liner systems are set and retrieved on threaded tubing, coil, electric wireline, or slickline. Solid design and precision machining assures tool reliability.

Retrievable Scab Liner Specifications

<table>
<thead>
<tr>
<th>Tool OD</th>
<th>2 1/8&quot;</th>
<th>2 8/16&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>.875&quot;</td>
<td>1.250&quot;</td>
</tr>
<tr>
<td>Element Length</td>
<td>36&quot;</td>
<td>48&quot;</td>
</tr>
<tr>
<td>Min. Run-in Length</td>
<td>74&quot;</td>
<td>96&quot;</td>
</tr>
<tr>
<td>Release Type</td>
<td>Pull</td>
<td>Pull</td>
</tr>
<tr>
<td>Element Size</td>
<td>2.13</td>
<td>2.56 &amp; 2.94</td>
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Thru Tubing Packers

TAM Thru Tubing Packers can be run-in small, inflated, and set at 2 1/2 times their run-in diameter, in cased or open hole using a variety of means including:

- **Slickline/Electric Line**: Packers inflate with either wellbore or carried fluids via a downhole electric pump activated and controlled using a battery and timer mechanism. (Request the SlikPak™ Plus brochure.)

- **Work String and Coiled Tubing**: Packers inflate by dropping and pumping a ball through the tubing ID to inflate the packers with well fluids. (Request the TAM Thru Tubing brochure.)

Slickline Scab Liner Operation

To Isolate Water Zone

Run/Set lower packer

Run/Set upper packer and spacers

Produce upper and lower perforations

Electric Line Scab Liner Operation using SlikPak™

To Isolate Damaged Screen

Set lower packer below damaged screen

Run in hole with upper packer and screen

Sting in to lower packer. Set upper packer & release
Applications:

In Open Hole, alter well flow profiles by
- Isolating production zones
- Isolating horizontal sections
- Isolating thief zones
- Tying back through multilateral junctions

In Cased Hole, isolate problem areas such as
- Damaged Screens
- Damaged Casing
- Perforations

Operations:

- Each packer can be set individually to assure performance
- Packers are pinned for automatic setting and releasing
- Expansion joint between the packers compensates for tubing movement
- Inflation elements grip the wall to eliminate movement of the tools

Features:

- Small OD allows tools to pass through tubing and set in larger ID
- Short sections can be run and retrieved when lubricator length is a constraint
- System is designed for highly deviated and horizontal wells
- New generation inflatable packer elements provide high differential pressure capability and large expansion ratios exceeding 2.5:1
- Special material seals and elements insure integrity at high temperatures and pressures
Casing Annulus Packers

TAM Casing Annulus Packers (CAPs) are available in sizes up to 23" run-in OD. They can be run-in on drill pipe or tubing for horizontal and vertical separation of zones, and set in cased or open hole. The work string can release from an inflatable packer assembly using hydraulic pressure providing a full bore ID through the scab liner.

CAPs can be set by:

- **Circulating a ball or plug** to a choke and using well fluids to inflate the packers.

- **Running an inner string assembly and Combination Tool** to straddle and inflate each packer with fluid.

(Request the TAM Casing Annulus Packer brochure.)