Rigless Non-explosive Thru-Tubing Isolations

Permanent NeoPEPs

Permanent NeoPEPs are thru-tubing mechanical bridge plugs that pass thru small restrictions and set in casing and openhole diameters up to 3½ times their run-in diameter.

NeoPEPs facilitate low cost operations that were never before possible.

Plug removal would require pumping, drilling, and/or milling of the plug anchor system.

NeoPEPs have robust anchor systems and elastomeric seals that provide immediate pressure isolation upon setting in casing. Like conventional cast iron bridge plugs, cement must be placed atop NeoPEPs if permanent long-term pressure isolation is required.

NeoProducts provides all the non-explosive tools needed for zonal isolation projects:

- High-Expansion Positive-sealing Elastomeric Plug (NeoPEP)
- NeoLong-Stroke Setting Tool (NeoHST)
- Non-Explosive Dump Bailer Systems (NeoBB & NeoHybridPDB)
- High Shear Bond Cement Slurry Kits (17 - 20 ppg expanding NeoSuperSlurry)

NeoPEPs can be set in open holes, cased holes, perforated casing intervals, and gravel packs.

View the Permanent NeoPEP animation, pick here.

Contact NeoProducts for information regarding Permanent NeoPEPs and their non-explosive setting tools (NeoHSTs).

Applications

- Rigless zonal isolations and recompletions
- Isolate cross-flow & thief zones
- Water production shut-off
- X-mas tree repairs & replacements
- Wellhead repairs & replacements
- Tubing string repairs and replacements
- Base for frack jobs
- Base for chemical stimulation jobs
- Base for thru-tubing gravel packs
- T&A and P&A operations

Benefits

- NeoPEPs facilitate low cost operations that were never before possible.
- Eliminates the burdens related to the presence of, transport and use of explosives
- NeoPEPs facilitate optimal exploitation of recoverable reserves (especially applicable to horizontal wells)

Features

- Run thru small restrictions, set in casing and provide ΔP seal
- Removable via drilling and/or milling
- 100% Non-explosive isolation operations, using;
  - Non-explosive setting tool
  - Non-explosive cement plug placement atop NeoPEP
  - High shear bond cmt plug assures long-term isolation
- Up to 3½ : 1 expansion ratio
- Robust Bi-directional anchor system
- Instant pressure isolation
Rigless Non-explosive Thru-Tubing Isolations
Permanent NeoPEPs

1-3/4" NeoPEP Specifications
(Removable - Standard and Sour Service)

<table>
<thead>
<tr>
<th>Casing Size (in.)</th>
<th>Casing Weight (lb/ft)</th>
<th>Casing ID</th>
<th>RIH Length</th>
<th>Set Length</th>
<th>RIH Diameter</th>
<th>Maximum Pressure *</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>9.5-11</td>
<td>3.548-3.476 in. (90.1-88.3 mm)</td>
<td>94.70 in. (2.41 m)</td>
<td>56.75 in. (1.44 m)</td>
<td>1.75 in. (44.5 mm)</td>
<td>2,000 psid (138 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
<tr>
<td>4-½</td>
<td>11-15</td>
<td>4.00-3.83 in. (101.6-97.3 mm)</td>
<td>106.40 in. (2.70 m)</td>
<td>60.38 in. (1.53 m)</td>
<td>1.75 in. (44.5 mm)</td>
<td>2,000 psid (138 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
<tr>
<td>5</td>
<td>18-23</td>
<td>4.276-4.04 in. (108.6-102.7 mm)</td>
<td>106.40 in. (2.70 m)</td>
<td>59.50 in. (1.51 m)</td>
<td>1.75 in. (44.5 mm)</td>
<td>2,000 psid (138 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
<tr>
<td>5-½</td>
<td>14-26</td>
<td>5.012-4.55 in. (127.3-115.5 mm)</td>
<td>106.40 in. (2.70 m)</td>
<td>55.70 in. (1.41 m)</td>
<td>1.75 in. (44.5 mm)</td>
<td>2,000 psid (138 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
</tbody>
</table>

* This value is the maximum pressure at the middle of the Casing ID range for the plug without cement at 250⁰F. The 1-3/4” NeoPEP can pass through a minimum restriction of 1.813” and greater ID.

2-1/8" NeoPEP Specifications
(Removable - Standard and Sour Service)

<table>
<thead>
<tr>
<th>Casing Size (in.)</th>
<th>Casing Weight (lb/ft)</th>
<th>Casing ID</th>
<th>RIH Length</th>
<th>Set Length</th>
<th>RIH Diameter</th>
<th>Maximum Pressure *</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-½</td>
<td>11-15</td>
<td>4.00-3.83 in. (101.6-97.3 mm)</td>
<td>99.83 in. (2.54 m)</td>
<td>56.41 in. (1.43 m)</td>
<td>2.12 in. (53.8 mm)</td>
<td>2,000 psid (138 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
<tr>
<td>5</td>
<td>15-23</td>
<td>4.41-4.04 in. (111.9-102.7 mm)</td>
<td>99.83 in. (2.54 m)</td>
<td>55.91 in. (1.42 m)</td>
<td>2.12 in. (53.8 mm)</td>
<td>2,000 psid (138 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
<tr>
<td>5-½</td>
<td>17-26</td>
<td>4.89-4.55 in. (124.2-115.5 mm)</td>
<td>101.88 in. (2.59 m)</td>
<td>54.41 in. (1.38 m)</td>
<td>2.12 in. (53.8 mm)</td>
<td>2,000 psid (138 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
<tr>
<td>7</td>
<td>20-35</td>
<td>6.46-6.00 in. (164.0-152.5 mm)</td>
<td>135.85 in. (3.45 m)</td>
<td>59.41 in. (1.51 m)</td>
<td>2.12 in. (53.8 mm)</td>
<td>1,500 psid (103 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
<tr>
<td>7-½</td>
<td>38-41</td>
<td>5.92-5.82 in. (150.4-147.8 mm)</td>
<td>135.85 in. (3.45 m)</td>
<td>58.41 in. (1.48 m)</td>
<td>2.12 in. (53.8 mm)</td>
<td>1,750 psid (121 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
<tr>
<td>7-⅝</td>
<td>26-39</td>
<td>6.97-6.63 in. (177.0-168.3 mm)</td>
<td>138.79 in. (3.53 m)</td>
<td>57.91 in. (1.47 m)</td>
<td>2.12 in. (53.8 mm)</td>
<td>500 psid (34 bard)</td>
<td>ambient - 350⁰F (ambient - 177⁰C)</td>
</tr>
</tbody>
</table>

* This value is the maximum pressure at the middle of the Casing ID range for the plug without cement at 250⁰F. The 2-1/8” NeoPEP can pass through a minimum restriction of 2.219” and greater ID.