PetroGuard® Armour Mesh Screen

**OVERVIEW**
The PetroGuard® Armour Mesh screen is an extremely erosion-resistant screen designed to extend the life of the well and to safeguard production in erosive environments while increasing production, reliability, and asset value. Screen erosion leads to rapid sand control failure, which increases sand production – resulting in costly remediation, non-productive time, and major environmental and safety hazards.

The superior erosion resistance of the PetroGuard Armour Mesh screen is achieved through the combination of an optimized screen design, resulting in increased flow performance and extreme erosion-resistant material. The screen consists of a perforated basepipe, along with an optimized drainage layer, filter mesh, and outer shroud. The PetroGuard Armour Mesh screen can be used as a standalone system or in conjunction with gravel- or frac-pack applications, providing a reliable barrier against the production of formation sands.

**FEATURES**
- Standard 316L SS or Alloy 825 erosional properties are enhanced through a proprietary manufacturing process
- Elevated hardness is more than 20 times compared to 316L SS and is near the hardness of silicon carbide, while retaining ductility
- Screen architecture includes a shroud and a drainage layer, which are specially designed to maximize flow efficiency by creating a more uniform flow pattern, thus diffusing and reducing concentrated erosive velocities
- Robust screen design maximizes reliability, mitigates damage during deployment, and provides life of well service
- No elastomeric materials are incorporated into the screen assembly
- This screen has a 30-50 percent open flow area compared to wire-wrap screens, further reducing the influx velocity, increasing production, and lowering erosion risk
- Reverse Dutch Twill filtration media provides superior retention capability
- Testing has proved that these screens last 11 times longer than keystone wire-wrapped screens
- PetroGuard Armour Mesh screens are qualified, tested, and manufactured as per ISO 17824 and API 19SS

**BENEFITS**
- Reliable solution to extend sand-free production and increase asset value
- Cost-effective compared to alternative erosion-resistant solutions
- Optimized flow performance increases production rate
- No elastomeric material makes it suitable for a larger range of applications, including high-temperature applications
- Robust screen design mitigates damage during deployment and operation
APPLICATIONS
Recommended for any environment that is susceptible to extreme erosion, such as in:

» High-rate producers/injectors
» Wells with highly erosive particulates
» Hot spots
» Aggressive well startups
» Standalone screens
» Gravel- or frac-pack applications for additional barriers
» Through-tubing sand control in:
  • Non-sand control completions that are producing sand
  • Failed sand control completions

PetroGuard® Armour Mesh Screen Specifications

<table>
<thead>
<tr>
<th>Screen Size (in.)</th>
<th>Perforations Per Foot</th>
<th>Basepipe Hole Size (in.)</th>
<th>Basepipe Inlet Area (in²/ft)</th>
<th>Shroud Open Area (in²/ft)</th>
<th>Max Screen OD (in.)</th>
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Hardness

| 316L SS | PetroGuard® Armour Mesh Screen | Silicon Carbide | Diamond |

Life Expectancy

Tests performed validated that PetroGuard® Armour Mesh screens can last longer than other leading screens.

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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