Garlock
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Case Study: Oil & Gas - Drilling ABRA-LINE® Style 206

INDUSTRY

Oil and Gas

CUSTOMER

The largest drilling company in the Middle East; Operating an expansive fleet of rigs including 63 land rigs, 21 jackup rigs and 11 island rigs.

BACKGROUND

MUD CIRCULATING SYSTEM - This site uses a water-based drilling fluid, commonly known as mud or drilling mud, which is a mixture of water, clay, weighting material (barite), and various chemicals. This fluid is critical to maintaining optimal system performance. After mixing & conditioning, the mud is circulated downhole by large slush pumps to satisfy a number of system requirements including, but not limited to, transportation of drill cuttings (solid materials that are broken down in the borehole as a side product of the drilling process) from downhole back to the surface as well as proper circulation of the weighting material during periods when the drill head is immobile. Competitor expansion joints were failing, on average, within an 8 week period after installation.

CHALLENGES FACED

In an industry where unplanned downtime costs $49-$88 million annually, the end customer needed a replacement solution that would help them significantly reduce how often they needed to bring equipment down to replace failed or failing components. The highly abrasive nature of the drill cuttings in the mud was beyond the capabilities of most elastomers to handle.

OPERATING CONDITIONS

1. Size: 8″ & 6″
2. Application: suction & discharge
3. Media: drill mud
4. Temperature: <176°F (<80°C)
5. Pressure: 44 - 73 psi (3-5 bar)

SOLUTION AND BENEFITS

After reviewing the application in late 2017, Garlock recommended Style 206 EZ-FLO expansion joints with ABRA-LINE tubes. The superior abrasion resistance of the ABRA-LINE elastomer continues to outperform previously installed configurations. With an increase in over 5x the service life, after 40 weeks in service, the Garlock expansion joints still show no visible signs of stress, leaking, or failure, representing significant operational savings for the site.

For more information, please visit:
http://www.garlock.com

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an *EnPro* Industries family of companies
Tel: 1-877-GARLOCK / 315.597.4811
Fax: 800.543.0598 / 315.597.3216
www.garlock.com

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