Case Study: THERMa-PUR® SWG Hydrocarbon Processing

INDUSTRY

Oil & Gas

BACKGROUND

A major refinery located in China installed a new Fluid Catalytic Cracking (FCC) unit with a capacity of 2,000 KMTA (kilo metric tons annually). As a result, approximately 2,000 Vermiculite metal gaskets were installed at this facility.

CHALLENGES FACED

The refinery performed a routine steam purge prior to commissioning the new FCC unit in August 2020 and all 2,000 Vermiculite gaskets were found to have failed.

Vermiculite-based gaskets are commonly used in high temperature applications and can catastrophically fail when exposed to water or steam. Since steam purging is common in the refining industry, it is best practice for refineries to use gaskets that can handle both the heat and steaming process.

OPERATING CONDITIONS

Size: ¾" through 12" 300# (DN20 through DN300)

Temperature: 896°F - 1346°F (480°C - 730°C)

Application: Fluidized Catalytic Cracking Unit, Raised Face Flange

Media: Oil/Petroleum

Pressure: 29 psi (2 bar)

SOLUTION AND BENEFITS

Garlock replaced all 2,000 Vermiculite gaskets that failed with THERMa-PUR® spiral wound metal gaskets. They offer not only superior sealability and oxidation at high process temperatures, but are hydrophobic to maintain performance after exposure to water or steam.

Garlock THERMa-PUR® SWG gaskets successfully passed the initial steam purge test and are still in operation today.

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

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GARLOCK
an Enpro Company

1666 Division Street
Palmyra, NY 14522

Tel: 1-877-GARLOCK / 315.597.4811
Fax: 800.543.0598 / 315.597.3216

www.garlock.com