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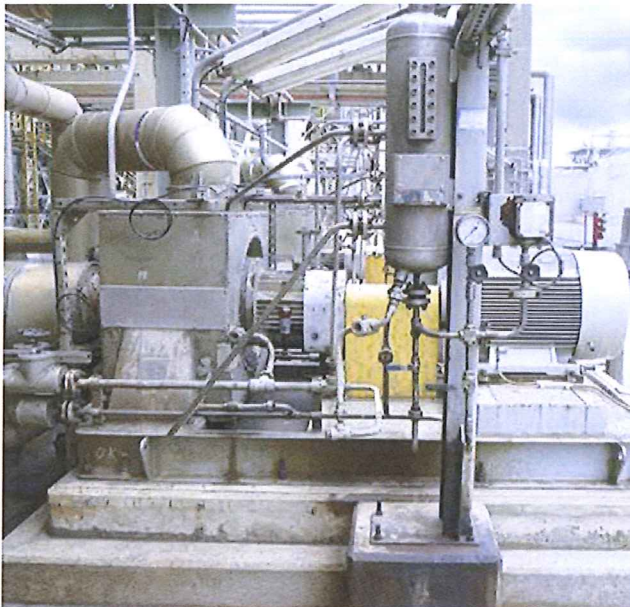
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ROSEDALE
PRODUCTS INC.Liquid Filtration
Solutions

The Innovative Sealing Solution for Difficult Media and Conditions of Use: Part 1 of 2

Featured Articles Sealing Solutions



The TOTAL refinery at the Leuna chemicals site is one of the most state-of-the-art facilities of its type in Europe. It processes over 33,000 tons of crude oil every day, most of which is pumped in from Russia.

Around three million tons of gasoline alone are produced in Leuna annually. This largely covers the demand from the German Federal States of Saxony-Anhalt, Saxony and Thuringia. Some 1,300 filling stations in the refinery's catchment area are supplied from Leuna. The TOTAL refinery is also Germany's largest manufacturer of methanol, which is an important base material for the chemical industry. Other products such as LPG, untreated gasoline and jet fuel, diesel, heating oil, and bitumen complete the range.



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22.02.2016

APPLICATION DATA

Medium:
Hydrocarbons

Pressure:
 $p = 17.5 \text{ bar (253.8 PSI)}$

Temperature:
 $t = 818^\circ\text{F (270}^\circ\text{C), max. 872}^\circ\text{F (300}^\circ\text{C)}$

Speed of rotation:
 $n = 1,485 \text{ min}^{-1}$

Materials:
Q15Q15G/KHM6G1-Q12Q1K/KHM6G1

Seal supply system:
AFI Plan 21+52+51

HARSH OPERATING CONDITIONS LEAD TO SEAL FAILURES

A type SVCN7 pump from Ingersoll Dresser Pumps used as a stabilizer reboiler pump drives the bottom circuit of a stabilization column in which the lighter and more volatile components are separated from the reformate by distillation. The SVCN7 pumps the bottom product (stabilized reformate) to a furnace and then returns it to the bottom of the column.

This mode of operation allows impurities such as pipe abrasion or catalyst residues to concentrate in the pumped column bottom, where they damage the mechanical seals. Solids in the medium and operation close to vapor pressure were the source of considerable problems for the competitor's seal that was originally used.

Numerous failures and very short MTBF finally induced the operator to join forces with EagleBurgmann to develop a permanent and reliable sealing solution. Just a few months later they were able to present their innovative solution which was validated in pilot operation and fulfilled the customer's expectations.

A LOOK AHEAD

In next month's conclusion, we'll take an up-close look at an innovative concept: EagleBurgmann's DF-MFLWTI with inserted seal face. Based on the proven metal bellows design, which does not need elastomer secondary seals, this solution is the perfect candidate for application at high temperatures. ♦

About The Author:

Robert Rusp is product manager for mechanical seals for pumps at Eagle Burgmann. With a pronounced understanding for quality and service as well as customer orientation, EagleBurgmann draws on its knowledge and expertise to provide local support to customers and solve their problems quickly and efficiently. For more information, visit www.eagleburgmann.us.

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