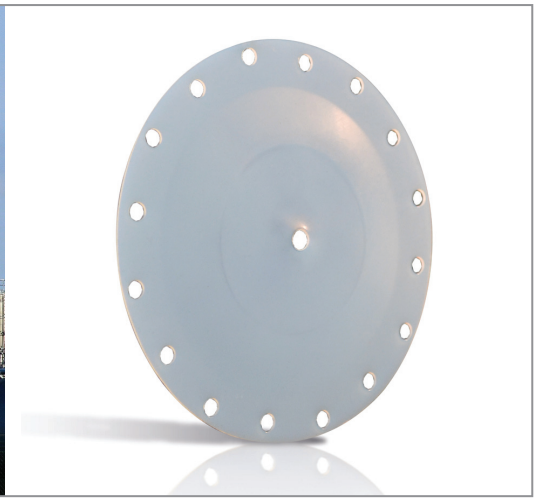
Diaphragms in GYLON® Style 3522

Case Study: Dosing pumps in petrochemical applications



Industry
Chemical processing, Oil & Gas.

Customer
Our customer is an Italian company specialized in the design and construction of package dosing systems, manufactured according to customer's specifications and the main governing standards for Oil & Gas, chemical and petrochemical markets.

Background
The company was looking for diaphragms for controlled volume pumps. These pumps are normally used as process or dosing pumps in petrochemical applications. The media is pushed by the action of a diaphragm activated by a crank mechanism. The media is controlled through the action of valves.

Challenges faced
Incorrect installation caused equipment failures. Seat lifetime should be increased and higher temperature limits compared to standard PTFE and elastomers should be achieved with a new solution.

Operating Conditions
1. Media: pumps are used in many different applications but mostly with hydrocarbons according API 675
2. Size: OD up to 270 mm
3. Temperature: from -30° C up to 150° C
4. Frequency: from 25 up to 140 strokes/min

Solution and Benefits
After some research and investigation, rubber/PTFE diaphragms were replaced with GYLON® Style 3522 diaphragms in High Pressure pumps. Our GYLON® helped the customer to reduce inventory using just one material for all the process. In addition, the one piece design reduced failures due to incorrect assembly.

Initially GYLON® Style 3510 and later Style 3522 cut gaskets were implemented in the inlet and outlet valve seats (4-6 for each pump) to increase seat lifetime due to a better wear resistance and higher temperature limits compared with standard PTFE and elastomers.

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

GARLOCK GMBH
an Enpro Company
Falkenweg 1, 41468 Neuss, Germany
+49 2131 349 0
garlockgmbh@ garlock.com
www.garlock.com

Garlock Sealing Technologies
Garlock USA
Garlock Australia
Garlock Canada

Garlock China
Garlock Germany
Garlock India

Garlock de México
Garlock New Zealand
Garlock Singapore

21174 I EN