Using Centrifugal Pumps in Terminal Applications

Grand Rapids, MI – Seeler Industries' 3 Rivers Terminal in Joliet, IL, is one of the country's larger storers, handlers and packagers of hydrogen peroxide. The company's 123-acre terminal facility with 17 storage tanks and 15 blend tanks also has the capacity to accommodate other products such as caustics, amines, glycerin propylene, glycol and chemical de-icers. Seeler recently expanded the blending capabilities in its packaging facility where hydrogen peroxide and acetic acid are combined to make peracetic acid.

To ensure that its blending facility would meet all operational parameters, Seeler turned to System One® Centrifugal Pumps from Blackmer®, a global leader in positive displacement, centrifugal and peristaltic pumps, and reciprocating compressor technologies. The System One pumps are used to circulate and transfer hydrogen peroxide into and out of storage tanks, as well as in blending the hydrogen peroxide and acetic acid.

System One pumps are perfect for these robust applications because they are constructed around the seal, where 90% of failures occur, and feature a heavy-duty, solid, low-deflection shaft and ball bearings that prevent common vibration damage and offer greater stability at the seal area to improve seal life. In the process, these innovations create a stronger, more vibration-resistant pump with a wider operational window off the Best Efficiency Point (BEP) and additional operational flexibility. The design and operation of the System One pumps improves mean time between failures and reduces maintenance costs, which are also crucial considerations for terminal operations where an increase in downtime means a decrease in profitability.

"The System One is the ideal pump for these applications because it's a very reliable pump since the trick with hydrogen peroxide is using a pump that has seals that can handle it," said Glenn Gibisch, Executive Vice President and COO at the 3 Rivers Terminal. "There are only two or three other pumps like that on the market and Blackmer's System One is the best."

System One pumps are available in three ASME/ANSI frame sizes. Each frame offers the lowest L^3/D^4 stiffness ratio of any standard competitive size pump, with delivery capacities to 4,500 gpm (17,034 lpm). In addition to the ASME/ANSI styles, System One pumps also include a Vortex pump that utilizes a recessed impeller design. This design allows the pump to handle sludges, slurries with solids, entrained air, stringy or fibrous material, and shear-sensitive liquids. The Vortex pumps have capacities to 1,500 gpm (5,678 lpm).

To illustrate just how effectively Blackmer pumps enhance the operations at the 3 Rivers Terminal, a video has been created that can be viewed on Blackmer's YouTube Channel at http://www.youtube.com/BlackmerGlobal [1].

For more information about Blackmer's System One® Centrifugal Pumps, please contact Tom Stone at stone@blackmer.com or (616) 248-9252. Blackmer is a member of Dover Corporation's Pump Solutions Group (PSG™). For more information on PSG and its member companies, visit www.pumpsg.com [2].

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