



Case Study

Cutting Clogs and Cutting Costs: Shredder pumps reduce costly maintenance calls at medical center

Overview

Pomona Valley Hospital Medical Center (PVHMC) employs 2400 physicians and nurses and features 437 hospital beds. It relies on 7 sewage ejection pits to collect waste from the hospital complex and pump waste materials into the municipal sewer system. Like many other hospitals, PVHMC was having problems with “disposable” wipes. The wastewater pumps consistently clogged with both wipes and other non-flushable items.

With 24/7 daily operations, pumps would clog continuously. Between 2008 and 2014, the sewage ejection pumps were rebuilt and replaced multiple times. The hospital regularly brought in additional maintenance staff to clear the ejection pits, at a cost of \$4500 - \$8500 including overtime and holiday charges.

To address budget concerns, PVHMC decided to replace their pump system with two key selection criteria: (1) pumps must shred flushed solids and (2) be extremely reliable to avoid additional maintenance expenses.

“Clogs happen at all times of the year – they don’t care whether it’s Thanksgiving, Christmas, or New Year’s Eve,” Cortech Engineering [PVHMC service engineering company]

PROBLEM

- Non-flushable items clogging sewer system
- Round-the-clock pump stoppages
- High maintenance costs due to emergency responses required after-hours



Solution

PVHMC's service engineer, Cortech Engineering, selected the Industrial Flow Solutions™ BJM® SK series corrosion-resistant, solids-handling pumps for the hospital's 16ft sewage ejection pits. SK series non-clog pumps are engineered to shred waste materials with a tungsten carbide-tipped cutting impeller that rips apart solids against a tooth-edged spiral shaped diffuser plate. The 360° shredding action and non-clog impellers are perfectly suited for processing disposable wipes, rags, and other solids up to 3.5" in size.

SK pumps are extremely reliable in 24/7 operating environments. Their three-seal motor protection includes a lip seal installed above the impeller to prevent unwanted materials from entering the seal chamber. Also included are winding projection and (NEMA) Class F motor insulation that allows motor temperatures to rise up to 230°F. An automatic turn-off switch ensures the motor cools off before resuming operations. Another important pump feature for PVHMC is the Seal Minder® moisture detection system for early notification of seal circuit failure.

PVHMC installed two SK pumps in a duplex arrangement with lifting chains for easy inspection and maintenance. Once installed, they achieved 570 GPM with 59ft of head. The SK pumps have been operating smoothly for 15 months.

“I'm so glad the SK series pumps are reliable. The maintenance staff appreciates the decrease in calls for middle-of-the-night and holiday emergencies, and the maintenance budget is much lower.”- Karen Deshler, Cortech Engineering



FEATURES

- Corrosion-resistant solids-handling non-clog pump
- Wear-resistant shredding and cutting system designed to tear, break, rip solids
- Tungsten carbide-tipped impeller
- Max solids from 1.6-3.5"

APPLICATIONS

- Pharmaceutical & Medical
- Food & Beverage
- Minerals & Mining
- Municipal Water & Wastewater

RESULTS

- Reliability from motor cooling and early moisture protection system
- Highly effective solids-handling of wipes, rags, etc.
- Fewer after-hours emergency calls
- Greatly reduced maintenance budget



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