

## Compact Progressive Cavity Pumps Cut Costs at Montreal Plant



SEEPEX INC.

Montreal uses two-stage progressive cavity pumps to transfer treated solids from homogenizing tanks to dewatering presses.

**Problem:** Wastewater treatment plant needs more efficient progressive cavity pumps.

**Solution:** Replace larger, more expensive four-stage pumps with compact two-stage pumps.

The city of Montreal's (Quebec, Canada) wastewater treatment plant serves approximately 2 million people and treats 44% of all wastewater processed in Quebec.

Solids are pumped initially into four 5000-m<sup>3</sup> (1.3 million-gal) holding tanks. From the tanks, eight four-stage and 12

two-stage progressive cavity (PC) pumps send primary solids into five homogenization tanks, where they are conditioned with cationic polymer before dewatering by either 10 filter presses or five rotating vacuum presses.

According to Jean Beauregard, a maintenance engineer at the plant, the PC pumps are expected to run for 5000 hours before requiring rebuilding. Once rebuilt, the pumps should

be able to run for another 5000 hours, Beauregard says, before requiring replacement. The PC units are in use 8 to 12 hours a day, 365 days a year. Both types of PC pumps perform to standard at 2080 L/min (550 gal/min) and 895 kPa (130 lb/in.<sup>2</sup>).

However, Beauregard says, the cost benefits of the two-stage unit, a Type 130-12NS from Seepex Inc. (Enon, Ohio), have become evident in certain areas.

The two-stage unit, for example, uses less floor space and takes less time to install and service than the four-stage pump, Beauregard says. The two-stage unit also

is sealed with the manufacturer's standard gland packing, compared to the four-stage pump's double mechanical seals. Beauregard says that translates into either paying \$200 to replace a pump's packing without having to disassemble the unit or spending a few thousand dollars to make labor-intensive seal repairs on the four-stage pump. And, he adds, maintaining and rebuilding a two-stage pump costs less than performing the same services on a four-stage pump.

Also, the four-stage unit requires 250-mm-diameter (10-in.-diameter) pipe, while the two-stage pump requires 200-mm-diameter (8-in.-diameter) pipe. Beauregard says the smaller diameter saves money because such parts as valves and flanges cost more for a larger diameter. In addition, the two-stage pump has a 20% lower purchase price and uses less energy than the four-stage pump.

"Considering everything, the two-stage pump ... stands up to a four-stage pump, especially based on the size of the pumps we are using in this transfer application," Beauregard says.

For more information on Seepex's two-stage PC pumps, call 1-937-864-7150 or visit the company's Web site at <http://www.seepex.com>.

**seepex**



**seepex, Inc.**  
511 Speedway Drive  
Enon, OH 45323  
Phone (937) 864-7150  
Fax (937) 864-7157

[www.seepex.com](http://www.seepex.com)  
[seepex@ix.netcom.com](mailto:seepex@ix.netcom.com)