

## Application Bulletin

**Industry:** Steel

**Product:** Larox Flowsys Peristaltic Pump (LPP)

**Process Application:** Blast furnace thickener under flow

Process Conditions	
Specific Gravity	1.7
Solids Content	20 - 60%
Temperature	50°C
Medium	Blast furnace sludge

### Larox Pumps Increase Filtering Efficiency in Steel Mill

*One of the leading global producers of steel in the world replaces six centrifugal pumps with (2) LPP peristaltic pumps. In late 2005, the Company looked to upgrade two of their blast furnace thickener under flow pumping and filtering systems. The goal was to increase availability, filtering efficiency, and reduce maintenance costs.*

#### Larox Flowsys in the Process

As part of the upgrade project (2) Larox (LPP65) pump were selected as the thickener underflow pumps to feed a plate and frame filter press. The Larox pump was selected due to its ability to handle abrasive materials with higher solids concentration levels. The thickened mill sludge contained coarse carbon particles which rendered the centrifugal pumps a poor selection due to intense wear and repair costs.



The LPP hose being the single repair item required appealed to the customer's requirement to increased availability reduce maintenance part count, and costs. In combination with the pumps, an operation station containing an inverter was provided by Larox Flowsys. The use of the LPP pump in conjunction with the inverter provides a variable output flow aiding in the balance and stability of the thickening process. The net result is a consistent and heavier solids concentration increasing the overall efficiency of the plate and frame filter press. Larox Flowsys provided both the pump as well as the complete control box for operating the pump.

The steel mill manager of this area commented these are lean mean pumping machines. Due to the success in this application this mill has followed up with another order for (4) more LPP65.

### Process Flowsheet

