



Mono® NOV Pumps Cuts Paper Mill Costs

Mono® NOV has boosted production and cut costs by approximately £175,000 at Frövi paper mill in Finland by providing a low maintenance pump to deliver viscous clay slurry from a circulation tank to the board coating machine.

The mill was facing production losses as high as 5% because the existing pumps were fitted with flushing shaft seals. The flushing water was diluting the coating mixture and upsetting the viscosity of the clay (500cP to 2,000cP), resulting in a marked reduction in the quality of the finished product.

The coating clay contains 55-75% solids, including kaolin, marble, carbonates and titanium oxide, and dries instantly. It was therefore critical that the pump chosen should prevent moisture loss, and have a gentle action to avoid shearing and damage to the pumped mixture.

Mono NOV's distributor recommended vertically mounted pumps from the Mono industrial range. These have been installed so that the seal area does not come into contact with the coating clay mixture; flushing is therefore unnecessary and there is no chance of the coating being diluted. The pumps stainless steel body, chrome-oxide coated, stainless steel rotor and nitrile rubber stator were chosen to avoid possible contamination of the clay coating mixture.

Any risk of contamination is further reduced by Mono's unique Flexishaft, which links the drive shaft to the helical rotor. This device has no wearing parts, making joint lubrication unnecessary so avoiding product contamination. The

simplicity of the design reduces the number of parts in the pumps, making them easy to dismantle and reassemble. Increased reliability lengthens the intervals between routine maintenance.

The three pumps at Frövi operate at speeds of between 160 and 250rpm at 1.5 bar pressure, delivering the coating at rates of up to 110m³/h. The mill produces around 250,000 tons of coated board each year, primarily for the leading packaging manufacturer of juice and milk cartons.

The pumps have been running continuously since autumn 1994 without any problems. During this period loss of production due to coating mixture dilution, has dropped to 0.4%.

Pump:	Industrial progressing cavity pump
Product:	Circulation of coating slurry
Capacity:	70 - 100 m³/h
Pressure:	1.5 bar
Pump speed:	180 rpm nominally
Drive:	30kW motor



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Mono® NOV

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