

Mono® NOV Provides A Vertical Solution for Coatings

Vertically mounted Industrial pumps from Mono are helping Iggesund Paperboard (Workington) Ltd in Cumbria to achieve a smooth latex coating on its board packaging materials.

Iggesund Paperboard (Workington) Ltd (IP(W)L) is one of Europe's leading manufacturers of high quality packaging, producing 190,000 tonnes of folding box board per year, which is destined primarily for the graphics, tobacco and food packaging industries.

IP(W)L's Coating and Chemical Plant prepares the special China clay/latex coating mix using a batch process. The coating is designed to give a high gloss finish to the board, producing an ideal surface for printing. Several grades of coating for specific applications are prepared and held in storage tanks until required.

Mono industrial pumps are used to pump the coating mix from the storage tanks to the final station tank which feeds the top layer blade coater. The final station tank is equipped with a level transmitter, which uses pressure to detect changes in tank level. This information is fed to the central Distributed Control System (DCS) which automatically alters the pumps variable speed drive in proportion to the rate at which the tank is emptying. This ensures total process efficiency by keeping a stable level within the tank.

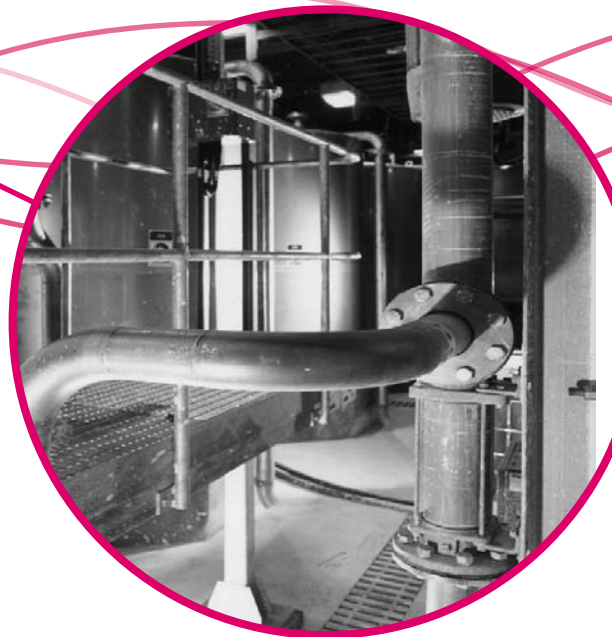
To constantly refill the tanks, the pumps normally operate at 5m³/h. The variable speed drive, however, enables this to be automatically increased to rapidly refill a tank that has been completely emptied when changing the grade of coating

mix. The coating mixtures can contain up to 60% suspended solids and with viscosities as high as 1200 cp are highly shear sensitive and can therefore be easily damaged during transfer. The Mono pumps, incorporating a helical rotor turning within a resilient rubber stator, provide a smooth low shear action which ensures that the integrity of the coating mix remains intact.

In the past, IP(W)L has experienced problems with the sealing mechanisms in alternative pumping systems. After close consultation with IP(W)L, Mono has mounted the pumps vertically to ensure that the seal and gland housing is sited above the highest possible liquid level in the tank. This prevents the possibility of seal leakage, which could have costly quality and environmental implications.

Although the Mono pumps have a good suction lift of 8m, Mono designed a unique suction chamber, incorporating a flange immediately above the stator to assist the suction of the pipe. This eliminates the need to install costly and excessive suction pipework.

Gavin Yule, IP(W)L's Project Engineer is pleased with Mono's vertical solution to their coating problem, commenting, "The unique installation and Flexishaft design of the Mono pumps increases long term reliability, while decreasing the costs and inconvenience of maintenance and downtime".



Pump:	Industrial progressing cavity pump
Product:	Paper coating latex mix
Capacity:	5-26m ³ /h
Pressure:	6 bar
Motor:	Variable speed drive motor



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Mono® NOV

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