

FOR IMMEDIATE RELEASE

Increasing Plant Availability With Expanded Warman® Wbh® Slurry Pump Range

Plant availability is paramount in all commodity sectors and there is an increasing emphasis on optimisation of pumping systems from end users as part of their cost savings drive. “One of the options in terms of reducing operating cost is to replace older technology with new,” says Rui Gomes, product manager slurry pumps for Weir Minerals Africa and Middle East.

Gomes points out that Weir Minerals Africa has a depth of experience and expertise in terms of assessing pumping systems. This allows the company to provide solutions aimed at assisting customers in reducing total cost of ownership on pumping systems. “The recent expansion of the Warman® WBH® range of pumps now gives our customers access to the latest technology across a range of pumping applications.”

The Warman® WBH® slurry pump is typically used in heavy duty applications such as mill discharge, slurry transfer and process pumping applications and is ideal for both greenfields and brownfields projects. “During its development we extrapolated the best attributes of our existing heavy duty slurry pumps and incorporated these into the new range,” Gomes continues.

In 2010 the Warman® WBH® 75 and Warman® WBH® 100 were launched to the African market through a trial programme. The twofold objective was to obtain field and verification data and to gain market acceptance.

The Warman® WBH® pump has proven so popular with customers that the range has been expanded upwards and downwards, and covers from 50 mm discharge diameter up to 300 mm discharge diameter with flow rates of between 5 litres per second and 800 litres per second.

The Warman® WBH® range is available with both metal volute or rubber liners, depending on the application. For instance, rubber would be suited to gold, copper and platinum pumping applications whereas a metal volute is used predominantly in diamond and coal processing plants while in iron ore processing, a mix of metal and rubber is used.

Furthermore, the Warman® WBH® pump features a streamlined impeller and volute design, enabling flow paths within the pump that enhance the overall performance and combine high efficiency and long life.

The pump is designed with a throatbush or front liner adjustment mechanism, which continuously minimises the impeller gap as recirculation increases. “Recirculation of the slurry within the pump will significantly increase the wear, which in turn decreases the component life. To counter this and provide a significantly improved life on the impeller and throatbush, the gap between these two components can be mechanically adjusted from a single point on the pump exterior. This makes ongoing adjustment, as normal wear occurs, a simple task,” Gomes explains.

The front liner adjustment mechanism also rotates the throatbush for a more even wear pattern and eliminates premature failure due to localised wear which would occur without this feature.

The new bearing assembly has been engineered to handle higher capacity motors and the bearing assembly shaft has a shorter overhang, which minimises deflection during operation and will increase the expected bearing life.

“The final design was based on a combination of wear component data gained through years of experience and the use of sophisticated software, including Computational Fluid Dynamics (CFD). From a wear life perspective this increase in volute life has translated into a decrease in maintenance costs for pumps users,” Gomes concludes.

WARMAN WBH SLURRY PUMP RANGE EXTENDED PIC 01 : Weir Minerals Africa's slurry product manager, Rui Gomes.

WARMAN WBH SLURRY PUMP RANGE EXTENDED PIC 02 : The Warman WBH slurry pump undergoing testing at Weir Mineral Africa's Alrode manufacturing centre.

WARMAN WBH SLURRY PUMP RANGE EXTENDED PIC 03 : The new Warman WBH slurry pump on site at a crushing plant.

WARMAN WBH SLURRY PUMP RANGE EXTENDED PIC 04 : The new Warman WBH slurry pump installed at a crushing plant.

WARMAN WBH SLURRY PUMP RANGE EXTENDED PIC 05 : Design engineers at Weir Minerals Africa working on a CFD model during research phase.

ENDS ... JULY 2015

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