FOR IMMEDIATE RELEASE

WEIR MINERALS HIGH PRESSURE GRINDING ROLL (HPGR) TECHNOLOGY ENABLES MINING OPERATIONS TO CUT ENERGY COSTS WHILE BOOSTING PRODUCTIVITY

Modern mining operations are focused on achieving 'more with less' and are therefore always on the lookout to optimise their processes, especially the major energy-consuming ones such as comminution. "Our focus is on helping customers recognise the benefit of utilising High Pressure Grinding Roll (HPGR) technology and assisting them to quantify whether payback can be achieved based on available capital," Dr. Ekkhart Matthies, Weir Minerals, Global Comminution Vice President, says.

"The key to success in our business is being where the customer needs us, which is at his operations. Providing trained service personnel and beneficiation experts result in optimisation opportunities for the customer in reducing the cost per ton of product, as well as continuing to differentiate Weir Minerals in the market. Another major opportunity lies in optimising Brownfield plants by means of the new HPGR technology, thus enabling them to treat ore more economically and effectively," Dr. Matthies says.

Extensive testwork undertaken by Weir Minerals in Germany gave the green light for dry air classification in tandem with HPGR technology. The end result is a closed HPGR circuit, which results in twice the amount of fine end product as well as much lower energy consumption compared to a traditional milling circuit.

"Conditions do have to be taken into consideration, however, and not all opportunities will be suitable. An open mind and some innovative thinking are a prerequisite. We are partnering with German mineral processing universities such as the University of Freiberg to better understand the relationship of very fine material and its moisture content," Dr. Matthies says.

The critical aspect from a customer's point of view is on-going technical support, longevity of wear components and the speed of the change-out of the HPGR rolls. "We continue to drive development in this area and believe our studded tyre technology, pioneered by KHD Humboldt Wedag, global support network and swing frame design for quick roll change-out currently surpasses our

competitors' offerings and meets all customer requirements. On top of the existing technology we always drive for more and work continuously on improvements to support the customers' needs."

Weir Minerals has long been a pioneer of such technological development, and was one of the first to market studded tyre technology, which resulted in a step change in tyre life. "We continue to tailor our product offering to better meet the needs of the market. With Weir Minerals' global footprint we can deliver wherever our customers are located," Dr. Matthies adds.

Dedicated test facilities in Cologne and Chile, with two additional ones soon to be installed in the United States and Australia, allow Weir Minerals to accurately simulate site conditions. "Here we can tweak parameters to derive optimum settings for optimised performance, without compromising production."

Weir Minerals also has an extensive service network. "This network guarantees the closest and best contact with our customers. Once the equipment is in operation, we keep on working on extending the lifespan of the wear parts. We have examples where we have doubled the lifespan by partnering with our customers and optimising the wear pattern of an HPGR roll on a step-by-step basis.

"All of this enables us to truly understand the needs of customers and work on a tailor-made solution that enables the customer to manufacture and design a flow sheet at the lowest possible cost-per-ton basis," Dr. Matthies concludes.

HPGR SHORT PIC 01A AND PIC 01B: A High Pressure Grinding Roll (HPGR) from Weir Minerals at final assembly stage at the manufacturing facility at Venlo, The Netherlands.

HPGR SHORT PIC 02A, PIC 02B AND PIC 02C: A detailed instrument and hydraulic check of a High Pressure Grinding Roll (HPGR) from Weir Minerals at a test stand at Venlo, The Netherlands.

HPGR SHORT PIC 03: Drilling of special geometry holes as the first step in the studded wear surface.

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FROM : CORALYNNE & ASSOCIATES
TEL : +27 011 849 3142
EMAIL : communicate@coralynne.co.za
WEBSITE: www.coralynne.co.za

FOR : RENE CALITZ
WEIR MINERALS AFRICA (PTY) LTD
TEL : +27 011 929 2622
EMAIL : r.calitz@weirminerals.com
WEBSITE: www.weirminerals.com