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The world's leading and only monthly magazine for the dry bulk industry

Martin Engineering: N2 technology for remote monitoring of conveyor belt cleaners

Martin Engineering is a globally renowned for technologies to make bulk material handling cleaner, safer and more productive. Since 1944, Martin® products have improved conveyor operations by minimizing dust and spillage at transfer points, removing carry back and controlling belt tracking. Martin Engineering specializes in belt cleaners, air cannons, engineered vibration, transfer point technologies, dust management and belt alignment. The company also provides specialized services such as equipment installation, process improvement, maintenance and silo cleaning.

Martin Engineering's success can be attributed to the development of practical, field-proven, cost-effective answers for 'real life' problems. All products are designed for tough industrial conditions, built to allow easy maintenance and engineered for simplicity, cleanliness, safety and efficiency.

Martin Engineering is proud to have a presence today in 19 countries across six continents, where its products and people deliver solutions to the problems associated with bulk material handling around the world. Its quality products and services provided by its team of specialists help ensure that plants are cleaner, safer, more efficient and more profitable.

Martin Engineering expanded its South African business unit with internal manufacturing operations that include welding and laser cutting operations, steel bending, urethane moulding, painting and powder coating, assembly and packaging operations. Martin Engineering incorporates lean manufacturing principles to optimize the efficiency, safety and quality throughout. 95% of products sold is manufactured locally in South Africa.

A critical element of Martin Engineering's success is its focus on training and knowledge-building across the many industries it serves. Since 1991 the company has been spearheading bulk handling training and education. Now in its fourth edition, the *Foundations™* reference book and training series have trained plant operators, maintenance personnel and engineers about belt conveyors — how the equipment works and how to make it work better. The modules include basic training, operations and maintenance, as well as advanced education. The book has become a vital component of the international training programmes developed by Martin Engineering, such as on-site workshops, online courses and certification. The online course because of lockdown has become

particularly popular for Martin Engineering's customers across Sub Saharan Africa.

The company's main focus will be growth in East and West Africa, including establishing partnerships with locally based companies and improving product support. The dedicated export division of Martin Engineering South Africa is still relatively new, and selling and working in Sub-Sahara Africa introduces many challenges, driving the need to establish local partnerships. More governments are also pushing mining companies in this direction to increase and improve business relationships with local companies.

Martin Engineering has a particular expertise in air cannons, and Smart Nozzles, because of the large cement industry found in the Sub Saharan Africa region. Smart Nozzles can be maintained, inspected and replaced from the outside the vessel or process without having to shut down operation. It also offers new technology found in the Hurricane and Typhoon air cannon valves which use far less air than any other air cannon design, while improving performance. The result is reductions in downtime and compressed air usage.

In South Africa, Martin Engineering mostly services the coal industry and customers like Sasol, Anglo & Seriti. It has established partnerships in provinces outside of Mpumalanga where it needs to grow more to diversify.

N2 TECHNOLOGY TO LAUNCH IN 2021

Martin Engineering is excited about its new N2 technology to monitor conveyor belt cleaners. This will use remote monitoring to enable customers to look after their

processing plants, ensuring safe inspection and servicing, making best use of time and resources, and ultimately maximizing uptime.

Unlike many headline-grabbing innovations, intelligent remote monitoring is not rocket science, it's not scary and it's not even expensive. Using the same wireless technology we use at home, remote monitoring systems can usually be retrofitted to existing manufacturing plant — that's why the technology is rapidly becoming a must-have to achieve productivity gains.

Traditional inspection regimes are time-consuming and inefficient. Remote monitoring resolves the problem of: equipment being located far away, so travel takes longer than the inspection; some inspections require complex procedures and supervision to ensure safe access; the whole plant needs to shut down just to inspect one specific component; or an inspection takes days to complete but no maintenance is actually needed. So inspections are often only carried out when there is a problem, which can result in unscheduled downtime, or a lack of spare parts.

Remote monitoring enables realtime, condition-based, predictive maintenance. That means you only need to physically inspect a piece of equipment when the data tells you that a service is needed or the end of life is approaching. This also has the advantage of giving plenty of time to arrange a full inspection, order the required parts, book contractors to carry out maintenance, and plan the work during scheduled downtime.

There are further positive impacts on safety, efficiency and cost effectiveness.

