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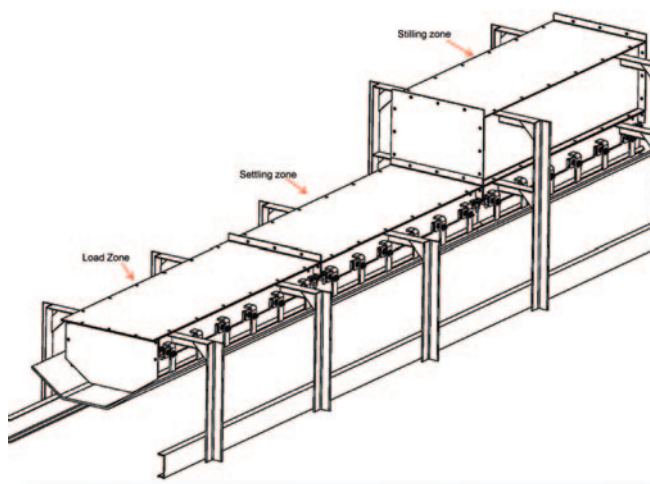
■ Dust Control Systems

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The modular system can be configured to fit the needs of the specific application.



Copyright © 2022 Martin Engineering | The Modular Transfer Point

Kit can be easily modified to adapt to changes in production.

accommodate new belt support equipment or adapt to increases in production, the chute is often raised or lengthened.

The Transfer Point Kit addresses these problems, as chute sections are 1) delivered in a single crate with every component for assembly included, 2) able to be assembled prior to the shutdown and installation, saving time and money, and 3) fully modular, making future changes easy without expensive construction projects.

The transfer point system accommodates belt widths of 18-72 in. (450-1,800mm) and an internal chute width of 9-59 in. (228-1,498mm). Each modular section is either 4 feet (1.21 metres) or 6 ft. (1.82m) long and constructed of mild steel, 304 stainless steel or 316 stainless steel, with a thickness of 0.25in. (6.35mm), 0.5in. (12.7mm), or 0.75in (19.05mm) to accommodate a wide variety of materials and conditions.

The Transfer Point Kit installation is

covered under the Absolutely No Excuses Guarantee as long as a Martin Engineering technician is involved in the installation process. Although assembly instructions are clear and easy to follow, another benefit of involving a factory-trained Martin expert is that customers who have ordered the kit have experienced a significant reduction in assembly and installation time. Moreover, once the system is started up and tested, there is a knowledgeable person on hand to offer advice on adjustments to ensure optimum performance.

“After installation, Martin Territory Managers or partner distributors are available to offer support,” Mueller added. “The feedback for the kit has been excellent. Customers get the heavy-duty Martin quality they’ve come to expect in a more convenient, efficient and sustainable package.”

Martin Engineering has been a global innovator in the bulk material handling

industry for more than 75 years, developing new solutions to common problems and participating in industry organizations to improve safety and productivity. The company’s series of *Foundations* books is an internationally recognized resource for safety, maintenance and operations training — with more than 22,000 print copies in circulation around the world. The 500+ page reference books are available in several languages and have been downloaded thousands of times as free PDFs from the Martin website. Martin Engineering products, sales, service and training are available from 17 factory-owned facilities worldwide, with wholly-owned business units in Australia, Brazil, China, Colombia, France, Germany, India, Indonesia, Italy, Mexico, Peru, Spain, South Africa, Turkey, the USA and UK. The firm employs more than 1,000 people, approximately 400 of whom hold advanced degrees.

Remote monitoring for conveyor belt cleaners launched in Europe, Middle East, Africa and South Asia

Global leader in bulk handling equipment solutions Martin Engineering has launched its innovative N2® remote monitoring system for conveyor belt cleaners in countries across Europe, Middle East, Africa and South Asia.

Designed for any belt cleaner using a polyurethane blade, the N2 Position Indicator (PI) system tracks belt cleaner performance and tells users when servicing is required via an intuitive cloud-based mobile app or desktop dashboard.

The N2 PI allows maintenance managers to keep on top of belt cleaner performance, eliminating needless

Martin’s N2 PI attaches to the belt cleaner mainframe and feeds performance data to the gateway.



inspection visits, reducing human exposure to moving conveyors and helping to increase production uptime. The N2 PI recently met all the requirements to achieve CE Marking in Europe.

Robert Whetstone, Vice President for Martin Engineering's EMEA region, said: "Martin has a long track record for outstanding innovations that keep industrial processing plants running safely and efficiently. Our new N2 system is a game-changer that combines tried and tested technologies into one easy-to-use package so users can monitor their conveyor belt cleaners remotely.

"With this smart yet simple upgrade, the technology does the legwork, providing real-time data on each belt cleaner blade to give an early indication of when servicing is needed. In the meantime, plant managers can be confident that material carryback, spillage and build-up is being controlled by the belt cleaner so they can keep the plant running to maximize productivity."

By tracking the individual performance and status of each belt cleaner, N2 PI delivers continuous, real-time feedback and eliminates guesswork. The detailed historic data also provides a maintenance log so service dates can be tracked and wear rates calculated. The result is an improved return on belt cleaner investments plus the ability to budget and forecast for essential replacement parts. Replacements can also be scheduled for just-in-time delivery helping users to better manage their inventory.

Development of the N2 PI has involved extensive technical research, as well as long-term customer trials at major material processing facilities in more than 10 countries worldwide. In the UK the system has been delivering results for more than 12 months at the country's largest lime production plant, operated by Singleton Birch.

Stuart Howden, Engineering Manager at Singleton Birch, who has overseen the UK trials from the start, said: "Martin Engineering's N2 Position Indicator is a clever system that eliminates the need for repeated visits to each conveyor belt – we will never need to go back to doing regular physical inspections of all our belt cleaners. With more than 90 conveyors across our production site, the ability to monitor our belt cleaner blades remotely is a massive advantage.

"Initial trials on six conveyors showed us that the N2 PI not only cuts inspection



The cellular gateway receives data from up to 200 N2 PI's and sends it to a cloud-based server.

time, but it also helps reduce exposure to moving conveyors and associated hazards. The Martin app shows us when belt cleaner servicing is needed, and we can arrange inspections at the end of shifts or during planned stoppages, which decreases unscheduled downtime. The app also allows us to monitor blade performance over time and budget accordingly. We now have PI's installed on 43 conveyors across our operation."



The Martin mobile app receives data from the cloud and presents it in a user friendly format.

The N2 PI can be retro-fitted to most conveyor belt cleaner mainframes that use polyurethane belt cleaner blades, or it can be introduced as part of a new installation. The battery-powered device feeds data about the performance and condition of conveyor belt cleaners to a central cellular 'gateway' unit. The gateway then sends the information to a cloud-based server, which delivers it to Martin's dedicated mobile app and desktop dashboard on a computer.

The Position Indicator itself is a small, robust and self-contained device with a proprietary grade polyurethane housing that stands up to punishing industrial environments. The device can be mounted

up to 1,000 metres from the gateway, which is located on a high part of the plant to achieve the strongest signal. The system does not require a cellular link for each PI – connection is via radio frequency enabling as many as 1,000 PI's to be monitored through a single gateway.

Supporting Martin Engineering on the technology side are two trusted Amazon Web Services (AWS) 'Internet of Things' partners. The result is a fully automated, seamlessly integrated and secure cloud-based system that delivers super-reliable connectivity.

Operating independently of any plant communications infrastructure, the low power requirements of the PI device give a projected battery life of at least two years. Only the gateway requires a constant power supply and work with a wide range of input voltages to match local standards in any country around the world.

The PI system works by recognising how much rotation of the belt cleaner mainframe is acceptable before tensioner adjustment is required. The mobile app tracks and displays blade status, remaining life, next scheduled tensioning, run time, wear rate, cleaner model, blade type and other details. Alerts are provided automatically when a blade change is required, re-tensioning is needed or an unusual condition or change is detected.

By relying on actual operating conditions instead of human judgement to monitor blade wear and tension for optimal cleaning performance, the PI maximizes the cleaner blade's usable surface area and reports with certainty when a blade is nearing the end of its useful life.