



Vostochny Port completes the expansion project

FEATURES

■ European Coal Trades

■ Hamburg-Le Havre Port Range

■ Stockyard Equipment

■ Biomass Handling

■ Self-Unloading Vessels & Transshipment Operations

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



3D model of a stacker/reclaimer at a coal terminal.

materials, which ensure a reliable, quick and efficient performance in the homogenization and storage of raw materials in linear and circular solutions, depending on customers' requirements.

TAIM WESER's stacker and reclaimer machines are designed for heavy-duty work and harsh work environments, as the equipment the company supplies for the Oil & Gas industry, that consist of fully integrated systems for handling petroleum coke and sulphur at refineries, including the entire in-house petroleum coke, and sulphur conveying, storage and stockpile systems. This way, TAIM WESER releases its customers from error and delay prone complex interfaces with a technological solution from a single supplier, all the way from the output of the material from the production area to its final dispatch.

At this moment, TAIM WESER is working on some relevant stockyard equipment installations around the world. In the Middle East; the company is in the final stage of commissioning two luffable and slewable stacker-reclaimer machines for iron ore handling, with capacities of 1,500tph (tonnes per hour) stacking and 600tph reclaiming.

In the Middle East as well, TAIM WESER is supplying a tailor-made project consisting of the design, manufacture and supply of a belt conveying system and storage system for sulphur in two circular stockpiles at a refinery. The circular storage system includes two big aluminium circular storage domes, to protect the environment with lower dust emissions, equipped each with a slewing/luffing boom stacker and a scraper reclaimer machine, cantilever type, with 150tph stacking and 1,500tph reclaiming capacities. The project is now in the assembly stage.

In Asia, TAIM WESER is working on the material handling system for the largest coal port terminal in India, once finished. The scope of supply includes three combined slewing and luffing bucketwheel stacker reclaimers, with capacities of 5,500tph stacking and 4,500tph reclaiming of coal.

TAIM WESER: INNOVATION AND TECHNOLOGY

TAIM WESER is a worldwide company specialized in the development and supply of tailor made solutions to meet today industry's challenges with tomorrow's

technologies, including i4.0 systems, virtual/augmented reality (VR/AR), remote access, data analytics, drones support as well as stockyard automation systems to improve the design and operation of machines and conveyors.

With installations in more than 65 countries and 120 years of experience, TAIM WESER provides solutions in the fields of materials handling, lifting and waste treatment.

The company's headquarters are located in Zaragoza (Spain), in a 64,000m² facility, 23,500 of which are covered and assigned to production processes. In Germany, the group has an office in Bad Oeynhausen and in Brazil, a plant in Curitiba (PR).

TAIM WESER's highly qualified technical team engages always to the development of the tailor made solutions, applying leading-edge technology to fulfil each customer's specifications.

The experience gained from a decades-long track-record delivering projects, as well as the use of the most advanced technical tools, allows TAIM WESER to offer reliable state-of-the-art technology solutions to customer's needs.

High-performance cleaner keeps stockyard conveyors in tip-top condition

INNOVATIVE STAINLESS STEEL CONVEYOR BELT CLEANER: HIGH PERFORMANCE + LONG LIFE = REDUCED OWNERSHIP COST

A new secondary conveyor belt cleaner has been engineered specifically for challenging applications where traditional designs fail to deliver the necessary performance or wear life. The CleanScrape® Secondary Cleaner (CS2) from Martin Engineering is particularly effective in conditions where continuous production is a high priority or cleaner service is difficult, including corrosive or high-temperature

environments. Typically requiring just one re-tensioning during its lifespan, the extremely low maintenance requirements and outstanding cleaning ability help reduce cost of ownership in a wide range of industries, such as mining, coal processing, quarrying, cement production, scrap and other bulk material handling operations.

An excellent solution for areas with restricted space, the unique all stainless steel design incorporates a matrix of specially-engineered carbide tips and is tensioned lightly to prevent damage to the

belt or splices. Despite extremely low contact pressure between belt and cleaner, it has been shown to effectively remove potential carryback material that was not dislodged by a primary cleaner. The carbide cleaning surfaces deliver excellent performance, and the unit's light touch helps protect against belt wear.

The CS2 can be used with any primary cleaner, but was engineered to be paired with the company's original CleanScrape® Primary Cleaner (CS1). When used together, they form a rugged, low-

maintenance system that effectively removes carryback, helping to prevent fugitive material and the associated cleanup. The system represents a revolutionary concept that delivers superior cleaning and up to 4x the service life of conventional designs, with half the maintenance. The combination has been shown to remove as much as 99% of the carryback in most belt cleaning applications. The reduced service requirements and exceptional durability deliver a low life cycle cost, while allowing crews to focus on other tasks.

“Many carbide-tipped belt cleaners require high pressure against the belt in order to be effective, and they typically need to be re-tensioned often throughout their service life,” explained Chief Technology Officer Paul Harrison. “Like the CSI, this design is extremely effective with light tension against the belt, which helps avoid the damage to belts and slices that can occur with other carbide-tipped secondary cleaners. And because it only needs tensioning once during its lifespan, the maintenance requirements are very low.”

Harrison said that the negative rake angle of the CS2 is also key to the new design. “Some manufacturers use a positive angle of attack at the secondary position, which is greater than 90°,” he continued. “That’s common in a urethane primary cleaner, which is tensioned tightly against the pulley. But using a ‘peeling’ action in a secondary cleaner can damage and prematurely wear the belt cover. It can be catastrophic on “beaver tails” (small sections of belt damage where a section of the top cover has separated from the belt carcass). With a negative rake angle and the ‘scraping’ action it provides, the CleanScrape Secondary Cleaner delivers



The new secondary belt cleaner is engineered to minimize maintenance and conveyor stoppages.

outstanding performance, while mitigating potential belt damage.”

INTELLIGENT DESIGN

The ‘free flow’ design, with an absolute minimum of exposed surface area, delivers optimum cleaning results while allowing material to pass through the arms and return to the cargo flow. The compact

system requires very little free space, and can be easily installed inside or outside of discharge chutes, while the crowned main frame compensates for cupping or wear of the centre of the belt.

The carbide blade tips have a small corner radius to protect against belt damage, and each one is supported on spring-loaded arms at both ends. The load springs allow independent blade rotation back and forth, as well as up and down. This range of motion provides equal load pressure across each blade, bypassing obstructions and conforming to ever-changing belt undulations. The unique design holds the blade in an effective cleaning position but allows the blades to retreat into a safe position for reversing belts or rollback.

“This new design is engineered to withstand high production demands in which maintenance and conveyor stoppages must be minimized,” said Harrison. “The combination of CleanScrape primary and secondary cleaners offers these customers a matched set of components that require half the maintenance of conventional designs, helping to reduce service costs and production downtime.”



The unique stainless steel design incorporates a matrix of spring-loaded carbide tips.



The CS2 typically requires just one re-tensioning during its lifespan, helping to reduce cost of ownership.

no need to enter a confined space.”

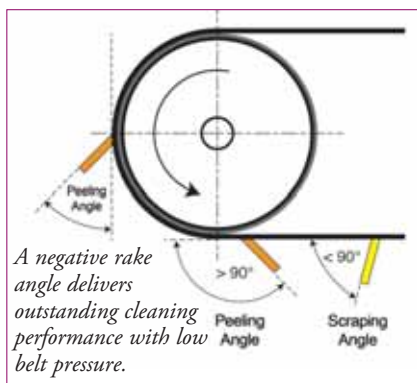
Engineered to disengage from the tensioner, Safe-To-Service designs allow the cleaner to be pulled out far enough to take out a quick-release pin and remove the assembly. Once the new unit is installed, it's simply pushed back into position and the tensioner re-engaged. The one-pin procedure makes replacement an easy, no-tool operation performed from the outside of the chute.

Both of the CleanScrape Cleaner designs meet all regulatory requirements for use in underground mining. Pre-assembled primary and secondary belt cleaners for standard belt widths are supplied ready for installation. The primary cleaner can also be supplied in coiled lengths of 12.4 metres (40.68 feet), allowing users to cut to length as needed and not have to stock multiple belt width sizes.

“The CleanScrape Cleaner System represents an entirely new dimension in belt cleaning,” Harrison concluded. “We’re so confident in the performance of these products that we provide a money-back satisfaction guarantee.”

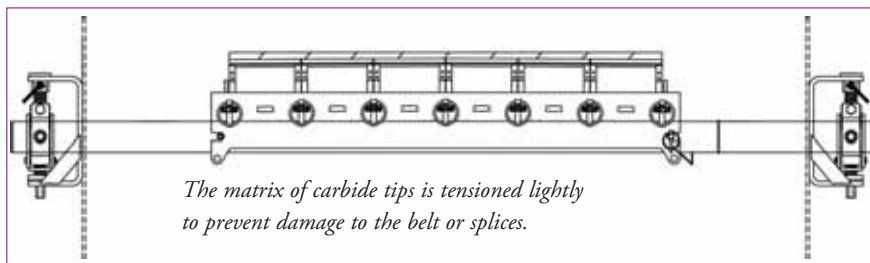
The new design will be introduced first in the USA and Australia.

Martin Engineering is a global innovator in the bulk material handling industry, 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 20,000 print copies in circulation around the world. The entire 500+ page volumes can also be downloaded as free PDFs from the Martin web site. Martin Engineering products, sales, service and training are available from 19 factory-owned facilities worldwide, with business units, subsidiaries, licensees and representatives spread out over six continents in Argentina, Australia, Brazil, Chile, China, Colombia, France, Germany, India, Indonesia, Italy, Japan, Mexico, Peru, Russia, Spain, South Africa, Turkey, the USA and UK. The firm employs more than 1,000 people, approximately 400 of whom hold advanced degrees.



unit can be specified with Martin’s unique Safe-To-Service technology — giving maintenance personnel the ability to work on the assembly safely from outside the chute wall or conveyor structure — without breaking the safety plane.

“Some plants require a confined space permit if workers are going to reach through the outer edge of the chute work,” Harrison added. “With all adjustments being made from the operator side, there is



The CleanScrape Secondary Cleaner is suitable for conveyor speeds up to 5m/s (900fpm) on belts with vulcanized splices, and up to 3m/s (600fpm) on belts with mechanical splices. Supplied with a stainless steel tensioner, it can withstand temperatures as high as 260°C (500°F). Available for any size belt in full belt widths or 150mm (6in) less than belt width, the

