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The Magazine for Coal Mining and Processing Professionals

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Mining Tires

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High-horsepower Diesels

Conveyor Cleaners



With a self-adjusting tension system, Richwood's cleaners can be located in primary or secondary positions.

Rugged Designs for Mining Applications

ASGCO, another company that specializes in material handling solutions, has a complete line of conveyor accessories including conveyor cleaners. Every material handling system, according to ASGCO, has site specific conditions that must be identified. They prefer to work with mine operators using a thorough on-site inspection to observe the operation and gather data. After the analysis, they make recommendations to improve operations.

For mining operations, ASGCO offers the Skalper MDX belt precleaner. It is designed for high-speed and high-tonnage conveyor systems in surface and underground applications. A heavy-duty, urethane blade presses against the head pul-

ley for efficient conveyor belt cleaning, and the company's unique torque cam action lever adjusts itself to remove high volumes of carryback while minimizing blade wear and wear from mechanical fasteners.

Manufactured from heavy-duty structural steel, the 3/8- x3-in.-diameter square mounting frame, with massive 14-in. abrasion-resistant urethane blade segments, individually adjust to the imperfections in the conveyor belt cover. An offset mounting tube allows the blade to angle up and into the belt to remove carryback and as mechanical splices come by the belt clean-

er the offset cam allows the mounting tube and blades to move downward away from the belt, therefore improving the life of the belt cleaner blades while not damaging or bending the mounting tubes.

The system is available with either Spring-Shoc or Air-Shoc (both are stainless steel) dual-tensioning systems to provide consistent self-adjusting pressure for optimal tension against the conveyor belt. An optional ceramic (XC) blade is available for high-speed and tonnage conveyor systems.

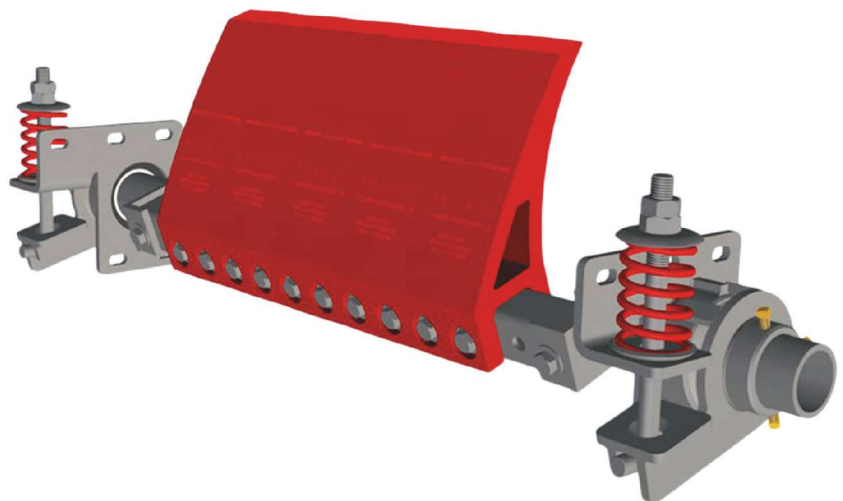
Safety is a Primary Consideration

Martin Engineering has introduced a new family of heavy-duty conveyor belt cleaner designs, engineered so the blade cartridge can be pulled away from the belt for safe access and replaced by a single miner. The Safe to Service (STS) blades secure both primary and secondary cleaners rigidly to the conveyor mainframe, while offering versatility and ease of access. Initially available for the company's line of primary and secondary cleaners, the STS external servicing system reduces confined space entry and eliminates reach-in maintenance, while facilitating quick blade replacement. The result, according to Martin Engineering, is greater safety and efficiency, with less downtime.

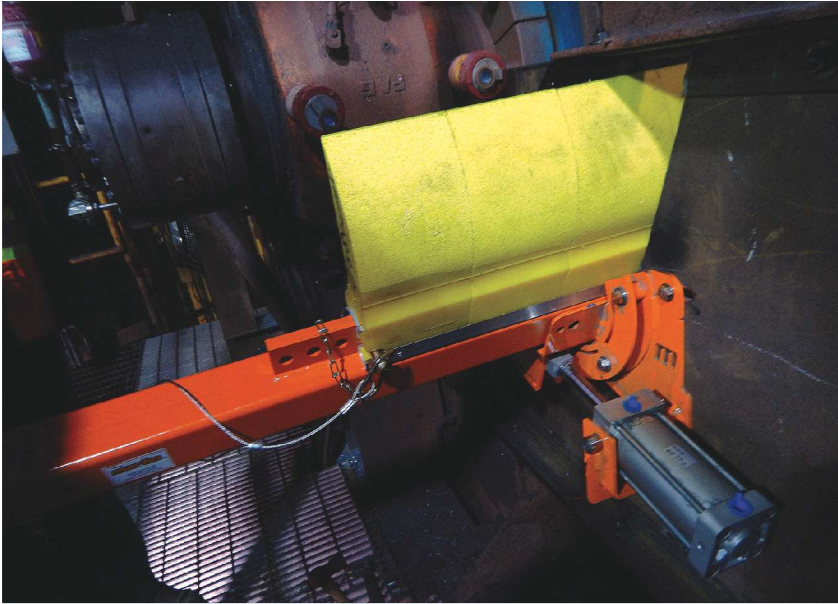
"Routine maintenance and replacement of blades that require reach-in or chute entry is an unpleasant and potentially dangerous task for workers," said Daniel Marshall, product engineer for Martin Engineering. "We developed the



ASGCO's MDX prevents carryback.



An offset mounting tube allows the Skalper MDX's 14-in. blade to angle up and into the belt.



The new STS Belt Cleaners reduce the need for confined space entry and reach-in maintenance.

STS system so operators could work on the product safely from outside the chute wall, without breaking the plane of entry.”

The system was originally developed for an international client who needed

a safer method for workers to replace cleaner blades on the company’s large conveyor system. After field-testing, operators found that the STS design lowered the chance of injury and required

fewer workers to perform maintenance, contributing to greater overall process efficiency.

Made of rigid steel, the STS manifold is a circular mandrel fitted with a square shaft on which the blade cartridge is attached. Dual tensioners separately adjust either end of the patented Constant Angle Radial Pressure (CARP) blade on the primary cleaner and the cushioned reversible blade on the secondary cleaner, for a tight, consistent seal on the belt.

Designed for conveyor speeds up to 1,200 feet per minute (fpm) and belt widths up to 120 in., the STS system is well-suited to heavy-duty applications. The rugged QC1 Cleaner XHD primary cleaning blade removes the bulk of the carryback, equipped with a polyurethane formulation to match the application. Primary cleaner urethane blades come color-coded to suit specific applications and are set in a multi-hole cartridge, allowing the sliding blade rack to be lined up with the material path for effective cleaning. The SQC2S Secondary Cleaner uses a tungsten tipped blade on a rig-

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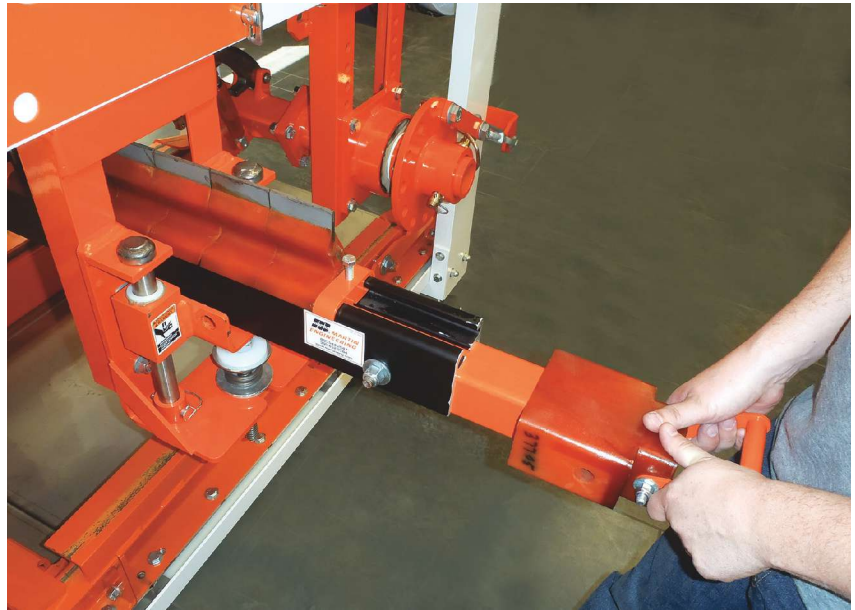
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national, a company that offers unique technology in the field of fine coal recovery. See how its Sub325® fine coal recovery system is creating a whole new revenue stream for mining companies. Visit www.somersetcoal.com

id polyurethane base or rubber buffers, which allow the system to handle belt reversals and rollback with no damage to the belt or splice.

“Part of innovation is not only better mechanical performance, but also improved workplace operations,” Marshall said. “We’ve found that, in our pursuit to engineer a safer component, efficiency naturally follows.”

The STS design eliminates many of the factors that expose workers to potential injury. To remove the blade cartridge, operators bring the conveyor to a full stop and make sure that no loose material is near the header. Once the area is deemed safe, using appropriate lockout/tagout procedures, they simply disengage the blade cartridge from the tensioner and pull it out far enough to remove the quick release pin. The blade is replaced, pin reset, rack pushed back into position and the tensioner re-engaged. A single experienced maintenance technician can typically perform the replacement, resulting in a total reduction in the man-hours invested.



External servicing reduces confined space entry and eliminates reach-in maintenance, while facilitating faster blade replacement.

“Though the STS is currently geared toward heavy-duty conveyor systems, we’re working on expanding the technology to accommodate more of our product

line,” Marshall said. “Our ultimate goal is to reduce and eventually eliminate reach-in and chute entry injuries related to blade cleaning and maintenance.”

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