## SAFE-TO-SERVICE CONVEYOR BELT CLEANER ISK AND SE UCE



The slide-out design is engineered for safe access and replacement of the blade cartridge by a single worker.

External servicing reduces confined space entry and eliminates reach-in maintenance.

BUSINESS FOCUS SAFETY

A global leader in bulk material handling technology 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 worker. Martin Engineering developed the Safe to Service (STS) blades to secure both primary and secondary cleaners rigidly to the conveyor mainframe, while offering more versatility and easier access. Initially available on the Martin<sup>®</sup> QC1<sup>™</sup> Cleaner HD, Martin<sup>®</sup> QC1<sup>™</sup> Cleaner XHD and Martin<sup>®</sup> SQC2S<sup>™</sup> Secondary Cleaner, external servicing reduces confined space entry and eliminates reach-in maintenance, while facilitating faster blade replacement. The result 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 STS system so operators could work on the product safely from outside the chute wall, without breaking the plane of entry."

## INNOVATION THROUGH NECESSITY

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 risk of injury and required fewer workers to perform

maintenance, contributing to greater overall process efficiency.

Designed for conveyor speeds up to 1200 FPM (6.1 mps) and belt widths from 18 to 120 inches (457 to 3048 mm), the STS system is well suited to heavy-duty applications faced by industries such as mining, coal handling and scrap processing. 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.

The rugged QC1<sup>™</sup> Cleaner XHD primary cleaning blade removes the bulk of the carryback, equipped with a polyurethane formulation to match the application. Primary cleaner urethane blades are 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 rigid polyurethane base or rubber buffers, which allow the system to handle belt reversals and rollback without belt or splice damage.

## FOCUS ON SAFETY

"Part of innovation is not only better mechanical performance, but also improved workplace operations," said Marshall. "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

"Although the STS is currently geared toward heavy-duty conveyor systems, our ultimate goal is to reduce and eventually eliminate reach-in and chute entry injuries related to blade cleaning and maintenance," Marshall concluded

Martin Engineering products, sales, service and training are available from factory-owned business units in Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Mexico, Peru, Russia, Spain, South Africa, Turkey and the UK.

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