

MINING

ASGCO® PRODUCTS FOR THE MINING INDUSTRY



Need Solutions...*to improve efficiency, safety and productivity?* **ask... ASGCO®**
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BELT CLEANERS

BELT CLEANERS ARE DESIGNED FOR OPTIMUM CLEAN WITH THE LEAST AMOUNT OF PRESSURE.



Retractable Razor-Back® Secondary Belt Cleaner with Spring-Shoc® Tensioner System



Skalper MDX® Primary Belt Cleaner

ASGCO®'s series of conveyor belt cleaners have been installed and have solved carry-back problems and bulk material product build-up all over the world. They are simple and highly effective belt cleaning systems.

Conveyor Belt Cleaners

Primary conveyor belt cleaners or pre-cleaners are the foundation and first step in maintaining a highly productive conveyor system. Belt cleaners help remove the material carry-back and prevent it from falling off at various points of the conveyor along the return side of the system. Carry-back causes a multitude of major problems including premature wear on conveyor belt idlers and pulleys, belt misalignment, and an unsafe working environment.

ASGCO®'s belt cleaners are specifically designed for long lasting removal of the toughest materials on the planet. The Skalper® and Super-Skalper® primary cleaners are fabricated from a single piece urethane blade for the maximum in durability. The patented E-Z

Torque® tensioning system with stainless steel torsion tensioning spring, ensures uniform belt contact throughout the life of the blade. An exterior visual indicator will alert technicians when replacement is needed, without the need to shut down operations for inspection inside the head chute. Replacing blades is a fast and easy process that can be performed in just minutes.

Razor-Back® Secondary Cleaners can be added for additional removal of the most stubborn materials. Self-tensioning blades maintain constant belt contact and can be used on belts with or without mechanical fasteners. For the ultimate in belt cleaning performance, the ASGCO® Wash Box is the perfect addition to remove the finest particulate from the belt surface and loosen any hardened material.



ASGCO® SOLUTION

Excessive buildup of material carry-back and dust from inadequate belt cleaners, resulted in increased labor for house-keeping issues and the possibility of strict fines, adding increased emphasis for this mining facility to improve its belt cleaner systems.

The Skalper® units were installed and after months of daily use, they have provided excellent cleaning along with reduced hours on housekeeping, safety issues, and wash downs. Manpower and maintenance time have also been greatly reduced.

Super-Skalper® Primary Belt Cleaner with E-Z Torque® Tensioner System

BELT TRACKING IDLERS

A PATENTED DESIGN OFFERING THE MOST RELIABLE AND REACTIVE BELT TRACKING IDLER AVAILABLE



Tru-Trainer® Urethane 96" Tapered Trougher Idler



Tru-Trainer® Urethane Dual V-Return Idler

ASGCO®'s line of Tru-Trainer® conveyor belt trackers don't rely on contact with the belt edge in order to guide it. This means that conveyor belt edge damage is avoided.

Tru-Trainer® Conveyor Belt Tracking Idlers

There are many options available to improve belt tracking, but nothing is more effective than ASGCO®'s Tru-Trainer® line of tracking idlers. The Tru-Trainer® conveyor belt tracker employs a unique and highly effective tracking action, which is non-damaging to the belt and reacts immediately if the conveyor belt begins to drift off center.

Tru-Trainer® conveyor belt trackers have no edge rollers, thus eliminating a major source of belt edge damage, which is common in conventional tracking idlers. The patented design uses a proprietary center pivot, consisting of a stainless steel pin within a solid steel center shaft. Its sealed design makes it a perfect choice for highly abrasive environments in both wet or

dry conditions, above and below ground.

ASGCO'S® Tru-Trainer® series of training idlers offer the most reliable and re-active tracking available today. Any movement from center immediately and constantly actuates the pivot to steer the belt back on line. Due to the streamlined design, the Tru-Trainer® is perfect for reversing belts and is easily installed on the return side of the system.

There are Tru-Trainer® models for any application or installation. Flat Return, Dual Return, Dual V-Return, Tapered Troughing Idler, Urethane covered and more. Regardless of the material or system design, there is a Tru-Trainer® model that will immediately improve belt performance and productivity with virtually no maintenance.

A large industrial conveyor belt system is shown, featuring a prominent red ASGCO idler roller. The roller is positioned horizontally, supporting a dark, heavy-duty conveyor belt. The background reveals a complex network of structural steel beams and other conveyor components, typical of a large-scale mining operation. The lighting is somewhat dim, highlighting the industrial environment.

ASGCO® SOLUTION

This copper mining operation had an extreme incline conveyor belt with tandem drives and a 6 pulley take-up system. Due to the nature of this drive system design, along with the speed of the belt and together with the high tonnage, severe belt mis-alignment was a serious problem.

After the installation of the ASGCO® Tru-Trainer® Dual Return Idlers centered the belt before those critical areas, avoiding the possible loss of material due to belt mis-tracking on this long high speed, high tonnage conveyor belt system. The damage has been completely eliminated with a significant improvement overall.

Tru-Trainer® 96" Dual Return Urethane Idler

CONVEYOR SAFETY

ASGCO® SAFE-GUARD® LINE OF CONVEYOR SAFETY PRODUCTS ENSURE SAFETY IN THE WORK PLACE.



Safe-Guard® V-Return Idler Cage



Sure Grip™ Belt Clamps

Our goal, to solve conveyor problems, always aware of OSHA/MSHA regulations in order to create a safer and well maintained work environment.

Conveyor Safety Products

The safety of workers is the most critical objective of any facility, and a delivering products to improve safety and reduce injury is a major focus at ASGCO®. Conveyor belts provide rapid, continuous flow of bulk material and products, but require regular maintenance to ensure maximum efficiency. Did you know that 84% of conveyor belt accidents occur during cleanup operations, due to lack of attention?

ASGCO® has developed the Safe-Guard® line of conveyor safety products to provide barriers to moving conveyor equipment and protect workers from injury. ASGCO® also has products that prevent injuries from pinch points and cages that will catch a return idler if it should fall. These products are in compliance with

MSHA Title 30, for flying or falling material, equipment guard construction and moving machine parts.

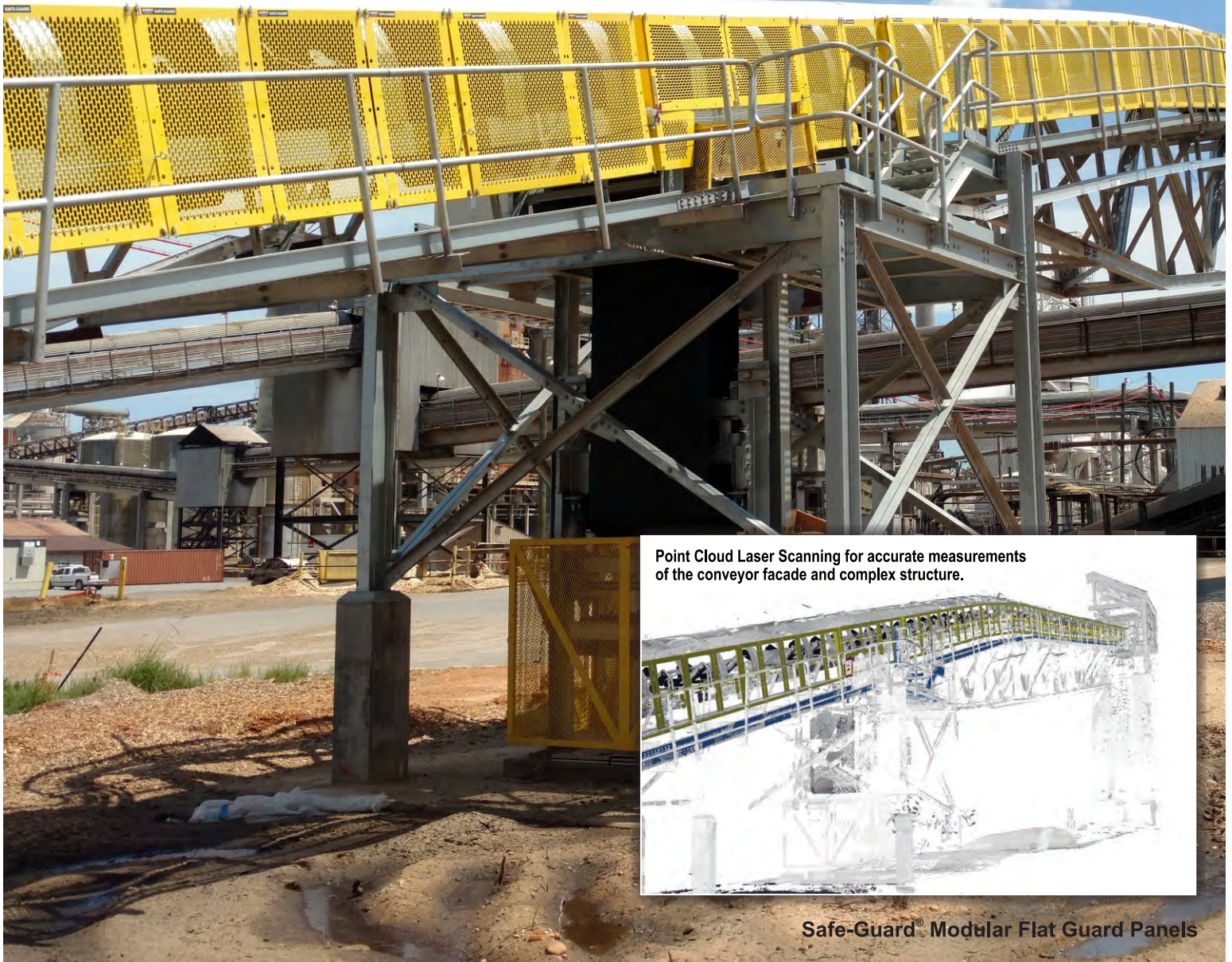
ASGCO® inspection doors are also a key addition to any conveyor system and allow operators to access primary or secondary cleaners located within head chutes, or even inspect material flow without the need to shut down the system.

Every item in ASGCO®'s Safe-Guard® line is designed for easy installation, maximum longevity and made from powder coated steel, UHMW, and stainless steel components to ensure corrosion resistance and allow for easy clean-outs. With safety and performance benefits, it's easy to see why ASGCO® Safe-Guard® products have become essential additions to so many conveyor systems worldwide.

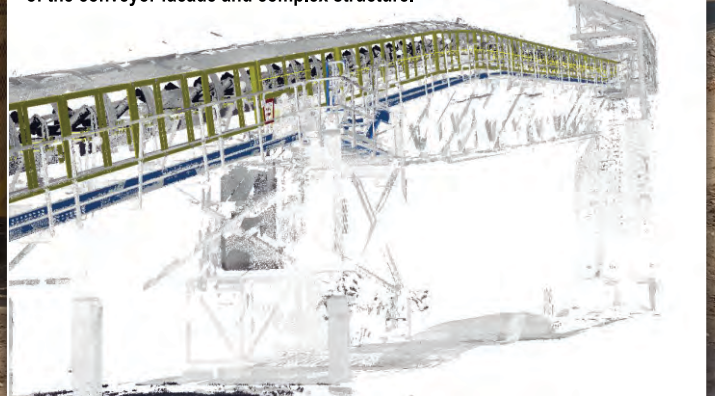
ASGCO® SOLUTION

The objective was to protect workers from all areas of conveyor systems that create a safety hazard, yet allow for easy removal of conveyor guarding, and replacement, when maintenance on the conveyor system is required.

By using various standard sizes of the ASGCO® Safe-Guard® Modular Conveyor Flat Guards, we were able to protect the hazardous areas and still allow them access as needed by easily removing and replacing the lightweight powder coated panels.



Point Cloud Laser Scanning for accurate measurements of the conveyor facade and complex structure.



Safe-Guard® Modular Flat Guard Panels

IMPACT BEDS/ROLLER CASSETTES

PATENTED DESIGN TO ELIMINATE SPILLAGE IN THE LOAD ZONE



Impact Cradle Beds



Impact Roller Cassette

ASGCO®'s patented Impact Cradle Beds are designed to provide protection to your conveyor belt from impact damage from large rocks, tramp metal, roof bolts or bucket teeth that can put a stop to operations.

Conveyor Impact Beds®

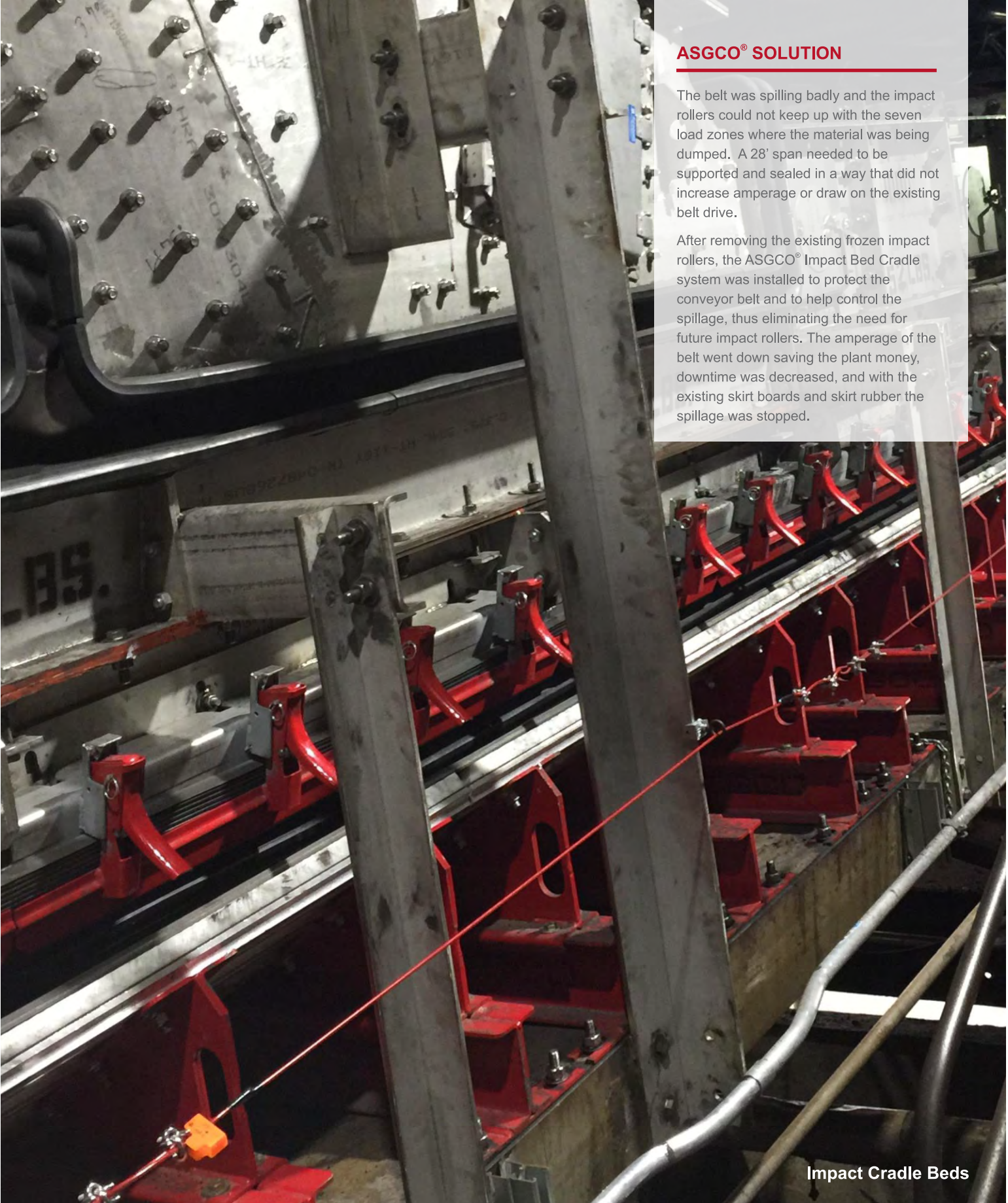
ASGCO®'s Impact Cradle Bed's™ are a patented design to provide protection to your conveyor belt from impact damage from large rocks, tramp metal, roof bolts, bucket teeth or anything else that can put a stop to operations. Our modular style beds provide impact protection for the conveyor belt, as well as a tool to help control spillage in the conveyor-loading zone. The Impact Cradle Beds™ support the conveyor belt across the entire width using our unique semi-U-shaped design that eliminates any unsupported areas between the rollers or bars where typical damage can occur in the idler junction points.

The Impact Cradle Beds™ are available in a variety of configurations for specific environments and applications. All models consist of a heavy-duty frame with removable (Slide-in or Slide-out) sides and center sections for ease of installation and maintenance.

Specialty applications can benefit from Slide-N-Roll™

Beds for an effective load support while helping to eliminate dust and spillage in the conveyor load zone. Replacing the side troughing idlers with low friction UHMW bars reduces belt friction and eliminates the gap between idlers to provide an effective sealing surface for the skirting at any troughing angle. The 3 Roll Slide-N-Roll™ Beds are the ultimate in load zone spillage control for wide, high speed and high tonnage conveyor belts as seen in below ground, above ground mining and port facilities. Our patented design encompasses a three-roller idler with low-friction UHMW bars, creating a dust free high-speed material transfer point.

Additionally, Roller Cassette™ Beds incorporate the advantages of slider and impact bars for sealing while maintaining constant rolling support for the conveyor belt in the load zone. This system also eliminates the deflection between the belt and standard impact or troughing belt idlers. No matter the material being harvested or the environment, ASGCO® has the ultimate in Impact Cradle Beds™ to improve



ASGCO® SOLUTION

The belt was spilling badly and the impact rollers could not keep up with the seven load zones where the material was being dumped. A 28' span needed to be supported and sealed in a way that did not increase amperage or draw on the existing belt drive.

After removing the existing frozen impact rollers, the ASGCO® Impact Bed Cradle system was installed to protect the conveyor belt and to help control the spillage, thus eliminating the need for future impact rollers. The amperage of the belt went down saving the plant money, downtime was decreased, and with the existing skirt boards and skirt rubber the spillage was stopped.

Impact Cradle Beds

SKIRTING/DUST CONTROL/FLO-CONTROL CHUTES

ELIMINATE SPILLAGE, DUST AND FINES AT THE TRANSFER POINT



Standard Double Clamp-Mount® Conveyor Skirtboard Sealing System



Stainless Steel Double Clamp-Mount® Conveyor Skirtboard Sealing System

ASGCO®'s skirt sealing systems and dust control products eliminate spillage, dust and fines at transfer points and provide a highly reliable seal in the load zone. ASGCO®'s 3-DEM™ transfer point design, fabrication and installation techniques optimize life on the conveyor belt by minimizing impact.

Dust Control Sealing Systems / Transfer Point Design and Flo-Control Chutes

The nature of the material being moved in the aggregate industry naturally creates high levels of dust. This dust can become a major hazard to the safety of workers as well as the performance of the conveyor system. Heavy dust accumulation can also result in costly cleanup and is subject to major fines.

ASGCO® has many solutions for both controlling dust and eliminating spillage in the load zone. ASGCO®'s Skirt Sealing systems provide a highly reliable, positive seal in the load zone. These skirts can be installed quickly without tools, using high performance clamp-mounts. Available in a variety of materials specific to the application, this skirting material is the toughest and most cut resistant available anywhere.

ASGCO® Flo-Control™ transfer point design, fabrication and installation utilizes our proprietary 3-DEM® (Discrete Element Methods) chute analysis program and provides a revolutionary way to handle granular and particular material handling problems while increasing production

capabilities. Virtual modeling technology can determine optimal chute design to maximize material flow and reduce impact in the load zone.

Improved chute design will immediately increase your production capabilities by helping to eliminate spillage, chute plugging, belt wear, dust control and noise. This will optimize life on the conveyor belt and components by minimizing impact and top cover wear by using a soft or curved chute loading design. In addition, these advanced designs minimize material spillage by center-loading the material at a uniform rate and optimizing the material flow in the direction of travel after the belt is fully troughed. This will also reduce the need for dust control and suppression by keeping the column of material together. Since air does not become entrapped in the material flow, there is less dust forced out of the material during belt loading.

These techniques are easily applied to both existing and new installations, resulting in significant cost improvements and system efficiency.



ASGCO® SOLUTION

Increased material flow naturally produces more dust and fugitive material due to escaping debris. The aggregate dust quickly accumulates creating a dangerous environment that can lead to costly repairs, downtime, injuries and fines. At this facility ill-fitting rubber skirts were causing dust and material leakage.

ASGCO® installed Slide-n-Roll® Slider Beds to support the belt, and Clamp-Mount® Skirtboard Sealing Systems with Dura-Seal® (ORG) skirting rubber to seal the dust from escaping from the skirting area. As a result dust and debris have been adequately contained allowing for a much higher level of productivity.

Clamp-Mount® MDX with Dura-Seal™ (ORG) Skirtboard Sealing System

CONVEYOR WEAR LINERS

ASGCO®'S WEAR LINERS ARE THE LONGEST LASTING, MOST COST EFFECTIVE IN THE INDUSTRY.



Armorite® Smooth Wear Plate



X-Wear® MDX Ceramic Wear Liners

ASGCO® manufactures a variety of conveyor wear liners with many options and sizes to choose from. Abrasion resistant, modular, high-wear material to line belts, chutes, and bin impact areas;

Conveyor Wear Liners

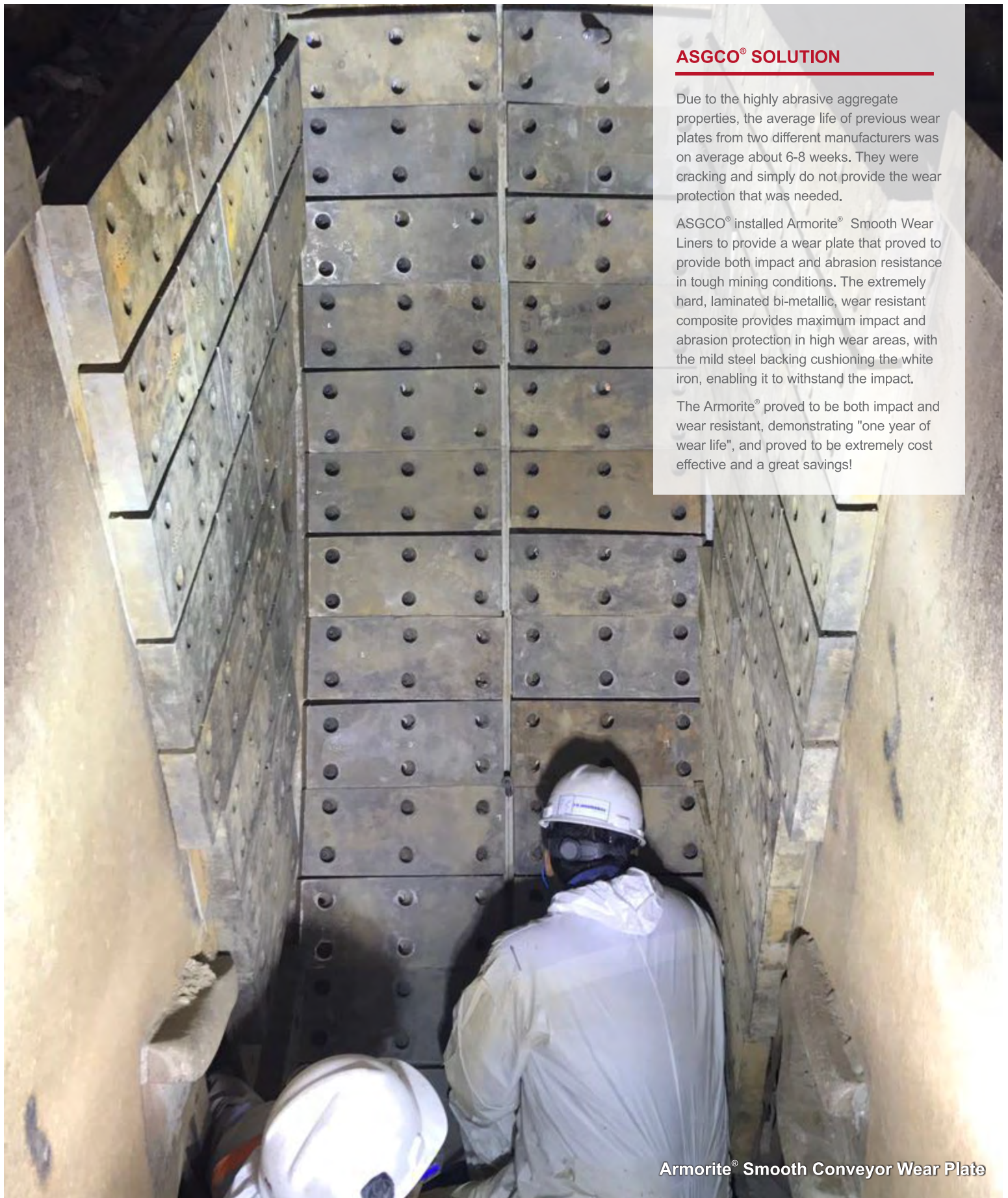
Bulk handling conveyor belts have many applications in today's mining industry. Because of their reliability, versatility, and range of capacities; belt conveyors are the most common type of bulk handling conveyor belt system. Wear Liners are designed to be an integral part of any bulk handling conveyor system.

Wear Liners are primarily designed to prevent abrasive damage to the chute and loading area, but offer a host of secondary benefits like: reducing material spillage, prolonging the life of the skirtboard and belt, as well as preventing fugitive material from escaping containment.

ASGCO® manufactures a variety of conveyor wear liners with many options and sizes to choose from. Designed to withstand the most extreme hard rock mining applications, Wear Liners are highly abrasion resistant, modular, and adaptable to any surface in the system. ASGCO® wear liner products are the longest lasting, most cost effective in the industry.

ASGCO® Armorite® is an extremely hard, laminated bi-metallic, wear resistant composite, which provides maximum impact and abrasion protection in high wear areas, with the mild steel backing cushioning the white iron enabling it to withstand impact. Armorite® is easily weldable to areas of the conveyor system with minimal preparation, providing unsurpassed resistance to abrasive bulk material wear, and it's **GUARANTEED** to Last 5-6 Times Longer than competitor's products.

For the wear and impact resistant alternative that makes steel and chromium carbide wearplate obsolete, look no further than ASGCO® X-Wear™. Years of research and development has lead our engineers to develop a unique impact and wear resistant liner which features the excellent wear resistant properties of ceramics combined with the superior energy-absorbing characteristics of rubber. These liners also provide significant reductions in noise pollution compared to steel liners and are extremely versatile and are suitable for many types of installations.



ASGCO® SOLUTION

Due to the highly abrasive aggregate properties, the average life of previous wear plates from two different manufacturers was on average about 6-8 weeks. They were cracking and simply do not provide the wear protection that was needed.

ASGCO® installed Armorite® Smooth Wear Liners to provide a wear plate that proved to provide both impact and abrasion resistance in tough mining conditions. The extremely hard, laminated bi-metallic, wear resistant composite provides maximum impact and abrasion protection in high wear areas, with the mild steel backing cushioning the white iron, enabling it to withstand the impact.

The Armorite® proved to be both impact and wear resistant, demonstrating "one year of wear life", and proved to be extremely cost effective and a great savings!

Armorite® Smooth Conveyor Wear Plate

CONVEYOR TRAINING AND INSPECTION SERVICES

ON SITE AND ON TIME 24/7/365 TO KEEP YOUR CONVEYOR SYSTEM RUNNING



Conveyor 101 Product and Installation Training



At ASGCO® our coordinated team has the capabilities to fabricate, implement, and service your equipment, always focusing on insuring your success.

Conveyor Training and Inspections

ASGCO®'s mission is to provide solutions to the most complex issues faced in the bulk material industries. Whether it's performing 24-hour emergency service or providing essential training for your employees, ASGCO® has you covered.

We understand that even short-term downtime means major loss of productivity. That's why ASGCO®'s locally trained Master Distributors are there to provide conveyor inspections, the first step in identifying possible problems and providing solutions before they develop into major issues. Routine scheduled maintenance programs are also available and provide major cost savings by addressing issues as they arise, instead of fixing more significant problems due to failure. Should you experience a more serious problem that needs immediate attention, experienced MSHA

certified service technicians are on call to help get your conveyor systems running like new with on-site and on-time fabrication to minimize costly shut downs.

The ASGCO® Conveyor Training School (ACT™) offers classes created to provide your team with the highest quality training to solve ongoing conveyor problems and maintain key components. Classes at ASGCO®'s world headquarters give your staff detailed examples on how to properly identify the most common conveyor issues such as mis-tracking, spillage and dust control. Students also get hands-on experience installing components on a full-size working conveyor. Our experienced staff will show your team the ease of installing and maintaining ASGCO® conveyor components. In addition, a custom curriculum can be developed to provide specific instruction on solving a particular problem for your facility with practical solutions.

ASGCO® SOLUTION

Inspection and Maintenance service providers maximize product output and overall conveyor performance. Routine conveyor inspection and maintenance will keep small problems from turning into major ones and insure maximum performance and increased productivity.

Our locally trained Master Distributor's know how to maintain your plant conveyor equipment and handle scheduled maintenance and emergency services.

Conveyor Inspection

