Belt Conveyor Maintenance

TECHNICAL SOLUTIONS FOR BELT CONVEYOR PRODUCTIVITY

The Need for Belt Cleaners

Why are belt cleaners important?

Efficient belt cleaning is key to optimizing the performance of your conveyor system. Clean belts last longer and help to reduce costs and downtime for repairs or maintenance for the entire system. Thorough cleaning also increases system productivity, safety, and employee satisfaction.

Are all belt cleaners the same?

Absolutely not! Cleaner design varies greatly—from simple homemade devices to sophisticated models designed for specific needs or industries.

- Precleaners are designed to work where the belt passes over the head pulley and remove a majority of carryback. Secondary cleaners, located slightly further down the line, provide additional cleaning.
- Different blades offer different levels of compatibility with mechanical and vulcanized splices.
- An ineffective cleaner leaves a conveyor system vulnerable to carryback resulting in product loss, additional labor hours, downtime, wear on the belt and other system components, and increased safety risks.

Why do conveyors need belt cleaners?

- A thoroughly cleaned and maintained conveyor system can reliably operate at 90% or higher availability.
- When properly cleaned and maintained, belt conveyors can be kept to less than 2% unplanned outages due to mechanical or electrical failures.



• According to an extensive study conducted at coal handling facilities in India, facilities that use





Secondary Cleaner

cleaners required only 50% of the maintenance necessary than at facilities without cleaners and also experienced an average of 150% longer belt life.

Problems caused by ineffective belt cleaners.

- Product is lost, maintenance requirements are greater and production is less efficient with a poorly cleaned belt.
- Without effective cleaners, conveyors experience unchecked carryback. Fugitive material is released all along the conveyor, so clean up must be done along the entire length of the system. This increases man hours, downtime, and risks. In fact, according to MSHA, 39% of conveyor related accidents occurred while cleaning or shoveling around the conveyors.*
- Carryback also causes the belt, splices, and idlers to experience excessive and premature wear.

*Based on a report entitled "Powered Haulage Conveyor Belt Injuries in Surface Areas of Metal / Non-metal Mines 1996-2000," by Harvey Padgett, a mine safety and health specialist.

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Belt Cleaning Systems

Many applications will require more than one belt cleaner to do a satisfactory cleaning job. A typical system includes a precleaner, one or more secondary cleaners, and many times, a final specialty cleaner for water removal.

Key to good belt cleaning is proper cleaner selection for the application, correct installation, and regular service maintenance. Partner with your local Flexco team to select the right belt cleaning products and get the best possible performance from your operation.



Precleaners

- Typically cleans off up to 80% of the initial carryback
- Mounted on the head pulley, below the material flow
- Blade is always narrower than the belt width



Secondary Cleaners

- Removes sticky fines the final cleaning job with cleaning efficiencies up to 90% or more
- Typically mounted just past where the belt leaves the head pulley and anywhere down the beltline
- Blade width is always the belt width or wider

240 Macpherson Road • #02-01 • Singapore 348574 Tel: +65-6484-1533 • Fax: +65-6484-1531 • E-mail: asiasales@flexco.com

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