



Whitepaper

## **Cleaning the Cleaners - A healthy Conveyor System begins and ends with Cleaning and Maintenance**

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Belt conveyors are an integral part of almost any plant in the base materials industries. Their function is of paramount importance for the entire plants.

Following you'll find the "Why's" and "How to's" for an effective conveying plant.



In aggregates business, for example, equipment is subjected to harsh materials and weather. (Pictures: © Flexco)

When you buy a product, you expect it to perform as well on day 365 as it did on the first day you installed it. You don't have time to spend wondering if or when it will break, and you certainly don't have time to buy a new one. The truth is that

maintenance can make all the difference with equipment, and this is especially true with belt conveyor cleaners. Belt cleaners are an important part of keeping systems clear and running. But while the cleaners are busy maintaining your belt, what are you doing to keep your cleaners running smoothly?

## **Maintaining Belt Cleaners**

Over the years, advances in belt cleaner technology have not only made them easier to use, but also easier to maintain. Maintaining cleaners enhances the performance of the actual cleaner as well as the other components in your system. Keeping an eye on the cleaners also extends the life of the cleaners, the belt, and your splices. Properly maintained cleaners are less likely to cause damage to belts and fasteners in comparison to cleaners that are installed and ignored.

## **Your Cleaners, Your Budget**

Cleaning the Cleaners – A healthy Conveyor System begins and ends with Cleaning and Maintenance – Carryback costs can affect your overall budget multiple times. Well-maintained belt cleaners help reduce carryback significantly.



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You would be hard-pressed to find a business in the world that isn't trying to cut costs in this economy. That's why it's more important than ever to maintain the systems you already have. There simply isn't money in the budget to replace something if it breaks, or time to withstand a major shut-down that could have been prevented.

Carryback costs, for example, can affect your overall budget multiple times. Maintenance costs, along with safety costs top the list, but the cost of the material wasted and the housekeeping costs to remove the material can also be pricey. CEMA (Conveyor Equipment Manufacturers' Association) conservatively estimates carryback to be as high as three tons per week, given a 60-inch-wide belt traveling at 800 feet per minute. Over the course of a full year, that adds up to 150 tons of material for only one belt.

Poor belt cleaning also contributes to after-the-fact maintenance costs related to belting, pulleys, idlers, etc. While good maintenance and quality replacement parts cost a little more up front, they can be worth it in the long run.

## **Maintaining Your Cleaners**

When approaching cleaner maintenance, there are three simple principles to remember: Clean It, Inspect It, Tension It.

**Clean It** – It may sound obvious, but the first rule of thumb with cleaners is to remove any debris from the blade and tension springs. Tensioners can't do their jobs with debris stuck in them and removing material build up from blades will make them much more effective. Plus, a dirt free cleaner is much easier to inspect.

**Inspect It** – A simple visual inspection can do wonders for a cleaner. You can check to see that everything is in working order and replace any damaged components. When it comes to your blades, inspect the visual wear lines to ensure that the blades have not reached the end of their lives. As you inspect the blades, make a note how close you are to complete wear and the approximate amount of time it took to get to that point.

**Tension It** – Tension the blade to accommodate the blade wear. This is done quickly and easily by referencing the tension check decal and measuring the tension spring to ensure the blade is properly tensioned.

## **Complete Maintenance Plan**

It's important to think of cleaner maintenance as a plan, instead of a specific task. In addition to regular maintenance, there are two other aspects that can enhance the performance of your belt conveyor system – quality of products and replacement parts.

Choosing the right products and replacement parts is integral, not only to your cleaning system, but to your entire conveyor operation. Taking the time to consider factors like blade life, the material path of your product, and the ease of a tension check will save you time and money.

Look for a blade with a long wear life. Oftentimes, this is determined by the material from which the blade is made. FLEXCO customers can choose between urethane, which is gentle to the belt and economical, or durable, high-performance carbide metal. Keeping an eye on the path your material actually takes on your belt can also save your cleaner. A blade that follows the material path is the most efficient because it wears evenly, instead of wearing in the center. Utilizing a blade that covers only the material path boosts cleaning performance and extends the life of the blade.

When it comes to visual tension checks, the philosophy is simple. The easier it is to check the tension, the more it will be inspected by the crew. Over- or under-tensioning the blade can lead to shortened blade life, as much as 20 per cent less. Improperly tensioned blades compromise cleaning efficiency and blade life, putting a dent in the budget.

## **A Complete System**

In a belt conveyor system, a myriad of products are working together toward a common goal – to keep things moving and get the job done. While belt cleaners are a small part of a much larger system, a healthy conveyor system begins and ends with cleaning and maintenance.

Consider your entire system when putting your belt cleaner maintenance plan into effect. It's a good rule of thumb to inspect and perform maintenance on your conveyor system components as part of an overall maintenance plan. After all, being proactive can save you time, money, and a headache down the road.