INSIGHTS™
Belt Conveyor Maintenance
TECHNICAL SOLUTIONS FOR BELT CONVEYOR PRODUCTIVITY

The Importance of a Good Splice

In a conveyor operation, the fasteners holding the belt together are just a small piece of the production puzzle. So it's not uncommon for there to be pressure to get repairs done as quickly as possible to limit downtime and get a system back up and running again. And while some crews have enough experience to install a good splice blindfolded, corners often get cut, resulting in a bad splice.

Why does a good splice matter?

You may be thinking that as long as the fasteners are holding the belt together and the material is moving along, the splice is just fine. And you may even wonder what the big deal is when it comes to installing a good splice. The big deal is that good splices will run longer, which ultimately leads to minimizing downtime. The longer the splice lasts, the less time your operation is at a standstill. Other than affecting the overall life of the splice, some of the biggest problems that can occur with an improperly spliced belt include mistracking and damage to other conveyor components.

What to look for in a good splice

How do you even know if a good splice has been achieved? Well, there are a few things to look for when examining a splice and the splicing process:

A squared belt

This is the most essential part of a good splice. If the belt is not square when it is cut and a splice is installed, there will be uneven tension across the width of the splice. Since the tension is higher on one side of the splice, the belt will wander, causing mistracking. Not cutting a belt squarely can also cause the hinge pin to migrate out of the splice. If you see hinge pin migration, chances are that the belt was not cut squarely.

A smooth fastener transition

This assessment is especially useful if there are cleaners on the belt. Skiving involves taking off some of the top cover of the belt to create a low profile and make the fasteners more compatible with the cleaners, encouraging a longer life for both the cleaners and the fasteners. If the

top cover of a belt is greater than 3/16", skiving is always recommended. Skiving does not affect the strength of the belt or the splice because only the top cover is removed, which does not affect the carcass. Deeper penetration of the fastener teeth into the belt carcass can also reduce return idler noise, minimize wear on idler bearings, and eliminate impact with skirting material.

Type of fastener

Depending on the type of belt you are running and the materials you are conveying, you'll want to make sure you are choosing the correct fasteners for the job. Selecting the proper fastener involves taking three primary factors into consideration – belt tension, belt thickness, and pulley diameter – and then working from there to choose metals and hinge pins based on other factors like environment, application, and the type of material being conveyed. Proper fastener selection can even include deciding whether to choose hinged fasteners (good for small diameter pulleys because they reduce the pull at the joint) or plate fasteners (promote long wear and a sift-free splice).

Belt pucker

A quick look at the finished splice should reveal little to no space between the fasteners and the belt. This means that there is less of an opportunity for the conveyed materials to get trapped and cause wear on the fastener. This also promotes the longevity of other components, such as cleaner blades and idler rollers, which come in contact with the belt at the splice point.

INSIGHTS™

Belt splicing solutions from Flexco

Flexco offers a variety of maintenance tools that will help you and your crew install the best splice for your belt.

900 Series* Belt Cutter

Designed with operator safety in mind, our 900 Series* Belt Cutter features a totally enclosed blade that provides accurate cuts while preventing on-the-job injuries. The robust blade design is guided at the top to ensure perpendicular cuts, while a cambered bottom beam provides uniform clamping force across the belt width.

* Patent pending

Electric Belt Cutter

A fast, safe belt-cutting solution, our power-assisted Electric Belt Cutter can handle all types of belting — from the softest of natural rubbers to the hardest constructed solid woven PVC and fabric-plied belts. The cordless versions allow maximum portability and convenience.

FSK™ Belt Skiver

For a safe, easy way to remove belt top covers, Flexco offers our lightweight FSK™ Belt Skiver. The simple, manual operation precisely removes top covers in a single pass with an adjustable fence for the appropriate fastener size. The skiver adjusts easily for cutting depths from 1/16" (1.5 mm) to 3/8" (10 mm). Front drive rollers aggressively grip the belt at the start of the skive to prevent slippage.

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