

The Importance of Belt Cleaner Tensioning

Why is belt cleaner tensioning so important?

Without correct tensioning, the performance of the belt cleaner is seriously compromised, directly affecting conveyor system efficiency. Maintaining optimal tension on belt cleaner blades provides more efficient cleaning, while protecting the belt and reducing carryback. Proper tensioning leads to thorough cleaning, which increases system productivity and safety.

Over-tensioning can result in a number of problems:

- Excessive friction and vibration with urethane blades can create internal temperatures up to 250°F. Hysteresis and thermal changes can cause over-heating in portions of the blade, which can result in blisters and melting.



Urethane blade damage from friction and thermal changes

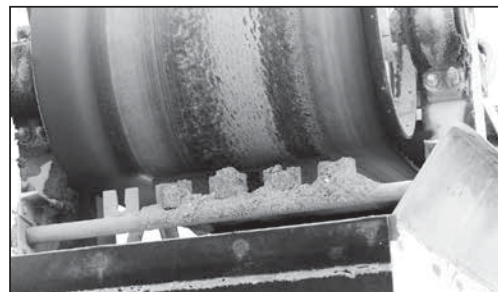
- When tensioning is too aggressive on metal blades, they experience an excessive rise in temperature. This heat is easily transferred to the belt. When the belt stops, the metal blade can actually “melt” the belt, burning through the top layer of belt material.
- Over-tensioning does not improve belt cleaning performance and can actually reduce belt cleaner efficiency.

All these factors increase the need for maintenance and repairs as well as added labor cost to clean up around the conveyor.

Under-tensioning can result in a number of problems:

If the cleaner lacks proper tensioning or maintenance processes are inconsistent, these problems may occur:

- Bouncing or chattering of blades.
- Reduced cleaner efficiency from buildup on the cleaner.



- Excessive carryback, which causes mistracking of the belt.



- Material can build up on the surface of the belt, making the belt abrasive and increasing blade wear.
- Material buildup causes the top cover of the belt to wear too. Worn top covers are harder to keep clean.

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At optimal tensioning:

- Belt cleaning is at its most efficient.
- Blade life is maximized.
- Wear to other belt conveyor components is minimized.



Belt cleaner tensioning maintenance is key.

All cleaners require maintenance, especially tensioning. Regular observation and tension checks allow you to make the adjustments needed to keep your belt clean, productive, and safe. Choosing a tensioner that makes checking and adjusting the cleaner convenient and easy helps ensure optimal cleaning.