



MSHA's Accident Prevention Program Safety Idea

**SAFETY
IS A
VALUE!**

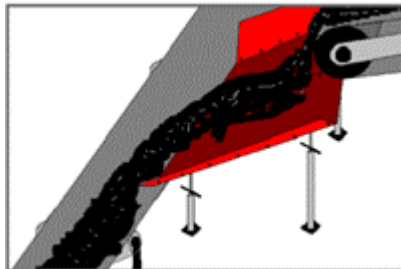
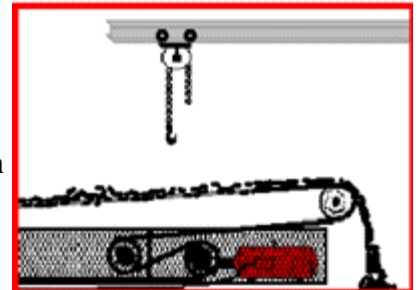
Conveyor Belt Installations

Category : [Back Injuries](#)
Mine Type: [All Underground](#)

The following back saving tips are for the installation of conveyor belt systems. The source is based in coal mining, but the applications can be adapted for other underground mines. Surface mines and plants may also find them useful.

"I-beams for Lifting"

When constructing permanent conveyor belts that will last years or even for the life of the mine, install an I-beam or monorail above both the head drive and tail piece. This will allow a crane, hoist or come-a-long to aid in removing and replacing motors, rollers, chutes, etc. Installing access doors in drive enclosures is also a real time saver.



"Chute Design"

Chutes for section transfer belts need to be strong, but they can also be reusable and portable if they are made modular. It can save time and effort to have the pieces numbered for easy assembly and can also eliminate cutting and welding. The transfer chutes can be built with screw jacks so that two miners can handle the entire setup and assembly.

"Splicing Station"

Establishing a "splicing station" on a main belt line is a great time saver. The ideal location has:

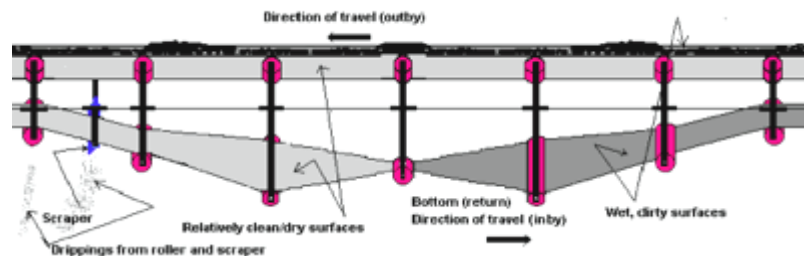
- Adequate height and width (may require prior planning on the mine map)
- Location near the belt take-up and starter box
- Adequate lighting
- Storage area for tool and splice kits

For maintenance records, belts and splices can be marked or branded with the installation date when

they are placed into service.

"Belt Cleaning"

Because water is necessary to reduce dust, freshly mined coal is wet. When coal is transported on a belt conveyor, the wet coal sticks to the belt surface. When dumped at the end of the conveyor onto another belt or into a bin, a fair amount will stay on the belt and get carried on the underside of the bottom or return belt. A belt scraper near the head will take off a good amount of the coal sludge, but enough of the sludge will resist the scraper and travel down the belt line. As the sludge dries, it is loosened as it rides over the bottom idler rollers creating little piles of coal under each roller. A simple way to reduce these piles along permanent (long-life) belt installations is to turn the bottom belt over 180 degrees right after the head drive and flip it back over at the tail. This will allow the clean, under side of the top belt to become the under side of the bottom belt. The sludge is carried on top of the return belt and is not dropped until it is flipped back over at the tail. This allows easy clean-up in a single area rather than a multitude of little piles the entire length of the belt line. This type of installation does require very specific engineering assessment, adequate height, and a measure of fine tuning.



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Remember - Safety is a Value that you can LIVE with!