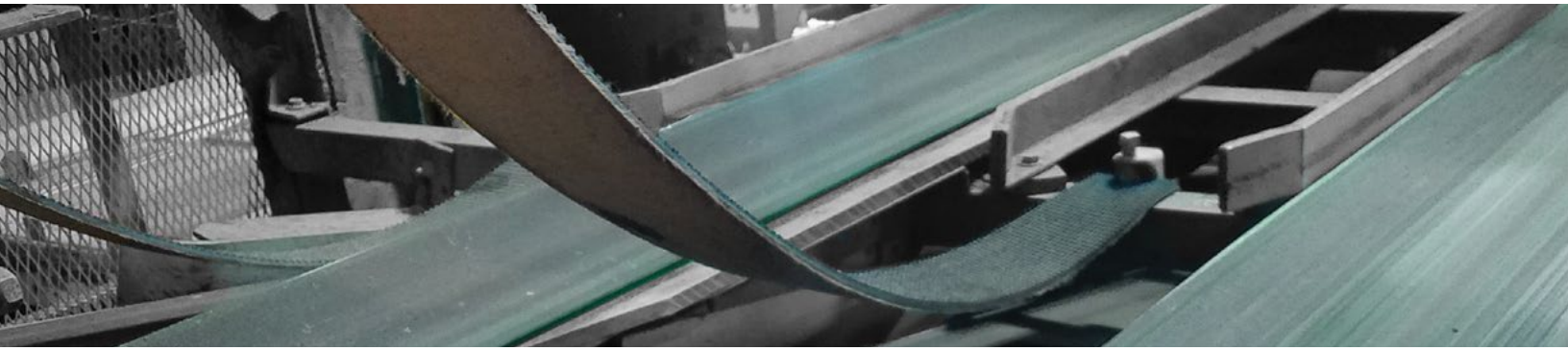
SHINGLE LINE PRODUCTION

CASE STUDY



PROBLEM

GRIT

An East Coast-based building materials manufacturer, with revenues of over $3 billion, was looking to improve common belting issues in their shingle production facilities throughout the US. Roofing plants commonly struggle with losing belts due to mechanical fastener failure. In most cases, the belt carcasses remain intact; failure results from shingle grit wearing out the bottom of the mechanical fastener plate that runs across the slider bed.

SOLUTION

HOMOGENEOUS BELTING

Mi Conveyance Solutions worked with the manufacturer to install a variety of Volta homogeneous TPE belts to multiple applications and production stages throughout their facilities. These belts eliminated the need for a mechanical fastener, and instead utilized a butt weld — where the ends of the belt are fused together.

SEEING IS BELIEVING

One of the installed belts, a Volta FEZ Smooth x Embossed, started at 4 mm and four weeks later was still 4 mm thick! Another belt showed wear, including a large puncture; the customer chose not to change the belt to see how long it would run, and seven months later it still had not failed. Throughout the seven months, there was no need to re-tension or re-weld any belts. Previously, the manufacturer had tried a three-ply blue roughtop and four-ply transmission belt, but each typically lasted about a week.

Elsewhere in the facility, Mi Conveyance Solutions identified six additional belts that only lasted six or seven weeks, and also experienced belt failures at the mechanical splice. A Volta FRGZ Green Smooth x Fabric belt was installed and after nine months, still had not failed. A Volta FRL Brown Smooth x Fabric belt also proved superior.

LONGER LIFE & MORE PROFIT

Having to change belting weekly forced the manufacturer to make large investments in belt replacements and required a minimum of four man-hours per week. The manufacturer completed a cost savings analysis on the first line and calculated a total annual materials cost savings of $80,000. The additional installed belts created a further annual cost savings of over $13,000, while also reducing bimonthly replacements of shafts and bearings.

KEY POINTS

- Eliminate lacing by fusing belts together with a butt weld
- Applications requiring guides have a stronger bond, due to welding directly to the urethane
- Belts can be ordered in specific lengths, or bulk rolls that can be cut to required length
- Available in various styles and thicknesses
- Can be welded and ready for use in 10 minutes or less
- Cleaning shingle grit from the system is highly recommended to ensure longer life

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