

Flexco® 190 MegAlloy® Fasteners Repair Rip at Midwest Aggregates Plant

Industry

Crushed and broken limestone, ready-mixed and other concrete products

Application

Incline belt leading to scalping screen

Product

Flexco® 190 MegAlloy® Top Plates

Objective

Repair rip quickly with little downtime

Conveyor Detail

Belting: 1219 mm (48") wide, rubber belt, approximately a year old

Configuration: 15-degree incline belt

Typical Load: Large limestone and concrete products.



Problem

A major rock quarrying operation in the Midwest experienced a work-stoppage after a plate of steel fell out of a receiving hopper and jammed into the corner of the conveyor. Before the crew could react, the sharp triangle tip ripped the incline belt. The year-old belt had been in good condition until the 104 m (340-foot) rip caused it to stop, bringing activity to a halt in the plant. Replacing the new belt would take too much time and was not in the quarry's budget. Since the 1219 mm (48") belt had already lost 457 mm (18") of width, the only solution was a mechanical fastener rip repair.

Solution

Flexco® 190 MegAlloy fasteners were ordered to stitch the middle of the belt together. First, workers cut out 457 mm (18") of belt to ensure that the belt they were working with was fresh belt with no possibility for additional rips. Several workers then pulled the belts side-by-side and placed the 190 fasteners approximately 76-101 mm (3-4 inches) apart for the entire length of the belt. More than 1200 Flexco fasteners were used when repairing the belt. The repair team used 13 mm (1/2") square drive impact tools, HW1 wrenches, HP1 punches, and 110 bolt breaker tools to speed installation of the fasteners.

Result

The entire repair job was completed in only three days by a crew that was on hand, avoiding further downtime. While the belt width is slightly narrower, the operation is back up and running, carrying stone up the incline to the scalping screen. The choice of MegAlloy fasteners is beneficial to the quarry as the hardened steel is highly resistant to wear and abrasion, making it perfect for an aggregate application. The quarry also saved an average of \$35-\$40 per foot, approximately \$12,000, by repairing the rip with fasteners as opposed to purchasing new conveyor belting.