FLEXCO

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Application Profile

Iron Ore Mine Increases Roller Longevity with Flexco CoreTech™ Nylon Rollers

Industry
Iron Ore

Application
Crusher Feed Conveyor

Product
CoreTech™ Nylon Rollers

Objective
- Decrease downtime
- Increase roller wear life
- Decrease belt wear
- Fix mistracking issues

Conveyor Detail
900mm belt 2.5mps

Problem:
An Australian iron ore mine was constantly struggling with their steel rollers. The main issue was the short wear life of the product. As the roller casing was quickly wearing out, the bearings were also prematurely failing – mainly due to rapid wear of the bearing seal. This resulted in a "pizza cutter" effect, where the seized rollers would cause severe damage to the bottom cover of the conveyor belt.

The secondary issue, was that the ore product was constantly sticking to the roller shell. The build-up of product was causing severe tracking issues and contributing to further wear of the belt.

Solution:
After assessing the challenges faced by the mine, Flexco and a local Flexco distributor encouraged the maintenance team to try Flexco CoreTech™ Rollers. The rollers are made from extruded nylon, so material easily sheds off the roller instead of creating a build-up. The rollers also feature a centrifugal seal with static ends, meaning even if the roller did fail, the bearing would not actually cut through the belt. The site agreed to a trial period on one conveyor.

Result:
Over each shutdown, the CoreTech rollers were monitored for wear and failures, with photos taken as a record. The site was so impressed with the results on the trial conveyor that they proceeded to switch out the steel rollers on another two conveyors with the CoreTech rollers as well. None of the rollers failed due to wear, and a full-site roller change-out is scheduled in the future.

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