Product HiLites

Load Cells
Used By Maker of High Strength Conveyor Belts

Whether a mine produces coal, iron ore, copper, or gold, it begins as a pile of rock which must be processed. Removing tons and tons of raw, ore-laden rock from a mine deep in the earth is a huge undertaking, but that's only part of the story. After it has been mined, moving the ore to where it can be loaded into trucks or railcars for transportation to processing facilities is just as challenging.

The new generation of heavy duty steel-cored conveyor belt is able to efficiently move the ore and deposit it almost anywhere. These belts are longer and stronger than ever before; often 6 feet wide and 1,000's of feet in length, and are designed for optimal strength and rigidity under the immense loads of the mined material.

In order to build these high-tech belts, strands of stainless steel are braided into strong cables which are positioned in parallel and held in tension as the belt is formed around them. This manufacturing process requires constant monitoring of tension forces during the molding process through the final curing of the belt to insure the proper bonding between the cable and the belting.

To monitor, maintain, and adjust the tension on the cables during manufacturing requires an extensive sensor network. Stellar engineers designed a series of Model MIN830 1,000 lb load cells with a custom mounting plate to incorporate into the process. The load cell and the mounting plate were tested and factory-calibrated as an assembly, making drop-in installation quick and easy. These compression load cells provide 4-20mA output and are vibration and shock protected. Another example of a sensor application solution from Stellar Technology.

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