

Siemens Belt Scale Helps Inventory Control



A leading aggregates producer and heavy building materials company processes aggregates for concrete pipe, asphalt, bricks, and ready-mix concrete. They provide the processed aggregates in bulk for use in construction projects.

Challenge

Once the aggregates are processed, they are moved to stock piles for storage. It is important to know how much inventory is on the stock pile for scheduling plant production and inventory cost control. Previously, inventory of the company's stock piles was measured by a "fly over". A "fly over" is when the customer authorizes a pilot to fly over an inventory pile in order to take extremely high resolution photographs. The photos are used to determine topography and size of the inventory pile. The customer can then use this information to determine the amount of weight (tons) on the pile. In addition, they may drill holes in the piles and take samples at various depths. The customer can then use the samples to determine the bulk density of the material at different levels.

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Because the fly over method is costly, it is typically done only one or twice a year. Because of this infrequency, the accounting department often must adjust the books to show that there is more inventory in stock than needed, or they may have to write off inventory so that the accounting books show what is actually in stock. From an accounting standpoint, either situation represents additional costs. If the fly over shows more inventory than estimated, they have the additional inventory cost. If the fly over shows less inventory than estimated, they have to write off the additional inventory.

Solution

The company recently installed a Siemens Milltronics-brand MBS belt scale to measure the screened aggregate materials as they are moved to stock piles for storage. The scale is installed on the conveyor that moves the aggregate to the stock pile. The tonnage put on the stock pile is measured by the scale. Another scale is used to measure the material as it is removed from the stock pile. The difference between these two measurements is the amount of material still in inventory.

Benefits

With the belt scale installed, stock pile inventories are now measured in real-time, preventing costly inventory adjustments after the "fly over" is done.

The Siemens MBS belt scale provides instantaneous response to vertical loads without the need for pivots and check rods. All Siemens Integrators, used with the belt scales, employ electronic load cell balancing which provides accurate measurements, even during off-center loading conditions.

The MBS scale is quick and easy to install, using only four bolts. It is supplied ready to set up. The MBS scale is suitable for most conveyor widths and standard idlers due to its modular design and no cross bridge construction. It is compatible with the Siemens-Milltronics brand of integrators that offer indication of flowrate, totalized weight, belt loading, and belt speed, complete with patented electronic load cell balancing.

Basic Belt Scale Package

The Siemens Milltronics-brand MBS is a basic, modular, medium-duty belt scale providing dynamic weighing information for process indication.

The Siemens Milltronics-brand BW100 offers indication of flowrate, totalized weight, belt loading, and belt speed for process control, as well as a programmable analog output and one programmable contact relay.

The Siemens Milltronics-brand TASS is a compact, low-profile, wheel-driven return belt speed sensor.



Basic scale package for dynamic weighing applications at minimal cost.