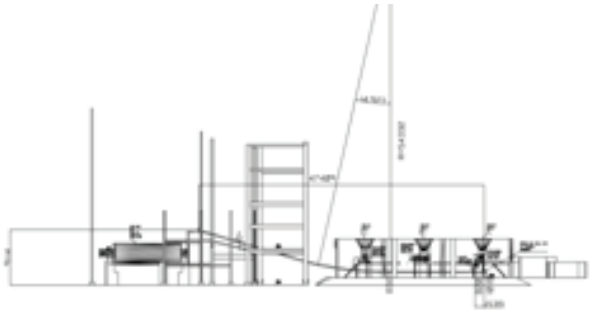
PROBLEM SOLVED™ PAPER

SOLUTION: Martin® Air Supported Conveyor

INDUSTRY: Cement

LOCATION: San Miguel, Guatemala



Cementos Progreso's Planta San Miguel required an improved conveyor to activate previously idled storage.

The Martin® Air Supported Conveyor installed at Cementos Progreso was engineered with a vertical curve in the center third of the conveyor's 156-foot (47.7-m) length.

The totally enclosed air conveyor was retrofit onto the structure of an existing but idled belt conveyor.

PROBLEM

As it reactivated a previously idled section of the plant, Cementos Progreso needed to upgrade the conveyor to carry clinker from storage to its grinding operation, while minimizing the escape of spillage and dust.

In addition, the conveyor needed to include a vertical curve in the center of the conveyor. The first one-third of the conveyor's 156-foot (47.4-m) length is flat, where the belt runs under the belt feeders that pull material from three clinker silos. The middle section is curved to reach a height of roughly 7-feet (2.1-m). The final section of the conveyor is inclined to raise the load to its discharge height of approximately 26-feet (7.9-m).

SOLUTION

Utilizing the Martin® Air Supported Conveyor, its modular design retrofits easily onto CEMA-standard conveyor structures, allowing the upgrade of the key portions of the existing belt conveyor. The enclosed plenum design allows airborne dust to return to the main material cargo without escaping to the outside.

For the conveyor's vertical curve, the air supported conveyor's unique design allowed the modular sections of the conveyor to be mitered to form a smooth arc.

RESULTS

The 30-inch (762-mm) air-supported conveyor system carries clinker at a rate of 340 tons per hour at 225 fpm (1.1 m/sec). Supported on its return side by conventional rollers, the conveyor is loaded by three feeder belts pulling material from storage hoppers. Cementos Progreso officials are pleased with the performance of the air supported conveyor and have purchased a second air supported conveyor system for the plant.

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