FEECO INTERNATIONAL

Project Profile: Rotary Dryer for Silica Fume

PROCESS

A specialty cement additive manufacturer wanted to increase production capacity of their existing products and commissioned FEECO to assist in the design of the rotary dryer with dust collection system at their new plant in this effort.

FEECO engineered a custom rotary dryer and dust collection system designed to dry 17.5 TPH of silica fume from a maximum of 30% moisture content to less than one percent.

The dryer, which ran on natural gas, employed a custom combustion chamber and utilized the co-current air flow configuration to avoid the potential for product over-heating, due to the critical nature of ensuring product integrity.

The drum itself was 6'-6" in diameter by 30' in length and was constructed from A36 steel. Due to the abrasive nature of silica fume, the entire drum was lined with AR400 liner plates that could be easily changed out in the event of abrasive wear. Flights were also constructed of AR400 plate and designed for easy replacement in the event of excessive wear.

The unit was equipped with a controls package and instrumentation to facilitate operation and monitor key process variables.

PROJECT SPECS

Customer:
Proprietary

Equipment Supplied:
Rotary Dryer w/ Dust Collection System

Project Location:
Alberta, Canada

Industry:
Aggregates

Material:
Silica Fume

Project Engineer:
FEECO International, Inc.