Competence in Solids

SWR engineering

Pigment processing and drying
Moisture measurement with M-Sens

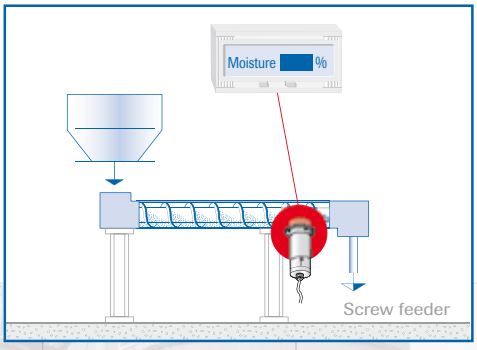
GLOBAL TECHNOLOGY SYSTEMS

Application

In this application pigment is used for colouring of varnishes in a paint factory. Therefor pigment sludge is delivered as raw material.
This pigment sludge is compressed using a compactor. Thereby the sludge is dewatered and washed salt-free.
The such processed material is dried on a conveyor belt using hot air and then conveyed onto an auger feed screw using a screw conveyor. The temperature in the drying plant depends on the amount of steam supplied to the heat exchanger via a control valve.
In the previous process, samples were taken from the dried material and checked in the laboratory for their moisture content.
Next, the temperature was respectively adjusted using the steam valve of the drying plant. The adjustment of the valve was realized manually.

Process Data

Customer:	pigment manufacturer (Germany)
Material:	colour pigments
Transport means:	screw conveyor
Installation location:	between drying and grinding plant
Moisture content:	0.1 - 1 %



Solution

Material drying is one of the most important process steps during pigment manufacturing and processing.
M-Sens measures the residual moisture of dried pigment powder after leaving the drying plant.
The material dried such is passed by the M-Sens via a screw conveyor. Using the moisture measured such and the signal provided by M-Sens, the steam amount supplied to the heat exchanger is controlled in a later step.
Continuous moisture measurements in the laboratory can be omitted or reduced to a minimum.

Customer benefit

- complex moisture measurement in the laboratory is omitted, which saves time and enables moisture measurement in real time
- energy saving and easy and direct process control through steam valve using the M-Sens signal
- easy calibration, high wear resistance of the sensor

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