Competence in Solids

SWR engineering

Limestone manufacturing test facility

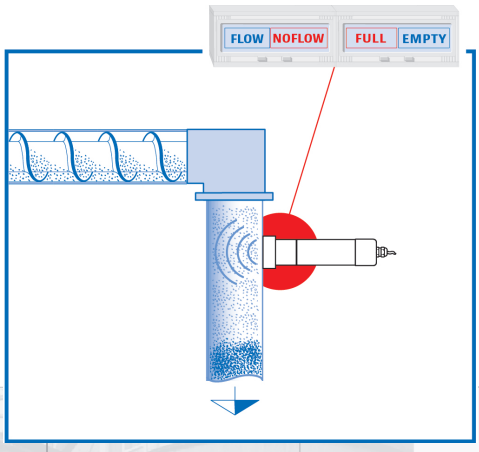
Material flow monitoring with FlowJam *Plus*

Application

A plant manufacturer simulates different processes of the cement production in his test facility.
One of these processes is the crushing of limestone. In the test facility this process is simulated by two different size crushers and an intermediate screen. The first crusher breaks down the raw material, which is sifted by a downstream shaker screen and recycled back. Material that passed through, because of the smaller size, is processed by the second crusher. Excess material with a large grain size leads to a material jam above the screen.
This material jam must be detected as fast as possible, to adjust the downstream crusher.

Process Data

Customer:	Plant manufacturer (Germany)
Material:	Limestone
Quantity:	max. 300 kg/h
Installation place:	Test facility, inclined line DN 100 (4“) between the two crushers
Function:	Material flow detection, detection of material build up after crushing



Solution

The FlowJam *Plus* is the evolution of the established FlowJam sensor.
In addition to the rapid detection of material movement (Flow / No Flow), the FlowJam *Plus* also provides “detection of blockage“.
When it detects a “No Flow“ condition, it will also provide a “Full or Empty“ status inside the pipe.
This is useful in determining if there is a material jam at the sensor.
It allows the customer more control for adjusting the upstream and downstream crusher loads and speeds.

Customer benefit

In this application the FlowJam *Plus* works as a control element for the crushing process.
After the detection of excess material between the two crushers by the FlowJam *Plus*, adjustments can be made, to control the fineness of the material and throughput of the crushers.

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Product link

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