

Inline moisture measurement in grain at Tate&Lyle Belgium

Market:

Food industry
Grain flour production

Application description:

During the products of grain flour, it is critical to the process monitoring and control to accurately measure the moisture of grain.

If the grain is too dry, it can crack, resulting in a lot of unwanted dust during grinding process. If the grain is too moist, the quality of the grinding suffers.

Optimal and constant grain moisture can only be assured with an accurate, inline moisture sensor and a controlled moisturizing.

With the Müttec inline moisture measurement system HUMY-3000 provides accurate and continuous measurement directly in the material flow. Thereby the measurement is self adjusting at different flow rates by using a simple fitting.

The measurement values are captured and evaluated in real time. This is indicated on the integrated colour display and forwarded to other systems such as moisturizing systems immediately.

Tate & Lyle operate a huge food processing plant out of Belgium. This plant processes about 25-60 tons of grain per line per hour. For an optimal grinding process, a moisture reading of 16% is required. This desired value must not deviate more than $\pm 0.1\%$ moisture.

To measure the grain moisture, the Müttec inline moisture measurement system HUMY 3000 is successfully installed at Tate & Lyle and works with an accuracy of 0.05%. The measured values are forwarded to the process control system via 4-20mA output. With the received values the pcs is able to adjust the moisturizing system.

Of course it is possible to use the inline moisture measurement system HUMY 3000 for other applications such as grain drying with a precise target value and consequently high energy and cost savings.

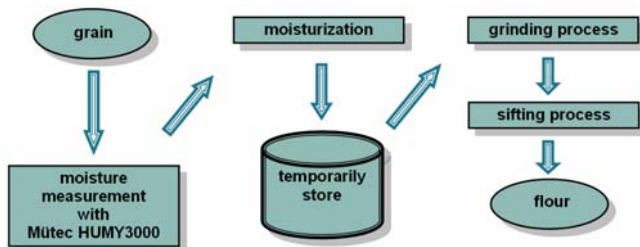


Chart of the plant

Benefits of the Installation:

- ◆ precise product measurement (accuracy 0,05%) and adjustment to optimize the grinding process.
- ◆ guarantees an optimal and continuous process
- ◆ early detection of process deviations and faults
- ◆ measurement independent of the flow rate via a robust fitting



Sensor HUMY3000 with fitting for a continuous measurement in grain material flow

HUMY-3000 Moisture Sensor Benefits:

- ◆ very fast measurement with a high resolution and accuracy
- ◆ moisture measuring into the core
- ◆ integrated temperature compensation
- ◆ digital measurement value evaluation and transmitting
- ◆ high safe to operate by robust fitting and sensor
- ◆ easy and inexpensive installation also at existing plants
- ◆ for all conveyor belts, screw conveyors, pipes, chutes and so on
- ◆ for all bulk materials even with a very high or low moisture