



# Application Review

Monitor Technologies LLC ^ [www.monitortech.com](http://www.monitortech.com) ^ [customerservice@monitortech.com](mailto:customerservice@monitortech.com) ^ 1-630-365-9403

## Product:

**HumiCore™** Moisture Measurement System

## Market:

Coke plant  
Coal

## Application Description:

For the final product coke it is necessary to bring the moisture to an exact value. This is an important task for the process monitoring and controlling. The main point of installing a moisture system for coal is to regulate the coke furnace to guarantee a continuous, constant coke. In addition to the regulation of the dryer, if the input coal is too dry, the formation of dust is too high while loading the coal and also later in the process. The formation of dust causes high cleaning costs as well as additional expenses for filtering installations. Optimal and constant product moisture can only be assured by an accurate inline moisture measurement and a controlled drying process. The inline moisture measurement system makes accurate and continuous measurement directly in the hopper possible. The measurement values are captured and evaluated in real time. This is indicated on the integrated color display and forwarded immediately to other systems such as moisturizing systems.

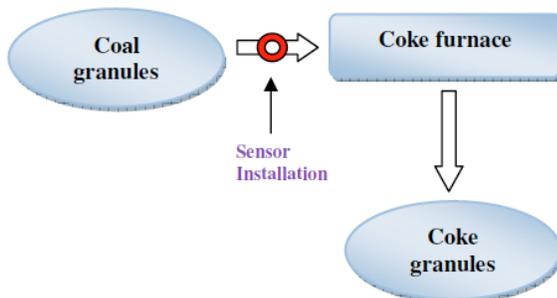


Chart of the Plant Process

## Benefits Achieved by The Measurement:

- > Guarantees constant product quality of the coke
- > Avoids high cleaning costs and additional costs for filtering
- > Precise product measurement and adjustment directly before conveying into the dryer

## Application Details:

A large iron and steel company uses the moisture measurement system for many different applications. For example, before loading the coal into the dryer the residual moisture of the coal is between 5 and 9%. Because of these differences, it is important to regulate the dryer depending on the incoming coal material automatically. To measure the product moisture, the in-line moisture measurement system is successfully installed at the coking plant and works with an accuracy of  $\pm 0.1\%$ . 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. It is also possible to use the inline moisture measurement system for other applications in coal processing.



Moisture measurement sensor installed at the hopper going in to the outlet

## Advantages of HumiCore:

- > Very fast measurement with a high resolution and accuracy
- > Moisture measuring into the core
- > Integrated temperature compensation
- > Digital measurement value evaluation and transmission
- > Easy installation and operation by keyboard and display
- > Easy installation at all conveyor belts, screw conveyors, pipes, chutes, etc.