



Continuous Measurement of Coke Drum Level

Monitoring coke level and foam

Monitoring the level of coke drum bottoms in a delayed coker is among the most important processes in a refinery. Along with this process is the critical need to measure the foam layer during the filling. Though the foaming can be reduced by using anti-foam agents, they are very expensive. In addition, the silica based anti-foam agent can get into processes past the coke drum which can impact catalytic performance of downstream equipment. Overflows can cause hundreds of thousands of dollars in replacing equipment, man-hours, and perhaps most important, lost production time.

Continuously monitoring the coke drum for both the coke level and level of the foam is essential to ensure maximum productivity in the coke drum cycle - and to prevent expensive overflows during the process.

A measuring solution with prospect

Coke Drums operate in extremely hostile process conditions (high temperatures, deposits, high-pressure water jet). That's why radiometric measurement of coke drum level is the most cost-efficient and reliable method- one that will stand up to this tough environment.

The LB 490 Tower-Sens is the perfect choice of this all important measurement. Performing continuous measurement in the drum, the LB 490 system can monitor both the foam level and provide information about the coke level after injection of the anti-foam agent.

The Tower-Sens utilizes a detector length up to 8 meters to ensure a reliable continuous level measurement. Due to the modular design of the detector, the Tower-Sens can be configured to lengths for each individual Coke Drum.

All components of the measuring system are mounted at the outer wall of the coke drum. No modification of the vessel walls is necessary. Due to Berthold Technologies' patented temperature and aging compensation, the Tower-Sens works reliably and maintenance-free during the entire operation.



More than a measurement

The LB 490 Tower-Sens enables a continuous monitoring of the coke drum filling, the foaming and the use of anti-foam agents over the whole measuring range. This information about the process cycle can be used to increase the efficiency of the coke drum and simultaneously minimizing operating costs, which means in detail:

- **Maximum utilization of coke drum capacity**
- **Reduction of cycle time**
- **Directed and efficient use of anti-foam agent**
- **Overflow protection**
- **Increased operational safety**

