polysius® Hot Cyclone Monitoring with Radar Technology

thyssenkrupp

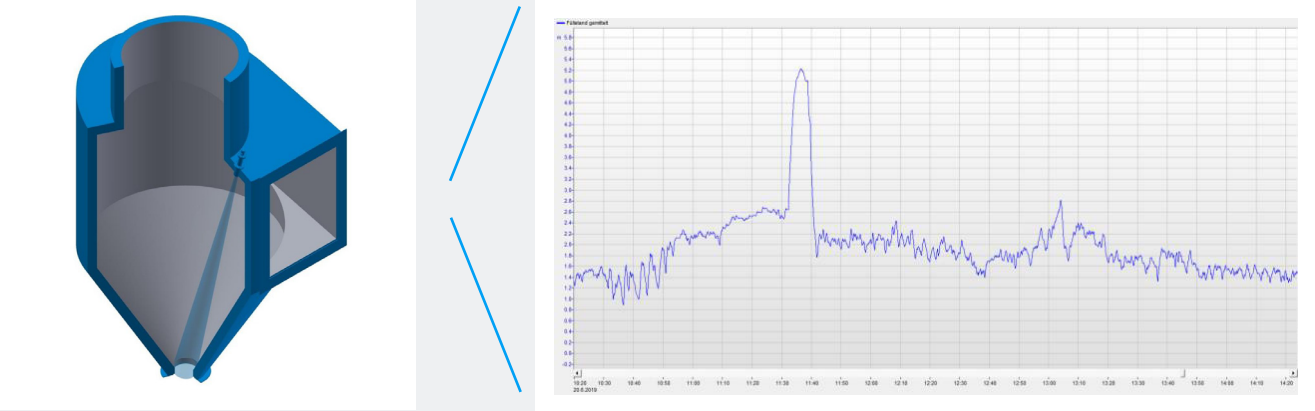

Figure 1: Principle constructive implementation of radar sensor

Reliable congestion detection for preheater cyclones

Gamma-ray detectors are used to monitor the cyclone levels and to be able to stop in time that the cyclone will not get filled up. This is not only a production loss, because the kiln needs to be stopped, it is also a safety concern due to the nature of calcined meal inside the cyclone when removing this blockage. Further, local regulations regarding radioactive materials must be considered in case a nuclear sonde is used.

Due to the strong handling regulations of radioactive gamma-sources, the radar based level measurement had been developed as an alternative.
The cyclone monitoring with radar technology enables a fast and reliable congestion detection inside the hot cyclones. After detection of congestions, reasonable measures can be taken at an early stage.
As a result, critical incidents and loss of production will be avoided.

thyssenkrupp Polysius has already installed several cyclone monitoring systems successfully. Both Installations are working reliably, there is no evidence for not detected blockages.

All components for the installation will be delivered by thyssenkrupp Polysius. We recommend that the installation or supervision is carried out by our specially trained personnel. Alternatively, we also working on the opportunity of a remote support.

Necessary preconditions & works for installation

- Compressed air (e.g. 6 bar)
- 4 - 20 mA for signal and energy consumption of radar sensor (2 - wire system)
- Full secure access to cyclone roofs
- Ability to drill a hole in cyclone roofs (steel and refractory lining)
- Ability to execute welding and assembling on cyclone roofs
- In case of works at the cyclone's refractory lining necessity to coordinate the different works
- Clear sight inside the cyclone from the drilled hole (cyclone roof) to the outlet of the cyclone (no scaffold inside the cyclone)

Your service advantages

- Fast and reliable congestion detection
- No radiometric measurement
- Smart Monitoring
- No need of a radiation protection officer
- Easy installation
- Nearly maintenance free (1x p.a. cleaning of the lense)

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