



Inline color measurement on the extruder line

BASF Leuna GmbH refines polyamide plastic. This process involves extrusion and strand pelletizing. Different product groups are created, which must comply with a specific color value depending on their specifications. In the event of a technical malfunction in the process, the color values of the pellets may change. The result is a product that does not meet specifications, which wastes money and energy.

A True Color sensor from the colorSENSOR CFO200 series by Micro-Epsilon was therefore used to detect the fluctuating color values of the pellets. The sensor measures the color of the pellets through a sight glass in the suction box of the finished product conveyor and reliably detects the smallest color deviations ($\Delta E < 1$) from the programmed reference value. The recorded values can then be forwarded directly from the sensor to a higher-level control system via a signal output.

Requirements for the measurement system

- Recognition of the subtlest color nuances
- $\Delta E < 1$
- Measurement through glass

Ambient conditions

- Dust
- Increased ambient temperatures

System design

- Controller colorSENSOR CFO 200
- Circular sensor CFS2-M11

Advantages

- Compact, robust and precise sensor
- Simple parameterization via web interface
- Good price-performance ratio



"Compared to a camera system for color detection that was also tested, the CFO200 sensor is easier to implement and much more flexible in terms of configuration."

Michael Bergner,
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