

Inline colour measurement of injection moulding parts

In plastic injection moulding plants, ensuring precise colour compliance of products is often important, particularly as their colour changes during cooling. To date, it has only been possible to measure random samples of cooled pieces.

However, the colorCONTROL ACS inline colour measurement system from Micro-Epsilon can 100% inspect the products as they are extracted from the mould. The system uses an empirically determined correlation of the colour between warm and cold pieces. This enables any colour deviations to be recognised at an early stage thus avoiding waste. To date, this method has been developed and tested as part of a study at SKZ in which structured surfaces were also examined.

Advantages

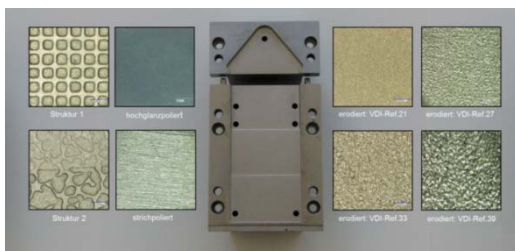
- Colour is automatically checked earlier than before
- Waste reduction
- Time reduction

Requirements for the measurement system

- Non-contact colour measurement
- Accuracy $\Delta E < 0.1$
- PLC connection via Ethernet interface

System design

- colorCONTROL ACS7000
- Circular sensor head R45°/0° FCS-T-ACS2-R45/0-28-1200



Different surface structures



The colorCONTROL ACS7000 inline colour measurement system with circular sensor ACS2