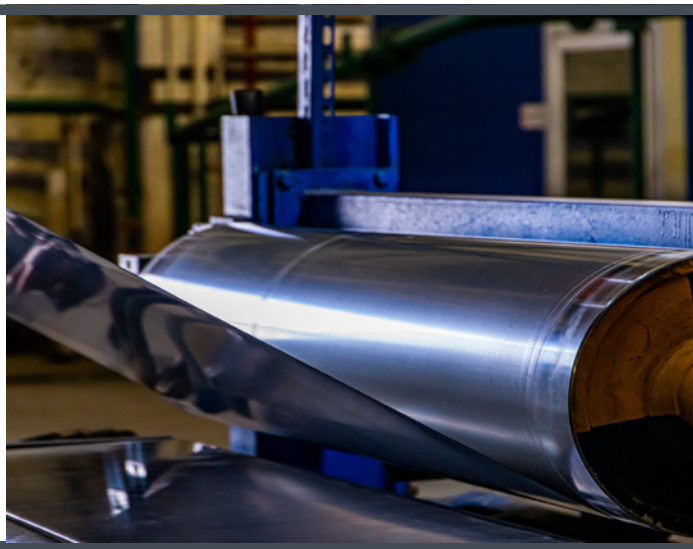

Rhopoint AIDO

Inline Measurement of Gloss, Haze, DOI & RSPEC

Continuous appearance assurance for production lines

Across many production environments, surface appearance is still verified through intermittent sampling and laboratory inspection. While suitable for basic confirmation, this approach leaves manufacturers exposed to undetected process drift, localised defects and batch-to-batch variation that may only become visible once products are installed or in service.

AIDO enables a shift from occasional inspection to continuous appearance assurance. Installed above moving strip, panels or finished components, the sensor monitors surface quality in real time, providing immediate visibility of changes in gloss, texture and reflected image clarity. Production teams can intervene early, stabilising processes while material remains on the line

Built for inline production environments

AIDO is designed for fully non-contact operation above hot, freshly coated or delicate surfaces. A fixed 60mm distance-to-surface enables stable measurement on unguided webs, variable-thickness panels and moving conveyors. Integrated air purge systems protect the optical path from dust, vapors and contamination, common in coating environments

Measuring appearance, not just gloss

Surfaces can share identical gloss values while appearing visibly different due to haze, texture or reflected image distortion. AIDO measures multiple complementary appearance parameters that together describe how a surface is perceived by the human eye, revealing changes that remain invisible to gloss-only sensors.

RHOPOINT AIDO

What the AIDO Inline Sensor measures

By combining 60° gloss, reflectance haze, DOI and RSPEC in a single non-contact inline system, AIDO provides a complete and perceptually relevant assessment of surface appearance in real time

60° Gloss

A measurement proportional to the amount of light reflected from a surface at 60° geometry, measured to ASTM D523 and ISO 2813. The 60° angle provides a universal gloss reference suitable for all gloss levels.

Reflectance Haze (Log H and Log HC)

Reflectance haze quantifies diffuse scatter caused by microscopic surface texture, residues or coating structure. Log H provides standard haze compensation, while Log HC applies a correction factor for metallic and special-effect coatings, enabling accurate measurement on bright colours and effect pigments.

Distinctness of Image (DOI)

DOI measures reflected image sharpness. Surface defects such as orange peel, waviness and micro-roughness significantly reduce visual quality without affecting gloss readings. DOI quantifies these effects directly.

RSPEC

RSPEC measures peak specular reflection over a narrow angular interval around the specular angle. It is highly sensitive to fine surface texture differences and separates surfaces that share identical gloss values but differ in smoothness and visual clarity.

High-speed operation and system integration

AIDO supports high-speed measurement with up to ten captures per second, providing dense coverage across fast-moving production lines. Measurement data is available instantly via a REST API, enabling integration with PLCs, manufacturing execution systems and quality monitoring platforms.

The sensor is managed through the Rhopoint Appearance Elements platform, providing configuration, calibration control, health monitoring and data access. The same sensor can also be deployed in laboratory environments, supporting correlation studies between offline appearance evaluation and inline production behaviour.

AIDO extends established Rhopoint appearance measurement principles into continuous inline production monitoring.

Want to learn more? Contact us:

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