Electrode sheet inspection system  e-FlexEye-RB2

Carries out inspections for coated-area defects and non-coated area defects. This system also performs pattern dimension measurements of coated and non-coated areas while it inspects.

Defects on uncoated areas
- Foreign material
- Streaks
- Wet solvent drops

Defects on coated areas
- Streaks/uncoated spots/uneven coating/air bubbles

Defects at the edge
- Misalignment of top/bottom coating in TD
- Length of coated areas
- Length of uncoated areas
- Curvature of coated edge
- Width between sheet edge and coated area
- Misalignment of top/bottom coating in MD
- Web flow

Defect detection examples
- Dent
- Unevenness
- Streaks

In addition to the ones shown above, the system can also detect defects such as fish eyes, agglomerates, and wrinkle.

Applicable electrode coating patterns
- Intermittent coating
- Striped coating
- Intermittent-striped coating

* The system can also handle a range of other patterns. Please discuss these with us.
Example of system configuration and measurement functions

**Camera**
The camera produces detailed resolution in the transverse direction (TD) relative to the moving material. Maximum speed 2048 to 8096 pixels, at a frequency of up to 320 MHz. Supports a 10-bit CIS (Contact Image Sensor) line sensor.

**Lamp units**
LED lamps, transmission rods, line fibers, fluorescent lamps, etc.

**Remote communications functions**
You can check defect data via the viewer terminal.

**Length encoder**
The encoder outputs the detailed calculation reference in the motion direction (MD) for the moving material.

**Basic functions**
- Automatic luminance correction circuit, 10-bit gray scale input circuit, automatic shading correction circuit, spot and streak defect detection circuit, 2-dimensional filtering, high-speed joint merge, automatic edge detection, automatic defect classification, re-classification, density mapping

**Defect examples**
- Uncoated areas: Streaks, wrinkle, dent
- Coated areas: Indentations, stains, scratches, streaks, foreign metallic reflective objects, pinholes

**Pattern measurement functions**
- Widths of intermittently coated parts, widths between edge of sheet and edge of intermittently coated areas, widths of uncoated areas between intermittent stripe-coated areas, widths of stripe-coated areas, widths between edge of sheet and edge of stripe-coated areas, widths of uncoated areas between stripe-coated areas, lengths of coated parts, lengths of uncoated parts, curvature of coated edges, top/bottom misalignment, coated area average brightness, un-coated area average brightness, amount of intermittent coated drag