Electrode sheet inspection system
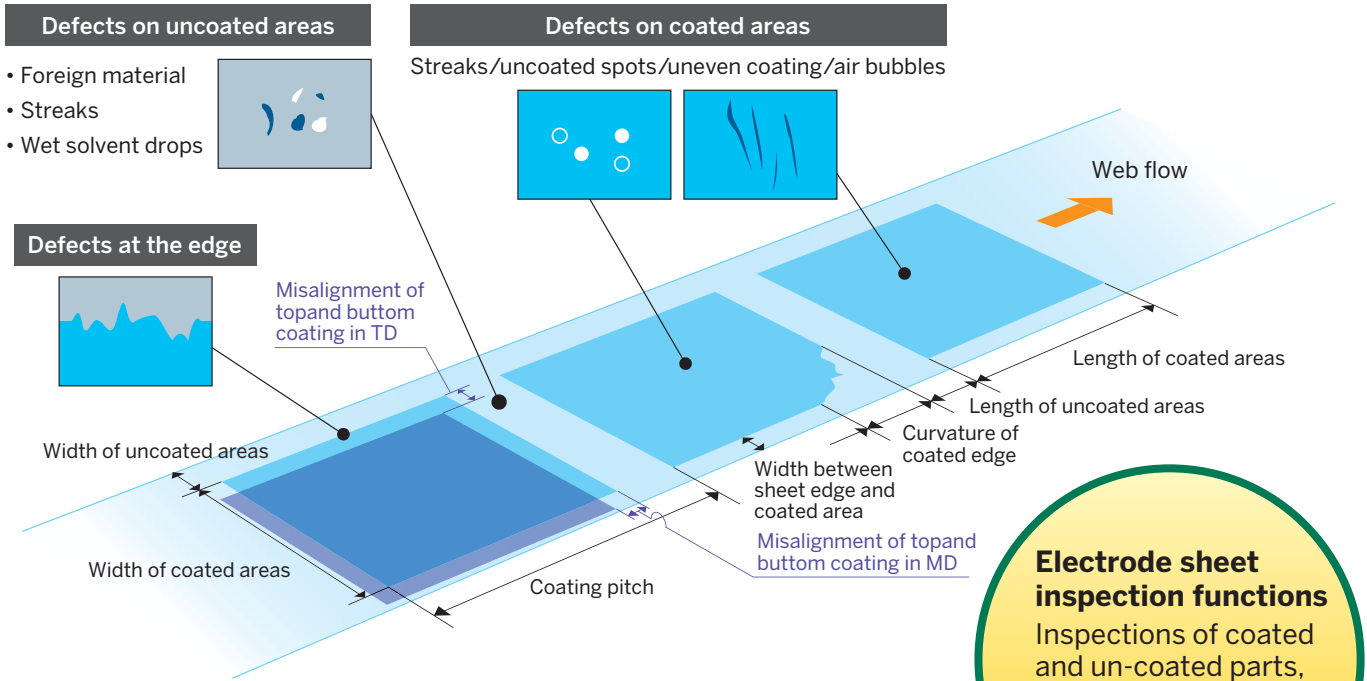# e-FlexEye-RB2

NIRECO

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

Web flow

Defects at the edge

Misalignment of topand buttom coating in TD

Length of coated areas

Length of uncoated areas

Curvature of coated edge

Width of uncoated areas

Width between sheet edge and coated area

Misalignment of topand buttom coating in MD

Width of coated areas

Coating pitch

Electrode sheet inspection functions
Inspections of coated and un-coated parts, concurrent inspections of top and bottom surfaces

Defect detection examples

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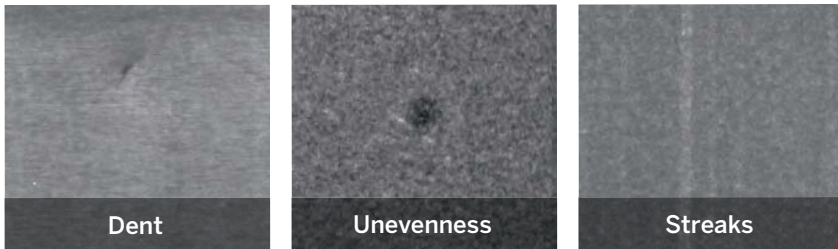
In addition to the ones shown above, the system can also detect defects such as fish eyes, agglomerates, and wrinkle.

Applicable electrode coating patterns

Intermittent coating

Striped coating

Intermittent-striped coating
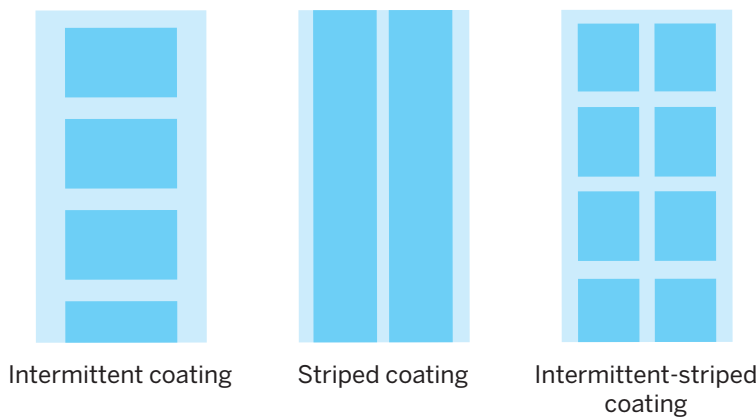
* The system can also handle a range of other patterns.
 Please discuss these with us.

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.
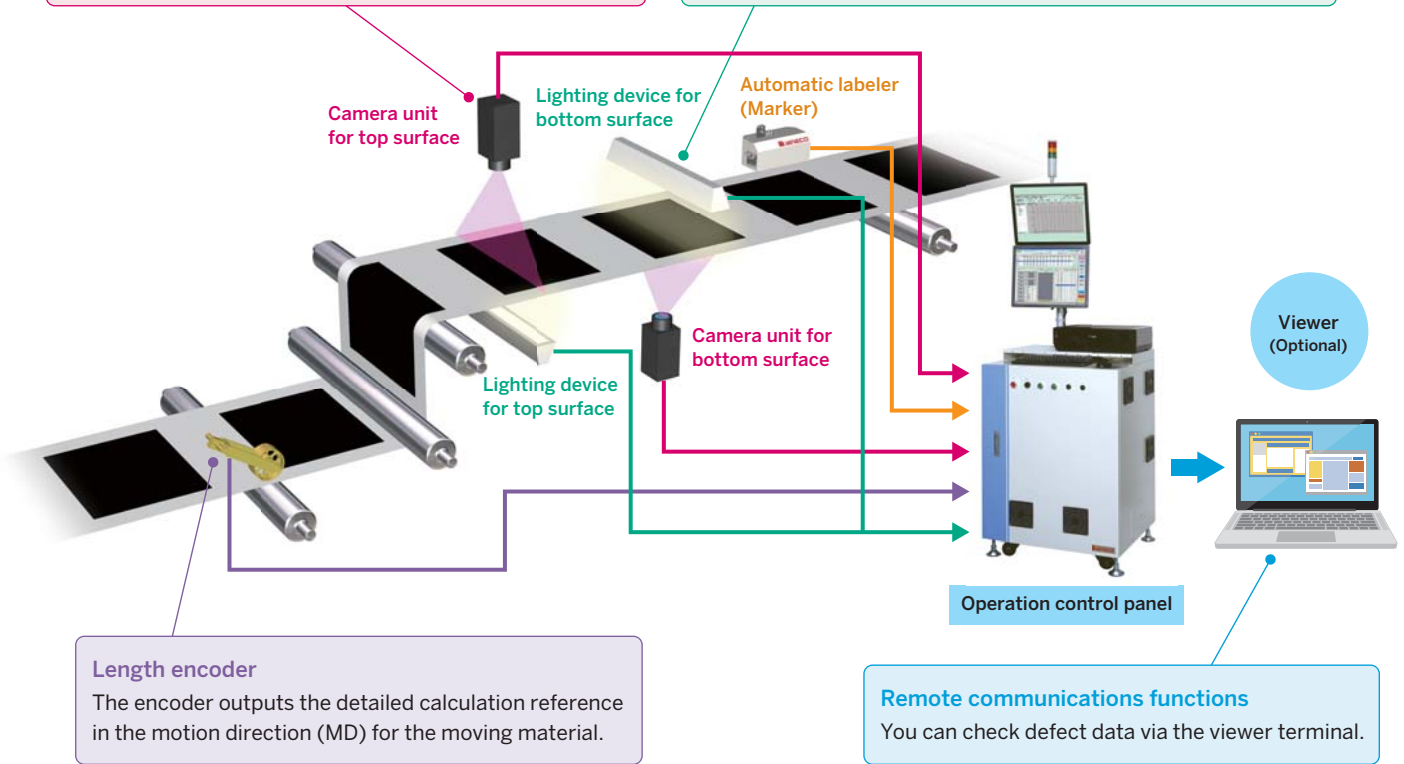
Camera unit for top surface

Lighting device for bottom surface

Automatic labeler (Marker)

Camera unit for bottom surface

Lighting device for top surface

Viewer (Optional)

Operation control panel

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

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

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/buttom misalignment, coated area average brightness, un-coated area average brightness, amount of intermittent coated drag

The contents of this catalog are subject to change without notice.
Please confirm details with our Sales Division during your planning stage.

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