Implement Edge AI & integrate data from all **inspection tools** for **accelerated root cause analysis**

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Defect Management & Edge AI

Defect Management System

A system to visualize and analyze inline defect data from all inspection & measurement systems

Our **end-to-end analytics platform** is the first to implement **product traceability** to enable **tracing quality failures to inline defects**.

Solutions Highlights

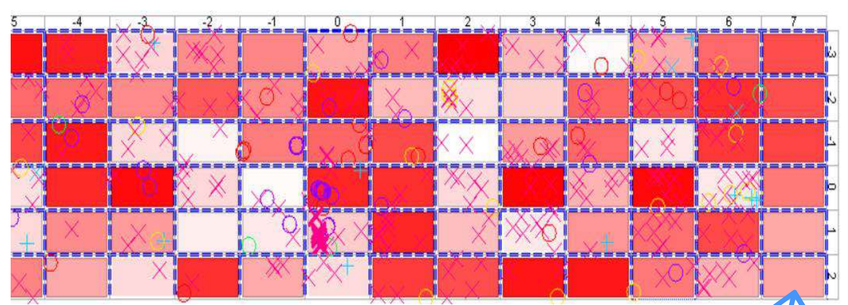
- Troubleshooting of low yields
- End-to-end yield and defect management
- Integration of all inline systems - system agnostic
- Defect binning and classification automation

Components

1 Defect Map & Analysis

Defect data storage and analysis with mapping capability and alignment with other data types.

*Includes visualization by **lot, cell, stacked roll, or single electrode roll***



stacked roll with the red blocks being cells & different shapes being defects

2 Defect Map Classification

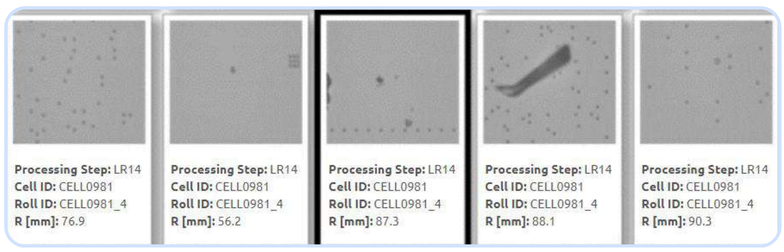
Classification of defects to group similar defects by type for Kill Rate and Capture Rate summaries

Common

Uncommon

3 Defect Map Gallery

Gallery of inspection and review images linked to inspection site



4 Online Integration With Client MES

Define Statistical Process Control (SPC) and Out-of-Control Action Plans (OCAP) and send alarms to the MES

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Combine inspection tool information all in one platform

measurement examples

- foil/electrode thickness
- die & roll clearance
- coating roughness
- foreign particles
- wrinkle inspection

- electrode thickness
- roll gap measurement
- peeling

- electrode vibrations
- cutter runout
- burr inspection

- delamination
- alignment
- tab bending defects
- tab position
- welding analysis

- lid welding position alignment
- can climp diameter
- battery cap thickness
- can edge defect inspection
- e-fill leakage inspection

- shrink wrap inspection
- can surface inspection
- x-ray

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Defect Management System

Workflow/Application Examples

- Manual reclassification of defects
- Defect traceability for yield diagnostics
- Defect source analysis
- Equipment / Recipe Matching
- Design-aware defect management

Edge AI

Quasi real time deep learning model for instance segmentation, allowing you to classify and measure defects during production.

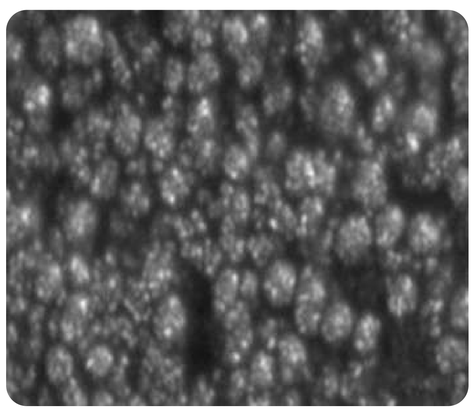
Enhance your inline vision systems through the power of AI.

How it works

1 PDF / SOLUTIONS™
Images from camera/sensor/vision system from PDF or other suppliers

2 PDF / SOLUTIONS™
inference engine equipped with deep learning model

3 PDF / SOLUTIONS™
defect classification & measurement for actionable insights



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