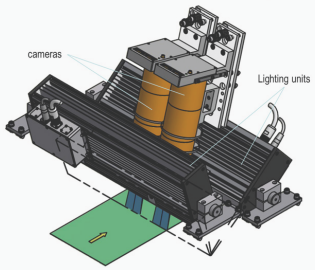
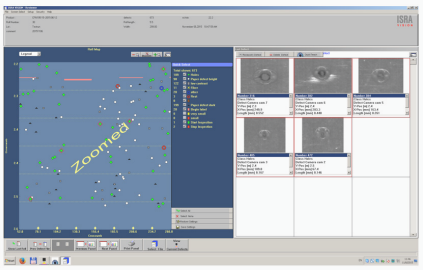
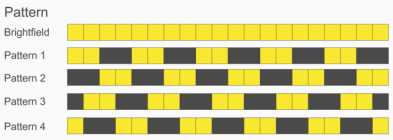
High-speed high-resolution surface inspection



Typical system setup



High-speed in-line inspection



Illumination modes

ISRA VISION AG has cooperated with universities and research institutes like TUT, NPL and Fraunhofer in order to develop in-line surface inspection techniques for high-speed high-resolution roll-to-roll applications. These techniques are on the edge on what is possible with optical inspection today and as part of NanoMend were integrated into inspection systems for different sample applications.

Key Innovative Features:

The surface inspection systems have three main features:

- Data processing performance of more than 640MB/s image data in one channel. ISRA has further developed the processing speed to 1.2 GB/s.
- Advanced multi-modal lighting techniques.
- Very high resolution down to 3µm for large surfaces.

The key advantage of the systems is the possibility to integrate these techniques towards high-end in-line inspection systems at an economical price.

Specifications	Value	Unit
Processing performance for image data	>650	MB/s
Resolution	≥3	µm
Illumination Modes	≤5	

Markets & Applications:

The techniques are integrated into high-speed high resolution in-line surface inspection systems for a variety of applications such as barrier foil inspection, PV-foil inspection, coated paper inspection, glass inspection, special paper inspection and metal inspection.

Commercialisation: The technology is protected by pending patent EP 10 180 291

Contact: info@nanomend.eu

www.nanomend.eu

Full project title: Nanoscale Defect Detection, Cleaning and Repair for Large Area Substrates

Partners

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 280581.