

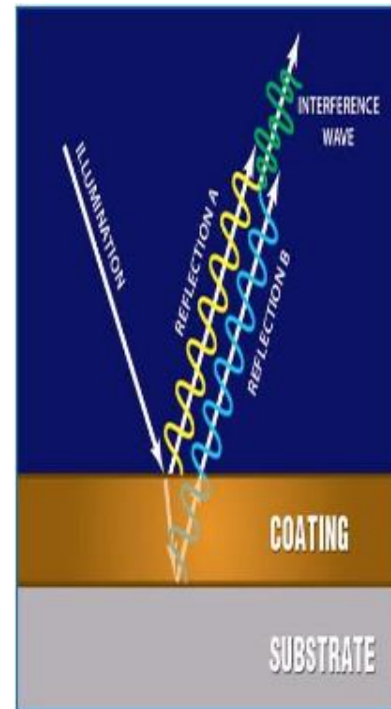
**Thank you for this opportunity
to present our award-winning SpecMetrix®
thin film and coating thickness
measurement systems**



Technology by SENSORY ANALYTICS

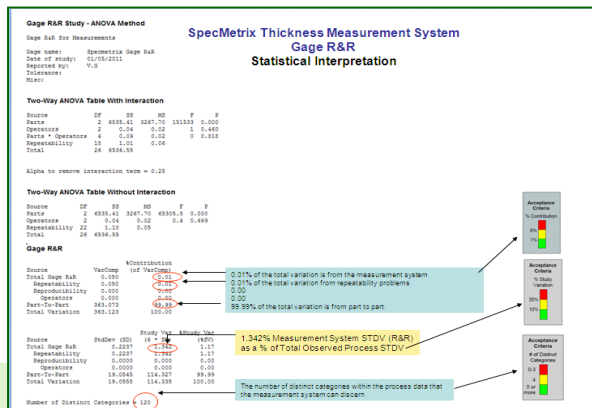
Exclusive ROI Optical Measurement Technology

- ❖ Proprietary 'ruggedized optical interference' technology
- ❖ Absolute thickness measurement
- ❖ Substrate independent
- ❖ Non-contact and non-hazardous
- ❖ Offline and in-line measurement
- ❖ Measures clear and opaque coatings
- ❖ Thickness measurement range:
 - 0.2 to 250 microns



Superior Gage R&R Results

- ❖ Determines how much measurement variability due to gauge and if thickness variability is coming from gauge or from operation
- ❖ If selected gauge not repeatable/reproducible, then it is not advised to make process changes based on data from that gauge
- ❖ All SpecMetrix systems ship with verified Gage R&R results of <5%



Gage R&R Result	Acceptability
<10%	Excellent
10% < R&R < 20%	Marginally Acceptable
20% < R&R < 30%	Conditionally Acceptable
>30%	Not Acceptable

Selected SpecMetrix Certified Films & Coatings

❖ **Base Substrates:**

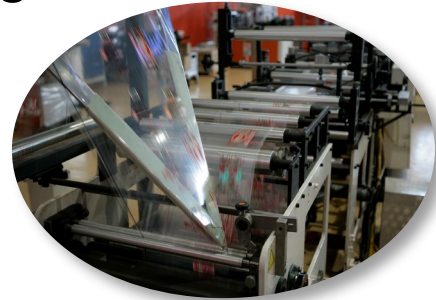
- Pet, Bopp, Opp, metalized, foil, nylon and optical & solar films, PE, plastics, primed papers, release liners and cast films

❖ **Coatings:**

- Silicone, barrier, scratch resistant, anti-fog, printable, heat sealable primers, conformal, electronic inks, organic, TiO₂ and other performance coatings

❖ **Adhesives:**

- Solvent, water base, hot melt, permanent, pressure sensitives



SpecMetrix Lab Systems

Advanced Lab System



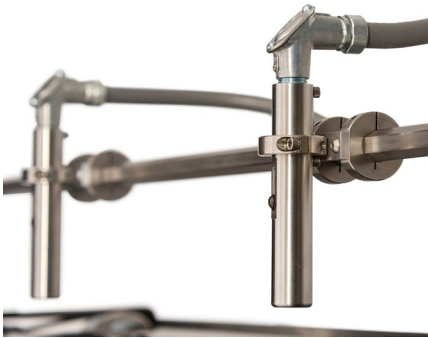
Enhanced Lab System



- ❖ Streamline coating QA
- ❖ Customer claim forensics
- ❖ Non-contact and non-destructive measurement
- ❖ Faster sample testing and in-process set-up/QC checks

SpecMetrix In-Line Systems

Fixed Probe System Configurations



Traversing System Configurations



- ❖ Continuous, in-process coating QA
- ❖ 100+ measurements per second, per probe
- ❖ Streamline changeover times and reduce waste
- ❖ OEM integration or direct installation options

SpecMetrix In-line Systems – Operating Software Features

- ❖ Easy to use coating recipe editor
 - Reduces operator involvement and setup time
 - No calibration required before each run
- ❖ Easy data integration to coater and plant systems
 - OPC and PLC communications are available through Kepware standard interface software with standard tag ID's
- ❖ 24/7 on-line support via Teamviewer
- ❖ Host country language options
- ❖ Secured user/administrative levels



Summary

- ❖ Robust and accurate real-time absolute thickness measurements
- ❖ Provides e-record of web data from each run
- ❖ Recipe based software encourages adherence of operators
- ❖ Non-contact, non-destructive and low maintenance alternative
- ❖ Measures wet or dry and discrete layers, even in sub-micron range
- ❖ Better throughput, with no need to stop the line for off-line testing
- ❖ Data integration and batch start/stop coordination
- ❖ Direct remote assistance for recipe questions, analysis
- ❖ Improve product quality, optimize process control
- ❖ Reduced costs by minimizing over application and waste stream



Technology by SENSORY ANALYTICS

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