

WEB **MEASUREMENT**

NON-CONTACT AND NON-RADIOMETRIC



MESYS AT A GLANCE

Mesys GmbH was founded 30 years ago by developer engineer Helmuth Knorr. The company is located in Greifenberg, Germany, few kilometers west of Munich. Its mission is to develop and manufacture effective, reliable and safe on-line and off-line weight/thickness measurement systems for film, foils and sheets.

Mesys has installed more than 1,500 systems worldwide in various types of production, including film and sheet extrusion, every type of coating, PVC calendering and lamination.



OUR APPLICATION AREAS



OUR **PRODUCTS** MEASUREMENT CONTROL FOR









Surface Inspection



CFS "C" slim frame. Max. 500 mm.





OF "O" standard frame. Max. 5500 mm.



OFA "O" Array sensors frame. Max. 1700mm.



LAB SCAN Thickness/Weight. Sample 200x450mm.

MESYS **PROGUI** DATA HANDLING INTELLIGENCE



Pro Report: Scan profile.



Pro Report: Heat-map, Cross roll profile, Longitudinal roll profile.



Pro Report: Cross roll profile (average, max. min.), Longitudinal roll profile (average, max. min.), Histogram, CPK.



OUR SENSORS



USMX-200 USMX-500 Ultrasonic absorption non-contact, non-radiation

USMX-200 0 - 1.200gsm (µm) USMX-500 0 - 4.000gsm (µm) Statistical sample accuracy $< \pm 0.5\%$

DAC

Aircushion/Eddy Current non-contact, non-radiation

0,2 - 30mm Accuracy: +/- 5 microns (mu)

LSS2 Laser Shadow non-contact, non-radiation

0,2 - 5mm



том Confocal laser non-contact, non-radiation

0.2 - 2 mm

LAB SCAN

New measuring method to determine basis weight and/or thickness of thin material (patented). Therefore all materials like fleece, paper, plastic and also electrically conductive materials like aluminium, coated, gold, etc. can be measured traversing and without contact. With the smallest thickness a precision of 20nm is reached. USMX Array system provides 100% weight/thickness.

For two sided contactless measurement. The measuring head and the reference plate float on an insulating air cushion in constant distance to the measuring material. The arrangement is executed in such a way so that the same low aerodynamic power can be carried out on both sides without touching the continuous material.

The thickness of web will be calculated by the difference of distance from eddy current sensor to the roller and the web surface measured by the CCD camera from laser scan micrometer.

Thickness is calculated by the distance between confocal lasers and top-bottom surfaces of the material.

Ultrasonic absorption Confocal laser For laboratory: weight, thickness

Weight accuracy: +/- 0.5% Thickness accuracy: +/- 1 micron OFFLine control. With three different types of sensing technologies mounted on a small laboratory scan the LAB SCAN provides a complete high resolution and high accuracy detections of weight, thickness and visual inspection of sample while it is automatically moving under the scan.



MCT NIR Near infrared sensor non-contact, non-radiation ONLine Moisture Measurement Thickness of coatings can be evaluated by the absorbtion of wavelength.



DS Microwave Microwave sensor Moisture measurement non-contact. non-radiation

As a measuring principle, a microwave frequency shift is used. The sensor consists of a cavity resonator. Due to this measurement method, the sensor is very insensitive to a wide variety of materials and additional components.



Inspection CCD High resolution CCD camera for defect inspection of material

Transmission and reflection method for detecting: pin-holes, scratches, stains, holes, contaminants, gels, insects, in all types of material and processes. Paper, metal foils, plastic film, laminates etc.



ALL FROM **ONE PROVIDER**

MESYS CONNECTS





WHY MESYS

PRECISION

almost 100% measurement possible, statistical sample accuracy $< \pm 0.5\%$

TAILORED SYSTEMS

traversing sensor, multiple sensors as arrays & offline combined area weight and thickness measurement DATA INTELLIGENCE

control and visualization systems set new standards concerning software stability, error detection, interface flexibility and user interface via OPC/UA & dot.net environment

- Mesys sensor's technologies are clean and safe. They do not require any permission to be utilized.
- They are insensitive to chemical composition or colors.
- Ultra-sound technology is a real weight (mass/area) measurement system. It does not require new calibration when material is changed. It is very user friendly where multiple different materials are combined (coatings applications).
- Ultra-sound technology does not have an intrinsic noise at the source. Thinner the film is, higher is the accuracy (perfect for thin film extrusion, and coating applications).
- Control and visualization systems set new standards concerning software stability, error detection, interface flexibility and user interface via OPC/UA & dot.net environment.

MeSys GmbH High Tech & Innovation made in Germany

Gewerbering 10 86926 Greifenberg Germany

 Phone
 +49 (0) 8192 997 2000

 Fax
 +49 (0) 8192 997 2010

 E-Mail
 office@mesys.de

Changes and errors excepted.