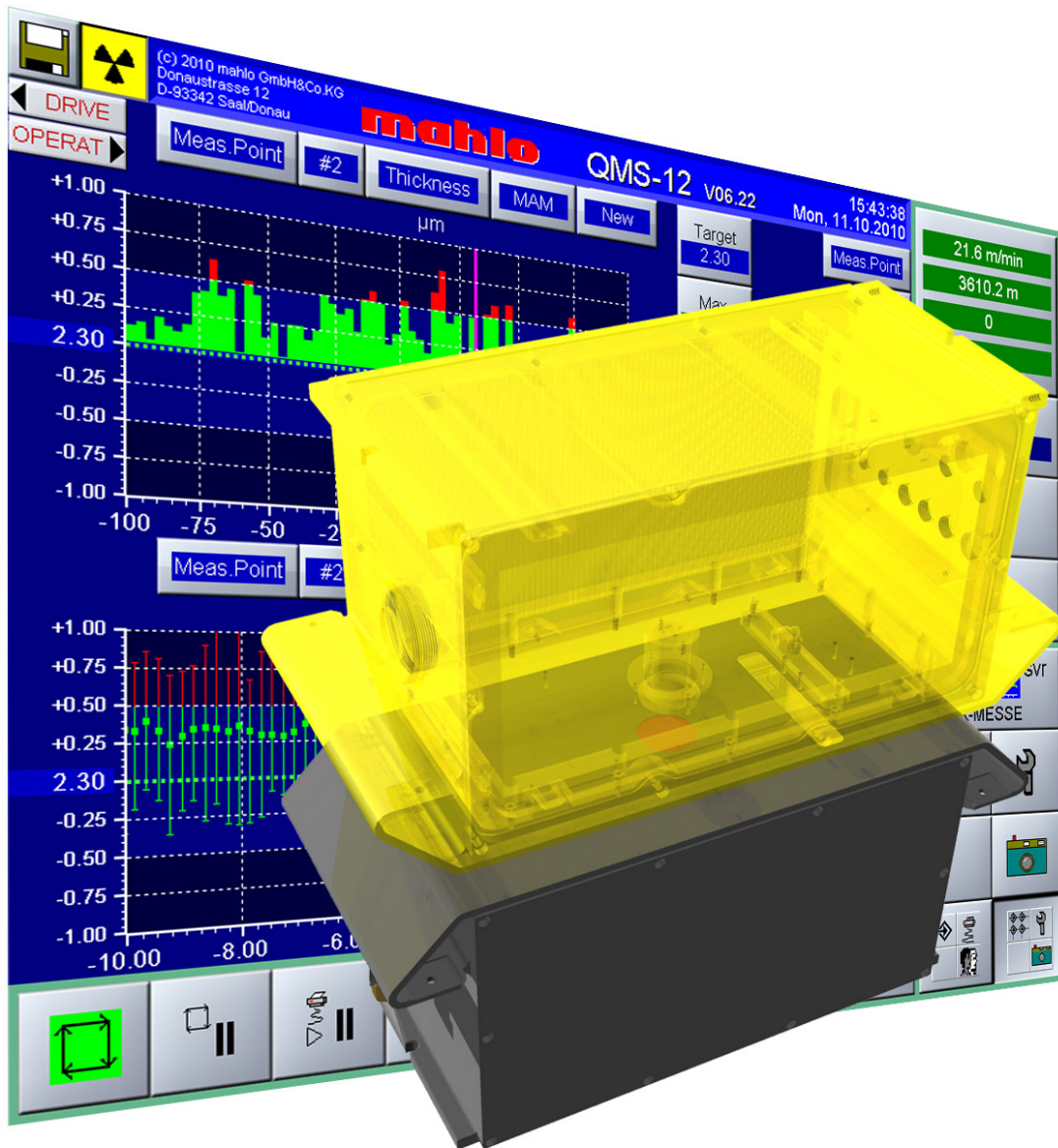


OPTOSCOPE WLI

Thickness measurement
by white light interference



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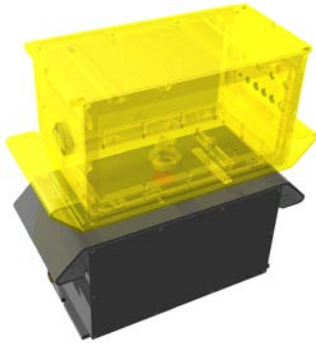
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OPTOSCOPE WLI

Thickness measurement by white light interference

Precise measurement



When white light is reflected from thin layers, this reflection appears colorful like a rainbow. This effect can be observed for example in a thin film of oil on a puddle of water. The light is reflected at both the upper and lower boundary of the part. The superimposed reflections interfere. The interference is related to the layer thickness and can be detected by a spectrometer.

Using this method, mono layers and transparent coatings on film can be measured precisely. By a special measuring procedure, both the layer thickness and the film thickness can be determined accurately on-line.

Benefits

- Simple and rapid measurement method
- Measures coating thickness and film thickness
- High accuracy and durability

Technical data

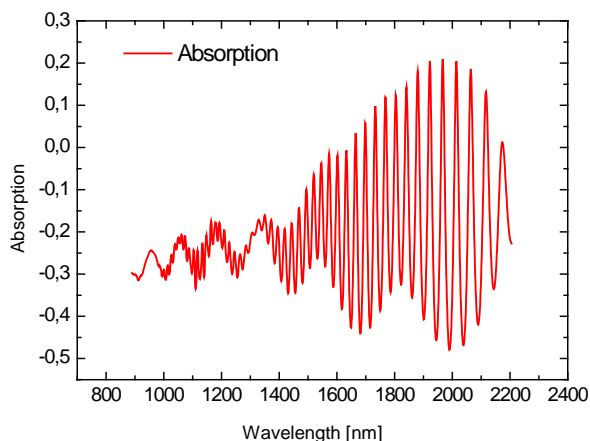
Sensor	Optoscope WLI	
Measurement principle	White light interference	
	Type 1	Type 2
Measurement range	approx. 0,2 – 10 μm	approx. 2 – 100 μm
Measurement Accuracy	approx. +/- 0,02 μm (depends on the refractive index or refractive index difference between film and coating)	
Max. ambient temperature	0°C – 60°C	
Power supply	24 V DC	

Can be used in

- ✓ Qualiscan QMS

Application sample

WLI interference spectrum of a paint-coated (approx. 4,3 gsm) PET film (approx. 23 μm), measured in reflection



Determination of layer thickness by Fourier transform

