Steinbeis
Qualitätssicherung und
Bildverarbeitung GmbH

PipeScan

Surface testing device for plastic pipes

The PipeScan surface testing device is used for quality assurance of plastic pipes. The testing device is easy to operate, very robust and can be used directly in the production line. The systems are designed for two diameter ranges of 9-32 mm and from 40-110 mm, up to 125 mm on request.

The extruded pipe is recorded on all sides by three CCD line-scan cameras as it passes through the inspection portal and inspected for surface defects such as dents, bubbles, cracks, colour defects, etc. The defect tolerance values are determined by the inspection system.

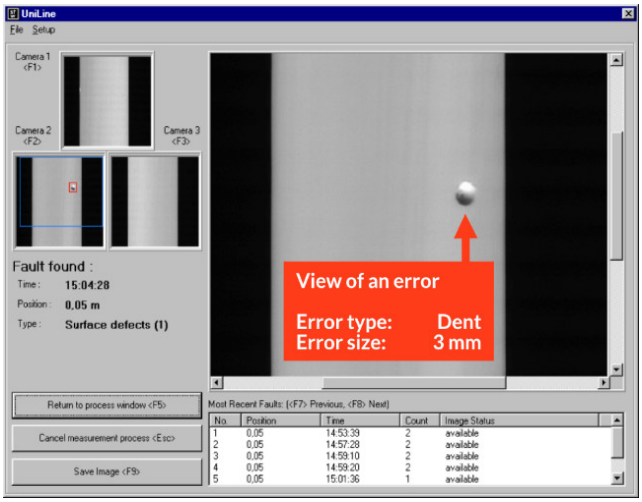
The defect tolerance values are adjustable for all surface defects, whereby defects up to 0.05 mm² can be detected. At the same time, the current pipe diameter is measured continuously.

The occurrence of a fault is signalled visually and acoustically by devices present on the unit. A new software function can distinguish uncritical water drops from real defects. Parallel image evaluation and system control are carried out by an industrial PC. Extremely short measuring times are achieved.

The PipeScan version 3 operating software under the Windows 7 operating system is used for parameter input, operation, visualisation and evaluation of the test results.

The high performance of the test facility is also characterised above all by the high operating speed of 36 m/min; further increases in the operating speed up to 72 m/min have already been successfully tested.

PipeScan



Userinterface PipeScan

Technical data

Operating system: Windows 7
Coupling with EDP network in the company or CAQ system is prepared.

Quick Image PipeScan 9-32

Degree of protection test portal	IP 54
Dimensions of inspection portal	Width: 1140 mm Height: 1900 mm
Diameter range	9-32mm
Smallest defect size	0.05 mm²
Diameter tolerance	+/- 0.1 mm
Inspection speed	1 m/min to 36 m/min
Camera resolution	0.1 mm/line
Scanning	150 to 6000 lines/s
Lens	1.4/50 mm
Illumination	1 LED ring, 3 LED lines

Quick Image PipeScan 40-110

Degree of protection test gantry	IP 54
Dimensions inspection portal	Width: 1140 mm Height: 1900 mm
Diameter range	40-110mm
Smallest defect size	0.1 mm²
Diameter tolerance	+/- 0.1 mm
Inspection speed	1 m/min to 36 m/min
Camera resolution	0.1 mm/line
Scanning	150 to 6000 lines/s
Lens	1.7/35 mm
Illumination	1 LED ring, 3 LED lines

Quick Image PipeScan 40-125

Degree of protection test gantry	IP 54
Dimensions test gantry	Width: 1140 mm Height: 1900 mm
Diameter range	40-125 mm
Smallest defect size	0.1 mm²
Diameter tolerance	+/- 0.1 mm
Inspection speed	1 m/min to 36 m/min
Camera resolution	0.1 mm/line
Scanning	150 to 6000 lines/s
Lens	1.4/50 mm
Illumination	1 LED ring, 3 LED lines

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