

Inline Modules

Optical Measurement and
Inspection Systems



Inspection modules are integrated inline to observe the production 100%. The optical inspection systems can easily be integrated any time – even after line construction – due to their sparse space requirement.

We offer turnkey solutions and go with you all the way from concept over initial operation up to questions of the daily operator during production.

Advantages of Optical Measurement



operator independent

The influence of the operator on the results is excluded.



easy documentation of measurement results

The results of the measurement are exactly recorded. Thus, users can prove the quality of the production and reduce complaints.



automated

Using optical measurement and inspection techniques, automates the quality assurance and relieves operators.



ready for Industry 4.0

imess measurement modules create detailed data of the production quality. This information is integrated in the customer network and control via various interfaces and digitalise the production.



economically efficient

Thanks to the use of high-quality hardware imess systems are as good as maintenance free and free of disruptions. The total life cycle costs are low compared to alternative systems or manual testing.

Performance Features of our Software

usable software surface

Intuitive operation is focus of the software design. Measurement results are visualised clearly both as table and graphically.



protected parameter

The software has different password protected level of operation. Critical measurement settings are exclusively available for experienced operators or under imess instructions.



measurement value export

All measurement values can be exported in Excel compatible formats. Subsequently, the operator can use them freely for analysing purposes.



head data menu & article management

Nominal values, tolerances and further product data can be saved in a customized article management by the operator or the PLC. The setup is fast and easy.



Runout check U100 T

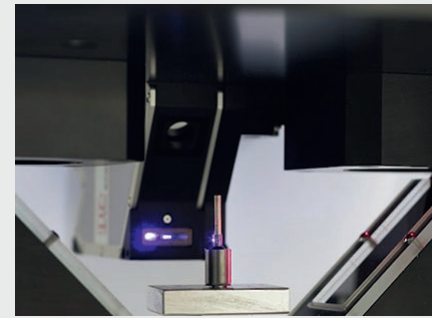
Location tolerances such as runout, concentricity and co-axiality of parts are measured. In order to avoid swings of the test sample, the camera moves around the part itself.

- Possible retrofitting in automated lines
- **OPTION** Use of lasers for crimping checks



View the Product Video:

<https://imess.com/vertrieb/Rundlauf/U100T.mp4>



The camera moves around the inspection item to avoid swinging.

Inspection of Connectors

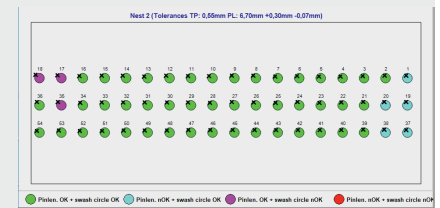
Pins are scanned from both sides with a laser to detect the location reliably. The imess **C260** is the sufficient measurement system for the certified process operation with an accuracy of factor 10 better than the product tolerance itself:

- Swash circumference (top of pin)
- Coplanarity / Flatness of pins
- Pin length



View the Product Video:

<https://imess.com/vertrieb/C260.mp4>



Operator friendly depiction of measurement results.

Thermography

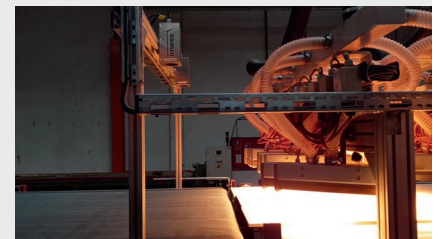
The use of thermography opens various new inspection opportunities.

- Two-dimensional observation of temperature dispersion
- Real time thermography with up to 60Hz frequency
- Line function to check strip material



View the Product Video:

www.imess.com/vertrieb/T100.mp4

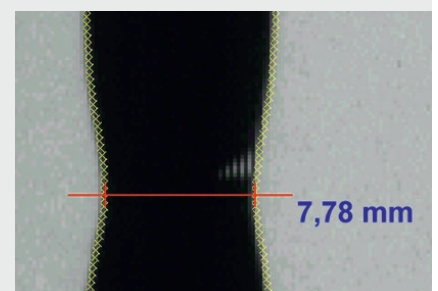


Even hidden errors become visible under observation with thermic images.

Reduction of area Z

The measurement system determines the Z-value of round and rectangular samples. An inspection is generally done within the stretch tester. If the system includes automatic sample handling via robot, a subsequent inspection is also possible.

- Measurement at 0° and 90° or 3° steps
- Contact-free and fast



The samples halves are merged within the software and the reduction of area Z is determined.

Break Disc Check

Complete test cabin with separation and sorting of the break discs.

- Borehole diameter
- Angles of boreholes towards each other
- Distances

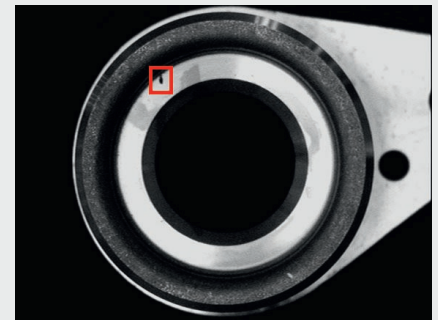


Break discs run through the inspection housing on a roller belt.

Cavities Check

Optical detection of cavities and their sizes on sealing surfaces of aluminium pressure die castings. The cavities are classified according to different categories and good/bad decision.

- Fast and highly accurate
- Determination according to Feret

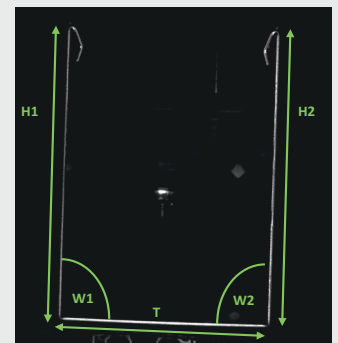


Cavities on die casting samples are reliably detected by the inspection software.

Profile Geometry

Profile bolts are cut along a line. The geometry is detected inline at the cutting area with a nominal-actual-value comparison.

- Measurement of heights, depths and rectangularity
- Contact-free and fast

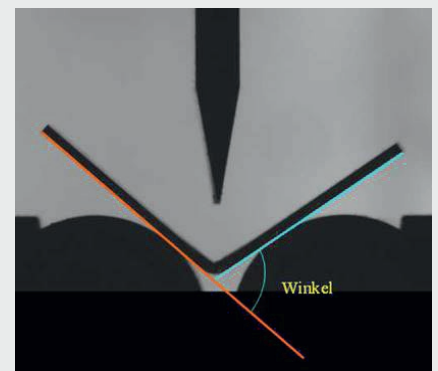


Nominal and actual value comparison of the geometry of the cutting area.

Break Angle

Measurement of the break angle online during the disc-bending-test according to VDA 238-100. Optical recording of angle parallel to force-way-measurement.

- Measurement in throughput
- High accuracy
- 100% inspection coverage
- Statistics, trend graph, and concise documentation



Non-destructive angle measurement in throughput.

In-Mould-Labeling Inspection

Subsequent inspection with cameras after the moulding process. Immediate check of critical areas of welding areas, overlapping and displacement.

- Easy inline integration
- Variant management with a variable number of types
- Teach-in for uncomplicated setup of new variants
- Container in various formats inspectable

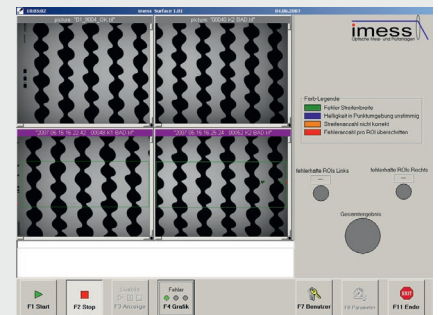


Error at welding areas, overlapping and displacement are detected reliably.

Inspection of plastic sheets

Continuous observation with cameras and backlight. Errors created during the lamination process are found reliably.

- Connection to the customer PLC
- Subsequent check and evaluation of the images possible



Images are sent to the software at once.



Stay informed & follow us



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