Safety with system
Test and Measuring Instruments for Trees and Timber Structures
A good analysis gives the correct answer

Reliable statements with little effort
You start with the visual control (VTA), but only testing the inside of the wood will give you certainty about its actual condition.

Just know, what you can’t see
The IML measurement and test instruments provide you reliable information about possible damages that often cannot be detected from the outside.

The general rule for trees and wooden constructions is: Trust is good, IML is better.

How healthy is the tree?
In the context of tree care and tree inspection our instruments help to detect inner defects at an early stage and to grant the traffic security. That way you can take steps to avoid personal and material damages in parks, alleys and forests.

How stable is the pole?
As only faultless poles comply with the high security requirements timber poles must be examined regularly for stability.

How secure is the playground equipment?
The decay diagnostics for playground equipment detects defect and decayed components that may cause accidents. Therefore it is regulated by law that swings, seesaws and jungle gyms have to be controlled regularly.

How sturdy is the house?
Controls of construction wood in timbered houses, bridges and pile dwellings detect weak points and safety risks.
Experience gives security
What makes IML one of the leading manufacturers of measurement and test instruments for wood diagnostics? It is the unique combination of wood-functional and device-related expertise! The measurement methods of our test instruments are scientifically approved and experts all over the world recommend them as objective and reliable diagnostic instruments.

Since 1990 IML produces measurement and test instruments for trees and wooden constructions. The continued success is due to our know-how and high quality customer service. Our innovative test systems for wood have to pass complex test series and functional tests during the assembly.

Only highest accuracy grants reliable and trustable analysis.

State-of-the-art development, precise assembly
Our IML devices are developed in close collaboration with national and international research institutions. Precision is added to expertise: The instruments are manufactured in Germany with the state-of-the-art equipment of our own machinery.

Approved procedure, quick results
The IML-RESI system is based on the principle of measuring the drilling resistance. A drilling needle is inserted in the wood under constant drive. While drilling, the needed energy is measured depending on the drilling depth of the needle.

That way, anywhere and with little effort it is possible to get information about structures, inner defects or residual walls of trees and wooden constructions. Depending on the instrument series, the obtained data can be recorded electronically and then transmitted, evaluated and processed on your PC with a specific software. This is a precision job that delivers significant results.

Measurement of the drilling resistance with the IML-RESI system
Explicit results for reliable evaluations

Definite data evaluation
The standard software 'IML-Tools' is used to configure the instrument and allows the readout of measurement data, their transmission to your PC as well as their evaluation, printout and saving. The enlarged software 'IML-Tools Pro' includes additional functions such as e.g. the exportation of data to Windows® applications, the calculation of density trends (taking the mean) and different print options (overviews).

Simply make better use of your data
The IML software is the perfect basis for expertises and analyses. Coloured graphs, detail views and comparisons simplify the single evaluation steps and generate a clear arrangement of the data filing structure over the long term.

Enlarged software modules
The software module ‘pole inspector’ allows the user to evaluate automatically information about cavities and the wood quality of utility poles. The electronic unit as well as the software F-Tools Pro display graphically quality violations.

With the Bluetooth transmission it is possible to record the measurement values directly while drilling (mobile control) with the laptop.

Screenshot taken from the automatic evaluation software.

Always the appropriate IML-RESI system – also, for your application

Mechanical series
- The IML-RESI MD300
  Light hand drilling instrument for preliminary investigations of trees
- The IML-RESI F series
  Handy and all-purpose for flexible use
- The IML-RESI M series
  Extremely sturdy and resistant for demanding wood

Electronic series
- The IML-RESI E series
  Digital storage of measurement data and printout on the spot
- The IML-RESI B series
  Precision measurement instrument with extremely high resolution for detailed results
- The IML-RESI PD series
  Uncompromising precision for all kind of applications with individual special options
IML-RESI systems
for basic applications

A wide choice for the evaluation of tree and wood damages

The IML-RESI system is composed of 6 instrument series that are available with different designs and drilling depths depending on the application field.

For more information about our instruments see: www.iml.de

Light and fast:
IML-RESI MD300
- Cost-saving measurement instrument for preliminary investigations
- Easy measurement of the drilling and penetration resistance thanks to direct reading of the drilling depth on a scale of 1:1
- Results directly on the spot
- Fast and easy handling

Compact and all-purpose:
The IML-RESI F series
- Flexible in difficult environments
- Driven by a cordless drill
- Record of the measurement graph on a weather-proof wax paper strip
- Optionally available with Bluetooth electronic unit and IML software

Sturdy and resistant:
The IML-RESI M series
- Mechanical measurement instrument
- Compact and break-proof case
- For use in rough conditions
- Suitable for hard wood
- Record of the measurement graph on a weather-proof wax paper strip
IML-RESI systems for demanding applications

Individual storage of measurement data

This series collects the results electronically so that they can be stored and evaluated. Additionally the results are recorded on a paper strip on the spot. A technical seminar helps the user to interpret the displayed measurement profiles correctly.

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For fast diagnoses: The IML-RESI E series
- For regular controls of trees and timbered houses
- Record of the measurement data with a separate electronic unit
- Additional printout of the measurement graph on a paper strip on the spot

Precision drilling instrument with high resolution: The IML-RESI B series
- Superior detailed measurement results for well-grounded expertises and official analyses
- Specially for experts, universities and research institutions
- Electronic storage of the measurement data as well as printout of the measurement graph on a thermal paper strip on the spot
- Resolution: 0,04 mm

Uncompromising precision: The IML-RESI PD series
- Sturdy and handy aluminum case with integrated system management
- High measurement accuracy 0,02 mm/300 mm
- Integrated 45° adapter for individual applications
- Comfortable, thanks to a clearly arranged display and automatic measurements
- Enlargeable options available (modular system)
Early detection thanks to sound velocity measurement: The IML Micro Hammer

For a gentle measurement of inner defects

The IML Micro Hammer measures the time it takes an impulse to travel through the tree. Due to the characteristics of sound velocity for each tree species, the measurement values clearly display the interior conditions of a tree.

The IML Micro Hammer localizes:

- Decay in the early stages of growth
- Brown and white rot
- Cavities, wet cores
- Cracks in fork areas

Modern technology, easy handling

To measure the sound velocity with the IML Micro Hammer it is necessary to enter two special screws on opposite sides of the tree.

The attachment system with magnetic fixtures minimizes the damages caused to the tree. The impulse is introduced via the impact screw and absorbed by the supersensitive sensor screw. The result is transmitted to the electronic unit.

- OLED display for showing the measurement results
- Electronic unit for collecting and saving the measurement data
- Integrated Bluetooth function for wireless data transmission to your PC or laptop
- Weather and water resistant components for all-weather use
- Supersensitive digital micro sensors for high measurement precision
Measurement of the bending fracture strength and compression strength with the Fractometer

Evaluating objectively the strength of wood
Just to make sure: With the Fractometer it is possible to determine the parameters of bending fracture strength and (depending on the version you use) additionally of compression strength of wood cores. Therefore you have to extract a wood core with an increment borer. The wooden cores are placed in the Fractometer and then loaded with bending and compression forces. The obtained objective values for the bending fracture moment, fracture angle and fracture energy provide the basis for statements about the bending fracture strength and the compression strength.

The Fractometer versions
Fractometer I:
Pocket sized instrument to measure the bending fracture strength

Fractometer II:
Mechanical measurement instrument to measure the bending fracture strength and the compression strength

Fractometer Print:
Electronic version to measure the bending fracture strength and the compression strength with a separate electronic unit and data evaluation on the PC.

Get to the heart of growth: Analysis of the annual rings with the IML Measuring Table
Identifying the growth characteristics of trees
With the IML Measuring Table you can evaluate the annual rings of wooden cores and tree discs quickly and easily.

- Exact evaluation of annual rings of core samples and tree discs
- Identification of disturbances of development and growth as well as weak growth
- Illustration and assignment of changes, dysfunctions or weak points
- Findings about the vitality of a tree
- Possible conclusions on environmental influences

IML Measuring Table and accessories
- Light measuring table with electronic unit and IML software „T-Tools Pro“
- Digital microscope camera or high resolution stereo microscope available as supplementary equipment

Fractometer I
(measurement of the bending fracture strength)

Fractometer II
(measurement of the bending fracture strength and the compression strength)

Fractometer Print
(electronic measurement of the bending fracture strength and the compression strength)
Our service: Quick-reacting, reliable and flexible

Service inspection and calibration
To maintain the high and reliable measuring accuracy of your instrument even after long use, we offer the annual service inspection.

This service package includes a professional calibration with detailed report, a quick execution and warranty of functional reliability of your instrument.

The IML guarantee of quality
Since 1998 IML is certified by TÜV. The annual ISO audit proves our extraordinary diligence, high precision, reliable customer service and stands for many years of experience.

Our customers can always rely on the constant quality, the reliability and high measurement accuracy of our test and measurement instruments.

IML Technical Center
Our experienced and quick-reacting Technical Center fixes defects and dysfunctions of our high precision test and measurement instruments. Service inspection or repairs - your measurement instrument is in good hands with us!

Our qualified technicians will help you with all problems and questions concerning your measurement instrument.
In case of technical problems our experts will try to help you directly on the phone.

Phone: +49 (0) 6222 6797-0
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