

### Tree Inspection



## TOOLS FOR AN INTERNAL VIEW

Test- and Measuring Instruments for Trees and Timber Structures

You can't see it.  
Exterior looks solid

You can't hear it.  
Tapping sounds solid

And you can't measure it without the  
IML-Resistograph!

The **IML** Resistograph  
There is **No** Substitute!

### Pole Inspection



TOLL  
FREE 800-815-2389  
[www.imlusa.com](http://www.imlusa.com)

# THE IML RESISTOGRAPH SYSTEM

## The Resistograph F-Series

### WHAT IS A RESISTOGRAPH?

The IML Resistograph is an attachment to a Bosch drill that aids in the early detection of decayed timber structures. The IML Resistograph System is based on a drilling resistance measuring method. A drilling needle with a diameter of 1.5 mm to 3.0 mm penetrates into the wooden structure at a constant speed, and the drilling resistance is measured. As the Resistograph penetrates the wooden structure, the data is recorded on a wax paper strip at a scale of 1:1. Because the drilling needle's diameter is so small, the damage to the timber is insignificantly small.

### WOOD DECAY DETECTION INSTRUMENTS

Our special test and measurement instruments are used to detect and locate internal defects in trees (along roadsides, in parks or forests) and wooden constructions (timber poles, playground equipment, building and bridge inspection), which often can not be seen from the outside. With the Resistograph, you will get detailed information about the inside of trees, roots and utility poles are determined by measuring the drilling resistance. The instruments work precisely and fast.

#### Use our instruments to:

- Detecting decay and rot in various stages
- Recognize compressed separation zones
- Locate ring shakes, cracks and cavities
- Analyze annual rings
- Determine annual ring width and growth
- Determine the degree of decay and
- Evaluate the quality of the wood



Playgrounds

### RESISTOGRAPH ADVANTAGES

The advantages of the Resistograph are quite obvious: The wood will only be insignificantly injured, and the drilling hole closes itself. If due to a special drilling angle that was customized for the drill bit. A special computer program (F-Tools/F-Tools Pro) is available for all instruments. If the Resistograph is equipped with the Bluetooth Electronic Unit the user might as well download all information gathered during the day into the above mentioned computer program. Graph profiles can then be downloaded and analyzed.

#### IML Resistograph Facts:

- Fast, accurate and reliable
- Find wood decay, rot, hollow areas and cracks
- Analyze annual ring structures
- Determine growth tendency according to the width of annual rings
- High efficiency due to less work having to be done
- Unnecessary wood damages are prevented



Tree Care



Pole Inspection



Building Inspection



Bridge Inspection

## TREE CARE INDUSTRY

### Decay Detection Instruments for the Serious Arborist!

The IML Resistograph has revolutionized our ability to detect decay in trees, utility poles and wooden structures such as log bridges and wooden crib walls. I have found it to be a very sophisticated and accurate instrument. With a small amount of practice, the user can readily discern the extent of decay present. The standard output on wax paper provides a good reference for later use. The digital output is, of course much better, not only because the user can examine the data in much more detail, but also because it can be more easily exported into reports. I have used it in a wide range of situations testing roots, trunks and limbs, from bucket trucks and from a single line rope.

**Dr. Julian A. Dunster, R.P.F., M.C.I.P., ISA Certified Arborist, RCA #378**



### TREE CARE INDUSTRY (VTA)

While experienced observation will continue to be important, combining visual tree assessment and IML instruments aids in early detection of decay, preventing personal injury and property damage due to fallen trees. The IML Resistograph measures the degree of decay and remaining wall thickness, giving the user a quantification of the structural integrity of trees. The inspector can also attach the 45-degree adapter to measure and record the wood density below ground level. The resulting data is the kind of detailed documentation managers and consultants need to defend or justify their decisions whether or not to remove a tree.



I have been using the IML Resistograph for ten years. In fact, I purchased one of the first instruments sold in the US. This tool has helped me to save many significant trees and make confident recommendations for removal of hazardous trees. The IML Resistograph is especially valuable in situations where the tree defect is located high in the canopy or below ground. I am a cautious and conscientious arborist, not one to drill holes in trees without good reason. When I am looking at a questionable tree, I need accurate information about the hidden cavities. With the IML Resistograph, I can collect accurate data and clearly communicate the results to the tree owners or other interested parties. Currently there is a great demand for tools to evaluate defective trees that may result in personal injury/property damage. I fully expect to see many tools for evaluating tree condition on the market in the future. Based on my experience so far, I am confident the IML Resistograph drill will continue to be a valuable tool that won't gather dust in my closet!

**Scott D. Baker, RCA #414, Tree Solutions, Inc.**

### The IML Resistograph for Hazard Tree Evaluation

- Reduce risk of failure of forests, park and roadside trees
- Evaluate tree defects quickly and accurately
- Measure the location and extend of decay
- Quantify and record decay
- Detailed and precise analysis
- Scientifically based and proven technology



## POLE INSPECTION

Replace No Pole Before Its Time!

### POLE INSPECTIONS WITH THE IML RESISTOGRAPH

The IML Resistograph is revolutionizing the utility pole inspection industry. Utility poles require regular inspections to evaluate the quality of the timber and level of wood decay present in determining whether the pole should be replaced. Most pole inspection services use primitive techniques that do not measure or record wood decay. More sophisticated procedures are needed to gather accurate data to assess a pole's life span.



In our 15 years of experience working in the utility industry, we have used various methods for testing poles (sound, drill and cork), but nothing compares to the accuracy and reliability of the IML Resistograph. We have found that it not only gives us very accurate and real-time results, but also has increased our productivity in the field, which in turn saved our customers needless replacement of poles and maintenance costs. The thing we like most about the IML Resistograph is that it is non-destructive to the pole. With the 45-degree adapter, we are able to test the pole below grade where most decay begins. We used to have to dig around the pole to test below grade and disturbing the compaction of the soil around a pole can do much more harm than good. Over the last two years we have researched and compared various methods of testing utility poles and all types of wooden structures. We have found the IML Resistograph to be the most accurate and reliable form of testing. We are not only pleased with the product but the service as well.

**Shawn Palmer, President, TMS TECHNOLOGIES**

### POLE INSPECTION BELOW GROUND

The IML Resistograph provides an exact measurement of the current condition of the inspected utility pole. The instrument is positioned at the base to measure wood decay at ground level. The inspector then attaches the 45-degree adapter to measure and record the wood density below ground level. With this technology, digging is no longer required and many times, costly reinforcement of the pole is avoided.



When I first started in the telephone business, I was shocked at how crude and inaccurate the old way of sound testing poles seemed. Imagine my surprise to find a device like the IML Resistograph in 2000. It is the only method of testing wooden poles that will give an accurate and reproducible result every time. It is the only accurate method of testing poles encased in concrete. It is the only way to test for compression weakness at the brand level. The fact that the test results can be referenced and compared from year to year is invaluable to all utility systems. This is a product that is a welcomed addition to our industry.

**Wayne B. Camick, Director, International Operations, WELTEC**



# IML SOFTWARE CENTER

## Measurements, Results and Analysis

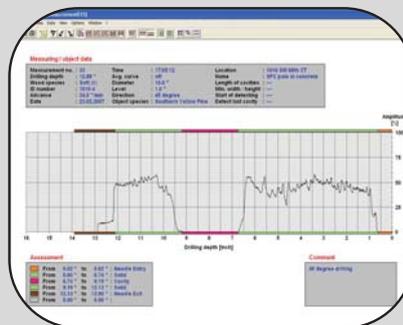
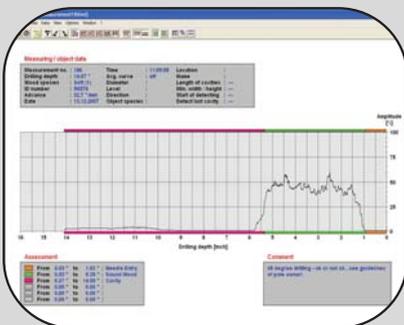
### IML F-TOOLS

IML's instruments are reliable, lightweight, and easy to use, and provide a clear picture of the condition of the wood in structures and trees. While experienced observation will continue to be important, these instruments give the user a quantification of the structural integrity of trees and wooden structures. The data is the kind of detailed documentation managers and consultants need to defend or justify their decisions to removal or let stand a tree or structure.



#### Use your data effectively

With the IML F-TOOLS software data can be downloaded into the computer for further analysis. There the data can be stored for years and referenced as needed. IML has designed software for each type of instrument with utility and ease of use in mind.



### NEW BLUETOOTH-ELECTRONIC UNIT

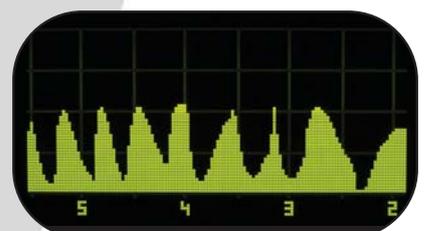
The Bluetooth-Electronic unit comes in an impact-resistant case with an integrated Lithium-Ion battery and is mounted to the bottom end of the Resistograph. Commands are given fast and easily by a navigation button. Thanks to the OLED display the measurement data can be easily read even by strong sunlight. Data storage is safe thanks to the modern and very compact technique.

#### Wireless Technology

The integrated Bluetooth-mode allows the wireless transmission of your measurement data to the PC or laptop. With the PC record mode it's even possible to transmit the data to the PC and save them simultaneously to the measurement process.

The following data will be shown on the OLED display:

- Measuring curve (simultaneous recording)
- Advanced speed stage
- Free memory storage (residual length)
- Battery capacity
- 20-digit ID-number
- 20-digit note
- Sensitivity stage (hard/soft wood)
- Date & time
- Display language: english and german



## IML, INC.

Wood Decay Detection Instruments

### ABOUT US

IML, Inc. was founded in April 1997. The company mainly involves in import/export activities of test and measuring instruments for wood diagnosis. The instruments are known as Resistograph and Fractometer which are used for the assessment of wooden structures such as trees, utility poles, playground equipment, timber bridges, and buildings.

### RESISTOGRAPH CERTIFICATION SEMINARS

We also conduct seminars with well known speakers such as Dr. Claus Mattheck and hands on workshops for the Resistograph instrument with IML personnel. We publish newsletters on a quarterly basis and feature up to date information on seminars and tradeshows on our home page.

Please feel free to contact us if you have any questions.

### YOUR DIRECT CONNECTION TO US PAYS OFF

You can order directly from IML. When you get your instruments directly from the expert, including services, we can advise you, answer all of your questions and address any concerns you may have. We will ensure you purchase the most suitable instrument to meet your needs, saving you time and additional expense.

**Just ask us.**

### CONTACT IML

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