

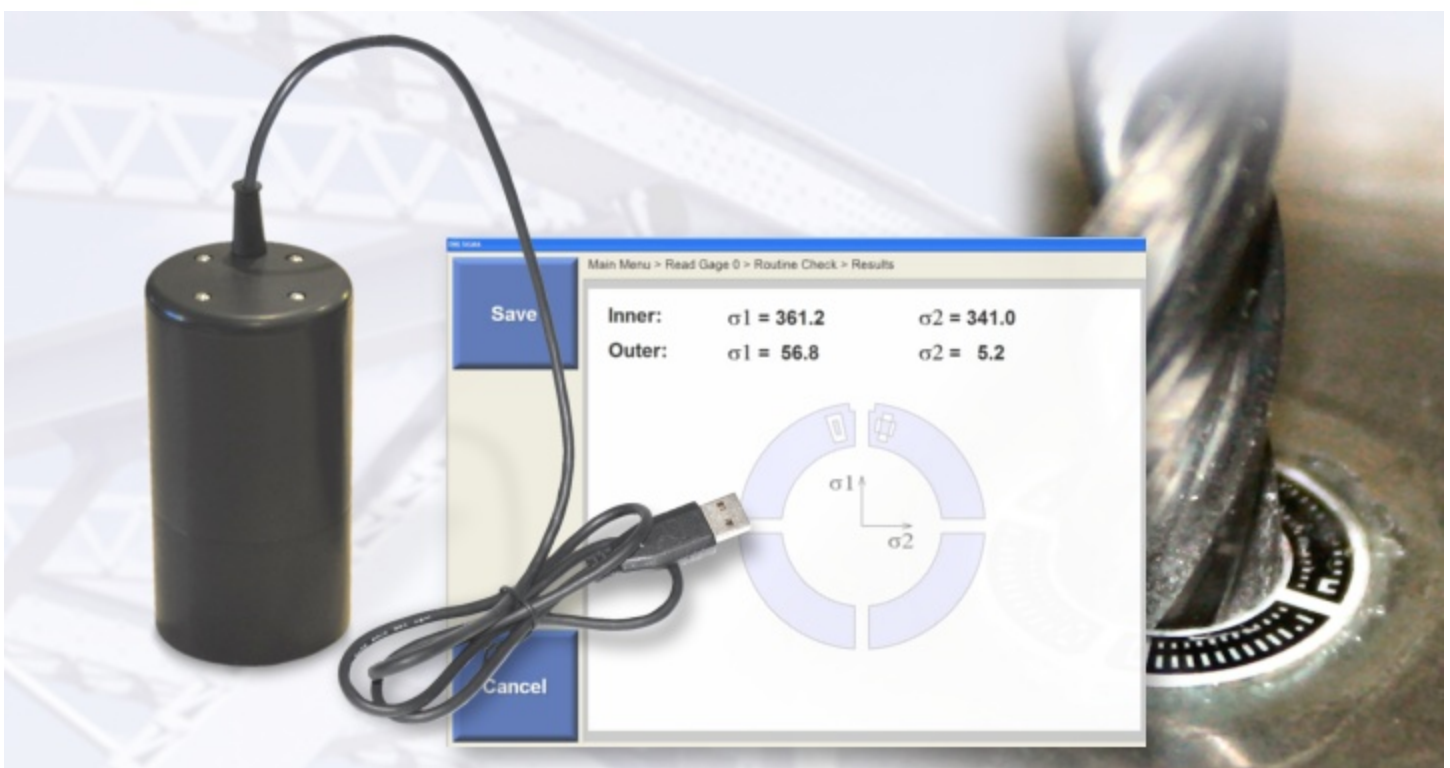


DIRECT MEASUREMENTS, INC.

Sigma

Stress Measurement System

Stress/Residual Stress Measurement



Sigma Features

- Measures residual stress
- Accurate, compact, easy to use
- No wiring, soldering, or separate data acquisition equipment required
- Logs readings in CSV/Excel text files
- Utilizes DMI polymer strain gages
- Includes rugged DMI handheld reader (requires one USB 2.0 port)
- Compatible with Windows XP and Windows 7 operating systems*

Sigma Applications

Civil Infrastructure



Aerospace & Defense



Energy



Laboratory & Testing



* Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

US & Int'l Patent/Patent Pending

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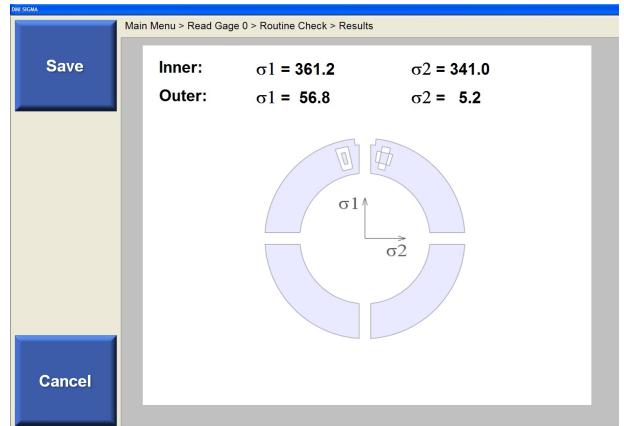
Stress Measurement System

Stress/Residual Stress Measurement

DMI Sigma

DMI Sigma is a software package designed specifically for residual-stress measurement. It utilizes an intuitive 'wizard' style interface that simplifies the measurement process. DMI Sigma works with circular DMI polymer strain gages to measure residual-stress components at the inner and outer gage boundaries. Features include a residual-stress component display, data logging, and more.

DMI polymer strain gages are bonded in desired measurement locations using conventional strain-gage application methods and materials, and readings are taken "as needed" using the DMI handheld reader (typically 'before' and 'after' a stress-inducing event). DMI polymer strain gages work on most materials, including metals, plastics, and composites.



Sigma Operation



Bond a DMI polymer strain gage at the measurement location



Take an *Initial Baseline* gage reading using the DMI handheld reader



Allow the stress event to occur (stress may be intentional or unintentional).



Measure stress by taking a *Routine Check* reading using the DMI handheld reader.

Contact Information

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Technical Specifications

Sigma Handheld Reader

Material: ABS Plastic
Handheld Reader: 5.2H x 2.7D in (132H x 69D mm)
Connection: USB 2.0, 3.3 ft (1m) cable
Accuracy: <10 microstrain^{*1}

Sigma Polymer Gage^{*2}

Material: Polyester
Dimensions: 0.39 in (10 mm) diameter^{*3}
Operating Temperature: -200 to 200 F (-129 to 93 C)

Computer Requirements

Operating System: Windows XP Professional^{*4} or Windows 7 Professional^{*4}
Processor: 1.6 GHz or greater
Connectivity: USB 2.0

Sigma Software

Sigma
Panasonic Toughbook U1 (Optional)
Panasonic Toughbook U1, Sigma software pre-installed

^{*1} DMI results under controlled conditions, actual results may vary

^{*2} Bonding methods and material same as conventional electrical-resistance strain gage application

^{*3} Contact DMI for gage size customization

^{*4} Windows is a registered trademark of Microsoft Corporation in the United States and other countries

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