

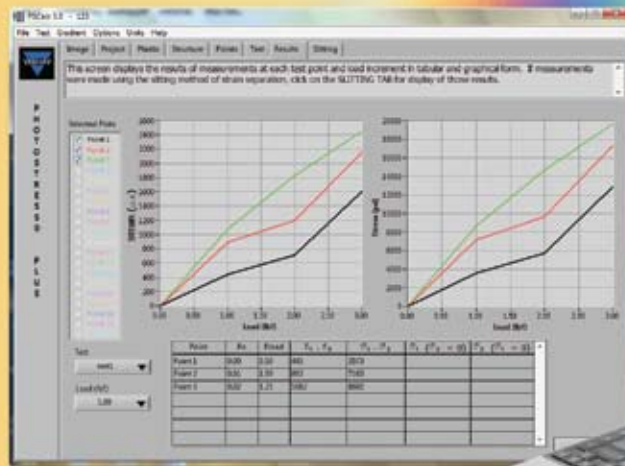


VISHAY INTERTECHNOLOGY, INC.

PHOTOSTRESS

PhotoStress[®] Analysis

The LF/Z-2 Computerized Reflection Polariscope System for Full-Field Stress Analysis



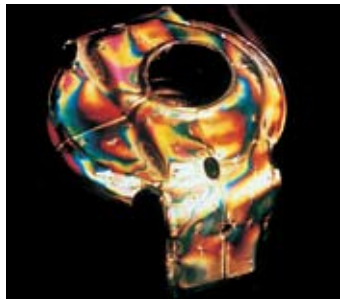


PhotoStress® Analysis

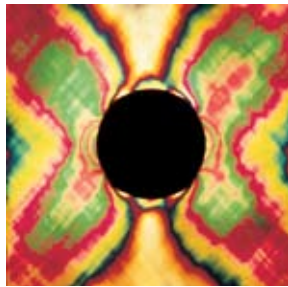
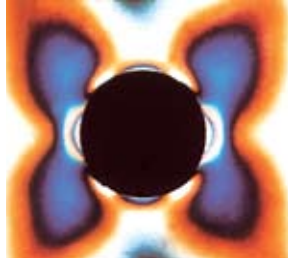
The LF/Z-2 Reflection Polariscope System for Full-Field Stress Analysis

What is PhotoStress® Analysis?

- A full-field stress and strain analysis method
- Can be utilized under various live load conditions
- Suitable for residual stress analysis, assembly stress inspection, and fatigue tests
- Can be applied to various materials (metals, composites, concrete, and more)
- Easy to use and analyze results



Suspensions



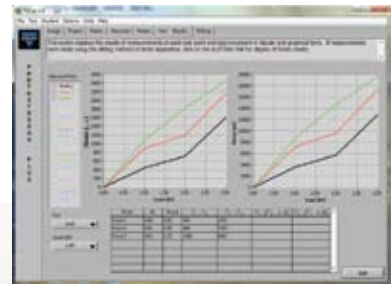
Aluminum (top), composite material (bottom)



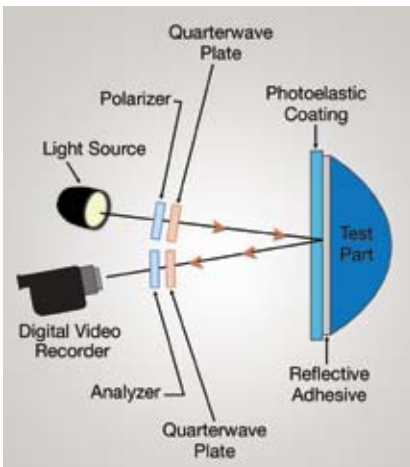
Low load (top), high load (bottom)

About PhotoStress

- The PhotoStress analysis system is composed of a reflection polariscope and PSCalc® computer software that enables the user to store and process LF/Z-2 readings of stress and strain
- A variety of photoelastic coatings may be applied on a wide range of materials, with simple or complex shapes



PSCalc® Software



Schematic representation of a reflection polariscope



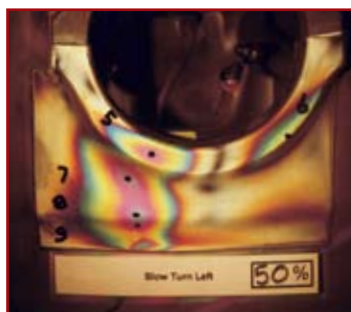
LF/Z-2 Reflection Polariscope— tripod-mounted or handheld



PhotoStress coating applied to a structure of complex shape

PhotoStress® Analysis System – Main Benefits and Solutions

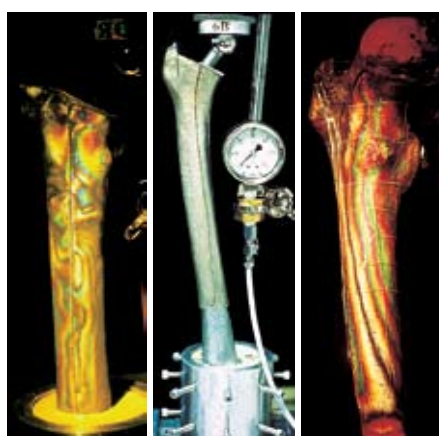
- Instant identification of stress concentrations and zero-stressed areas
- Quantitative measurement of stress and strain at any point on the structure
- Validation of any finite element analysis (FEA)
- Weight reduction optimization
- Analysis of:
 - Stress resulting from fabrication tolerances
 - Stresses which occur during assembly processes
 - Residual stresses due to processes such as welding and casting
 - Simple or complex stress situations



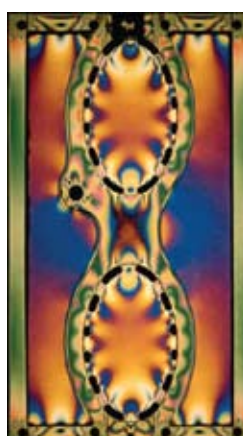
PhotoStress®

FEA

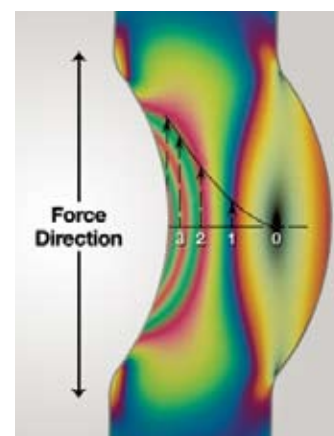
PhotoStress analysis of a landing gear



Human bones—PhotoStress stress distribution analysis



PhotoStress stress patterns of an aircraft fuel door panel under load



Stress distribution in a C-shaped beam

DISCLAIMER All product specifications and data are subject to change without notice. Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product. Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications. Product names and markings noted herein may be trademarks of their respective owners.



Specifications	
Range	From 0% to 150% elongation (by various coating types)
Resolution	≈10 μs (for 3-mm coating thickness)
Measuring Area	Subject to coated area
Working Distance	Up to 3.05 m (10 ft)*
Light Source	White light
Operating System	Windows 2000, XP, Vista
Size and Weight	Maximum height: 1950 mm (76.4") Assembled weight: 2.9 kg (6.3 lb)
Camera Resolution	Function of camera type used
Other Components	PSCalc® computer software, laser-based direction indicator, USB compensator interface, application kit, portable operation handgrip, technical/operating manuals and tech notes

*Distance may be increased by additional light source

WORLDWIDE SALES CONTACTS

THE AMERICAS

UNITED STATES

VISHAY MICRO-MEASUREMENTS
P.O. BOX 27777
RALEIGH, NC 27611
UNITED STATES
PH: +1-919-365-3800
FAX: +1-919-365-3945
E-MAIL: VMM.US@VISHAYMG.COM

ASIA

P.R. CHINA

VISHAY MICRO-MEASUREMENTS CHINA
C/O VISHAY TRADING (SHANGHAI) CO., LTD.
15D, SUN TONG INFOPORT PLAZA
55 HUAI HAI WEST ROAD
200030 SHANGHAI
P.R. CHINA
PH: +86-21-5258-5000, EXT. 6016
FAX: +86-21-5258-7979
E-MAIL: VMM.CN@VISHAYMG.COM

EUROPE

FRANCE

VISHAY MEASUREMENTS GROUP FRANCE
16 RUE FRANCIS VOVELLE
28000 CHARTRES
FRANCE
PH: +33-2-37-33-31-20
FAX: +33-2-37-33-31-29
E-MAIL: VMG.FR@VISHAYMG.COM

SPAIN

VISHAY MEASUREMENTS GROUP IBÉRICA, S.L.
C/COPENHAGUE, N°4, 6 Y 8 - PLANTA 1ª - OFICINA 12
EDIFICIO AL ANDALUS - POLÍGONO EURÓPOLIS
28232, LAS ROZAS, MADRID
SPAIN
PH: +34-916-407-624
FAX: +34-916-375-601
E-MAIL: VMG.ES@VISHAYMG.COM

GERMANY

VISHAY MEASUREMENTS GROUP GMBH
TATSCHENWEG 1
74078 HEILBRONN
GERMANY
PH: +49-7131-39099-0
FAX +49-7131-39099-229
E-MAIL: VMG.DE@VISHAYMG.COM

UNITED KINGDOM

VISHAY MEASUREMENTS GROUP UK
STROUDLEY ROAD
BASINGSTOKE
HAMPSHIRE RG24 8FW
UNITED KINGDOM
PH: +44-(0)125-646-2131
FAX: +44-(0)125-647-1441
EMAIL: VMG.UK@VISHAYMG.COM

ISRAEL

VISHAY PHOTOSTRESS TECHNOLOGY
2 HA'OFAN STREET
HOLON 58814
ISRAEL
PH: +972-3-557-0981
FAX: +972-3-559-5715
E-MAIL: PHOTOSTRESS@VISHAY.COM

www.vishaymg.com
www.photostress.com