



STRESS ANALYSIS LABORATORY

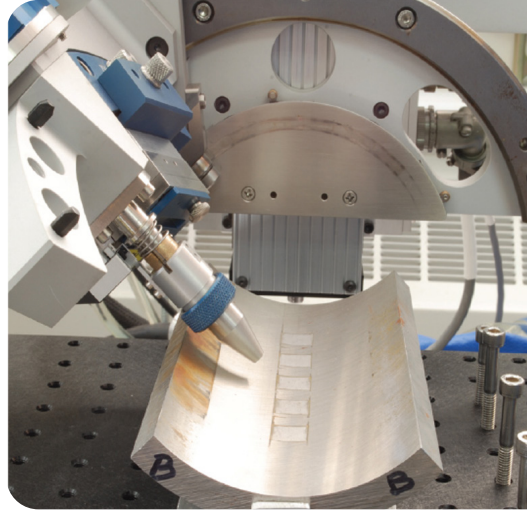
LABORATORY INFORMATION FACT SHEET

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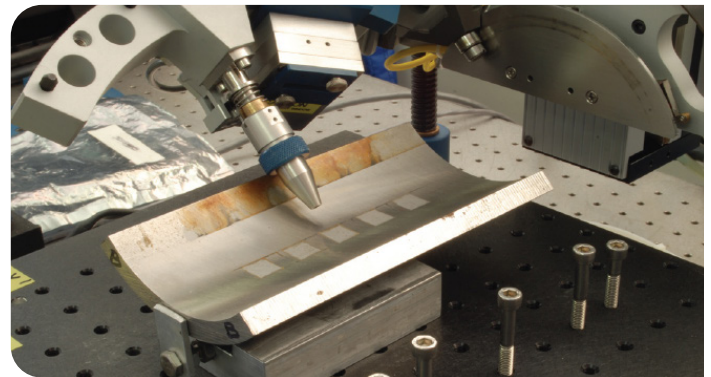
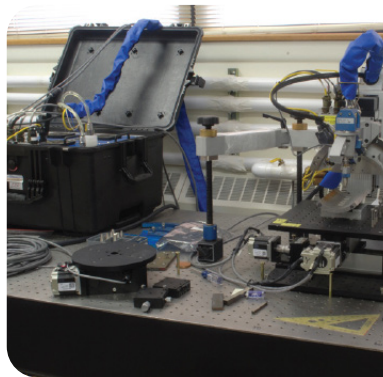


Benét's Stress Analysis Laboratory specializes in the measurement of residual stress and retained austenite using X-ray diffraction. These measurements are often critical in verifying various manufacturing processes such as autofrettage, cold working, and heat treatment.

TECHNOLOGY/FACILITY DESCRIPTION:

The laboratory is capable of stress measurements using both the two-angle and multi-angle sine-squared-psi techniques v.02 in accordance with SAE HS-784. Using these

methods, the laboratory can not only measure stress but also identify conditions such as large grain size, preferred grain orientations, shear stresses, stress gradients, and micro-stresses. The X-ray system includes position sensitive detectors, low-power miniature X-ray tubes, and computerized control, data acquisition, and analysis.



EQUIPMENT AND EXPERTISE AVAILABLE:

- TEC 4000 X-Ray Diffraction System
- Proto Portable Electrolytic Polisher
- Residual stress measurement
- Retained austenite measurement