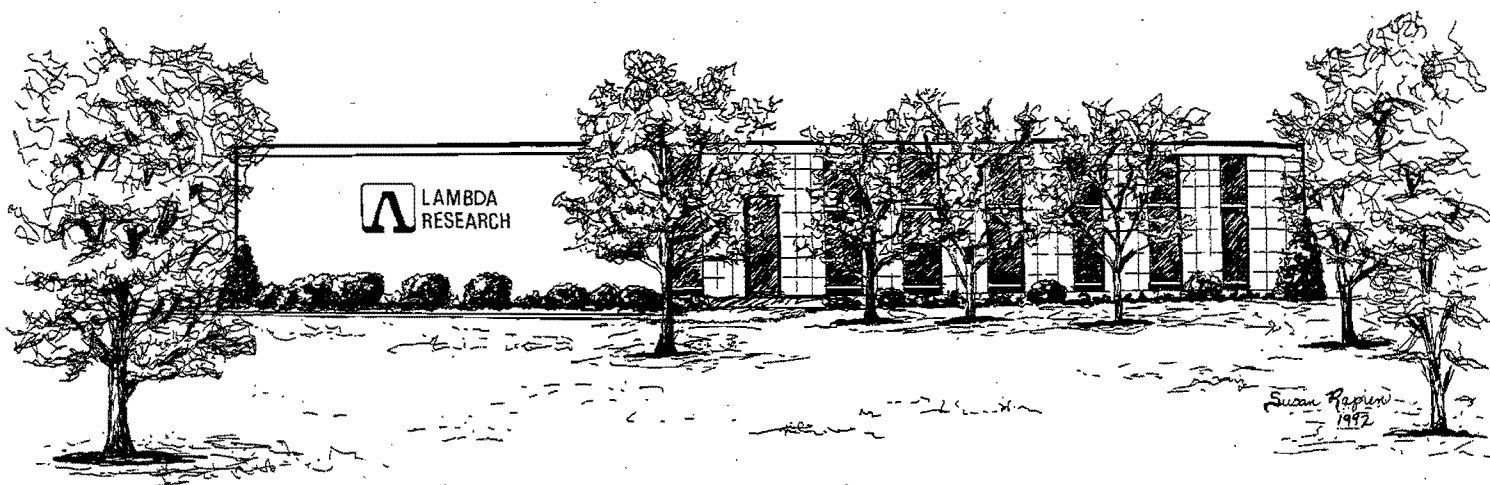


# Diffraction Notes

No. 11  
Fall, 1992

LAMBDA RESEARCH 5521 FAIR LANE CINCINNATI, OHIO 45227 (513) 561-0883



## WE ARE MOVING!

Lambda Research is pleased to announce the move of our corporate headquarters to a newly expanded laboratory facility located on Cincinnati's east side. For your convenience in corresponding with Lambda Research, and in order for us to continue to provide our customers with timely turnaround, please make note of our new address and phone numbers:

LAMBDA RESEARCH  
5521 FAIR LANE  
CINCINNATI, OHIO 45227  
PHONE: (513) 561-0883  
FAX: (513) 561-0886

Please use this address for mailing test specimens, as well as all other correspondence.

In addition to the relocation and expansion of our facilities, we are also proud to announce that 1992 marks our 15 year anniversary as a provider of quality x-ray diffraction testing services.

Lambda Research, Inc. was founded in 1977 as a commercial materials test-

ing laboratory specializing in x-ray diffraction. After years of developing, expanding and improving our testing techniques, services currently being offered include residual stress measurement, quantitative and qualitative phase analysis, pole figure determination, retained austenite analysis, precise lattice parameter measurement, and line broadening studies. Since our establishment in 1977, Lambda has completed over 3,000 client projects. Lambda Research regularly provides services to over 400 clients in the automotive, aerospace, petrochemical, ceramic and medical industries, including major universities and federal laboratories. Lambda Research also provides services to other laboratories as a means of extending their analytical capabilities.

As an independent private laboratory, Lambda Research is able to undertake proprietary studies with no obligation to publish, safeguarding trade secrets. All results are considered the proprietary property of the client.

Projects are varied, ranging from assisting with failure analyses to product development, process optimization or periodic quality control testing. Each project is designed to meet the specific needs of the client. Because most of the software, experimental techniques, and much of the apparatus used is developed at Lambda Research, improvements in data reduction methods and instrumentation can be quickly implemented. The apparatus, data reduction software and testing techniques have been developed and refined as a result of years of experience performing thousands of individual projects. This experience and technology can be brought to bear quickly and efficiently to focus on the solution of a materials problem in the most cost effective manner.

In order to provide our clients with quality testing services, Lambda Research maintains a rigorous Quality Assurance Program, with all test procedures conforming to ASTM, SAE



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or other applicable standards, and written procedures maintained for all test methods.

The use of fully computerized data acquisition insures standard test procedures and virtually eliminates errors in data acquisition.

All personnel at Lambda Research are required to participate in an extensive training program, with weekly in-house seminars to keep the technical staff informed of new developments in the laboratory. All technicians must pass both a written test and proficiency test to be certified to perform a procedure.

Lambda maintains a specialized library devoted to the fields of x-ray diffraction fluorescence and material science, which provides our laboratory team with immediate reference to current technology and research findings.

Lambda Research is accredited by the American Association for Laboratory Accreditation as listed in the current A2LA Directory of Accredited Laboratories. Lambda Research has also been certified by major corporations in the aerospace, automotive and nuclear power industries for meeting their specific criteria for laboratory testing.

Our new facilities include seven automated diffractometers under computer control and linked by a LAN. Three of the diffractometers use Si(Li) solid-state detectors, providing high-energy resolution. Computer-controlled position sensitive detector apparatus allows residual stress measurements to be performed on massive steel components. The energy-dispersive x-ray fluorescence apparatus utilizes direct white x-radiation excitation and

a vacuum sample chamber to improve the detection of low-atomic number elements. Various x-ray diffraction camera, film processing, and sample preparation facilities complete the diffraction laboratory. A machine shop, electropolishing apparatus and strain gaging facilities are available for sample preparation and subsurface studies of metallic materials.

We look forward to continuing to meet your testing needs from our newly updated and expanded laboratory facilities. If you would like further information regarding any of the services we offer, or if you have questions about developing a specific testing program, please feel free to contact us at our new address and phone number.