3FROM THE INFICON PRODUCTIVITY TEAM

Inficon instruments monitor, control, and fine-tune your processes, so you can improve your product quality and yield.

1VACUUM GAUGES

Measure the entire vacuum range with a single, microprocessorbased, digital controller, offering all 4 major measuring tech-

nologies in a modular design that uses less rack space.

2 RESIDUAL GAS 2. ANALYZERS

Monitor, diagnose, and precisely control all vacuum processes (sputtering, etching, evaporation, and



CVD) with the Quadrex family of Residual Gas Analyzers, preferred by the semiconductor industry for their accuracy and easy-to-use software features.

3. HELIUM LEAK DETECTORS

Begin leak testing your system in 3 minutes from start-up with the portable, turbo-pumped UL 100. Its counterflow technology permits full sensitivity testing with minimum operator skill.



Inficon advanced technology — precise, practical, affordable.



East Syracuse, NY 13057 (315) 437-0377 See us at the Materials Research Society Show Booth No. 207

Engineering Foundation Issues Call for Papers on Modeling of Casting and Welding Processes

The fourth annual conference on Modeling of Casting and Welding Processes will be held in Palm Coast, Florida, April 17– 22, 1988. As in previous years, the conference will facilitate the interchange of information among government, industrial, and academic researchers interested in solidification modeling. Abstracts are requested on heat flow, stress and strain, advanced processing, ingots, traditional castings, near-net-shape castings, welding, pre- and post-processing, high speed computation, artificial intelligence, "expert" systems, "special effects" output, and experimental verification.

Several tutorial sessions and a panel discussion are planned. A 3D casting will be made by Prof. G.J. Abbaschian (University of Florida), and a cash award will be given for the best simulation.

The preliminary program is as follows: • Heat flow analyses for conventional ingots and castings

• Heat flow analyses of welding processes

• Analysis of near-net-shape processing methods

• Analysis of stress/deformation during solidification

• Fluid flow in casting/weldments

 Advanced solidification processing methods

Experimental correlations

CAD/CAM, CAE, pre and post-

processing, color and animation

 Future directions and needs — panel discussion

CHAPTER NEWS

Submit TMS format abstracts by **October 15, 1987** to Anthony F. Giamei, MS-22, United Technologies Research Center, Silver Lane, East Hartford, CT 06108. *Abstracts will be accepted through two weeks following the deadline*.

Conference fees, including registration, accommodation, meals, etc. range from \$700 to \$795. For further information contact the Engineering Foundation, 345 East 47th Street, New York, NY 10017; telephone (212) 705-7835; cable ENGFOUND NEW YORK; telex 126022.

Electroceramics Meeting Scheduled for King's College

The Basic Science Section of the Institute of Ceramics (Shelton House, Shelton, Stoke-on-Trent, UK) will hold a meeting on electroceramics December 16-18, 1987 at King's College, London, UK. Topics include:

• Preparation of materials — mixed oxide and organometallic routes, multilayer structures, sol-gel, sputtering, and CVD preparation of thin films

Capacitor dielectrics

• Microwave ceramics—both dielectric and magnetic

• Sensors and transducers — including pyroelectric, piezoelectric and electro-optic ceramics, thermistors, varistors, and ceramic gas sensors

• Conducting ceramics — particularly solid electrolytes

For further information contact J.G.P. Binner, Department of Ceramics, University of Leeds, Leeds LS2 9JT, UK; or L. Cartz, Office of Naval Research Branch Office, London, P.O. Box 39, FPO NY 09510.

Penn State Student Chapter Visits NBS

On July 29, 1987, 12 members of the Pennsylvania State University Student Chapter of the Materials Research Society traveled to the National Bureau of Standards, Gaithersburg, Maryland. During the one-day field trip, members toured two divisions, the Ceramics Division and the Polymers Division, of the Materials Science branch of the National Bureau of Standards.

The Ceramics Division tour began with an overview presentation of current activities in ceramics at NBS. This was followed by tours of the particle characterization laboratory, x-ray powder diffraction laboratory, thin films laboratory, and phase diagram facilities.

In the afternoon, the tours were shifted to the Polymers Division. A broad overview of the activities within the polymers division was achieved by excellent presentations of current research projects in the various facilities. Tours covered the molecular weight characterization laboratory, small-angle x-ray scattering facilities, polymer matrix composite characterization laboratory, fluorescence monitoring laboratory, and electrical properties of conducting polymers facilities.