

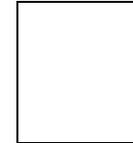
SERVING YOUR ANALYTICAL NEEDS SINCE 1984

Spring 2001

IMR RECEIVES NADCAP ACCREDITATION / GE APPROVAL

Deena Crossmore, CQE, Quality Manager

IMR recently received NADCAP accreditation for a Materials Testing Laboratory (MTL). NADCAP (National Aerospace and Defense Contractors Accreditation Program) is administered by a division of SAE called the Performance Review Institute (PRI). PRI is responsible for the national qualification/accreditation program for the aerospace industry. Independent auditors, hired by PRI, came to audit IMR on November 28th through December 1st, 2000. On January 22nd, the group of Prime Contractors that make up the overseeing group voted to grant us accreditation.

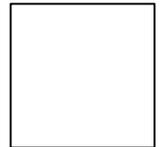


Materials Testing Laboratory

What does NADCAP accreditation mean to you as a customer? It means:

- 1) that IMR is now approved to perform testing for nearly all Aerospace applications,
- 2) that IMR will follow the most stringent quality policy and testing guidelines when performing your work,
- 3) that IMR must now store samples for a minimum of 6 months, unless otherwise instructed in writing,
- 4) that IMR may require more information about your parts (heat, lot, etc.),
- 5) that IMR will have a defined policy for retesting parts when a customer requests it, and
- 6) that IMR has preliminary approval to perform testing for GE Aircraft Engine. A formal GE Audit will be performed by July 2001.

If you have any questions or need a copy of our certifications, please contact Deena Crossmore, Quality Manager by phone or [e-mail \(deena@imrtest.com\)](mailto:deena@imrtest.com).



2001 Progress Report

Steve Ruoff, President

During the past year, we at IMR have worked tirelessly to deliver on a promise we made three years ago – to build a World Class Testing Lab that can deliver on its' promises. As we begin year four of a five year development plan, we bring you our BEST YET:

- A dedicated, trained staff of 36 Materials Engineers, Scientists, Chemists, Technicians and Support Personnel who I believe are as good as they get.
- A quality system that has been tested to the highest standards set by the Aerospace Industry.
- A recently expanded (for the third time) state-of-the-art 14,000 sq. ft. laboratory and research facility.
- More capacity than ever to serve your needs.
- Reduced cycle times.
- More equipment, analytical tools and services.
- An increased desire to earn your trust.

In this coming year we plan to invest in the new technologies that you want and to continue the process of self-evaluation and

renewal in all aspects of our business.

Thank you for your support and for allowing us to serve your analytical needs.

CHEMISTRY DEPARTMENT MEETS "ON TIME" GOAL

Tim McGrady, Department Supervisor

At the start of the year 2000, the Chemical Analysis Department set a goal to cut a full day off of our normal lead time of 3 working days. We hired additional chemists and technicians, added approximately \$200,000 in new analytical equipment and studied our work flow to improve our turn-around times.

I am pleased to report that not only have we achieved this goal, but we have surpassed it, meeting nearly 100% of our customer imposed due dates and reducing overall cycle time to less than 48 hours. On behalf of the 5 chemists, two technicians, and one administrative assistant in my department, I want to thank our customers for giving us the opportunity to serve them.

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Winter 2001

Additionally, I would like to congratulate the members of the chemistry department on completing the NADCAP audit with zero findings!

Employee Training

IMR is committed to providing employees access to the latest training, educational programs, and technical conferences; and also supports their independent study and courses at local colleges. Here is a run-down of recent training activities:

\$ Larry Canfield, Machinist: Recently completed a week- long training course sponsored by Hardinge Machine Tools for training on our Cobra 42 CNC Lathe.

\$ Jeremy Hansen, Chemist: Completed a week long training course with Jarrel-Ash on analytical techniques utilizing our TJA IRIS ICP Analyzer.

\$ Peter Damian, Chemist: Completed a one-week course on the operation of our OneSpark Optical Emission Spectrometer.

\$ Dave Christie, Ron Parrington, Ed Brothers, and Steve Ruoff attended a one day symposium on micro-electronic failure analysis.

\$ Ed Brothers, Senior Research Scientist: Attended the National Microscopy and Microanalysis Conference.

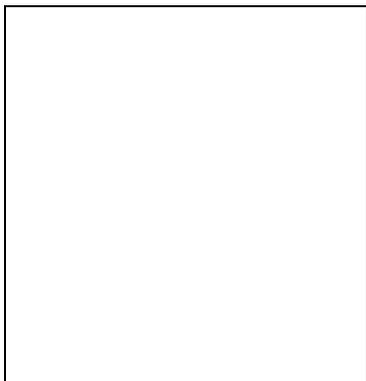
\$ Neil Burns, Staff Metallurgist: Attended a conference on Corrosion Science sponsored by the regional NACE committee.

\$ Terri Cheatham, Chemist – Non Metallics Group: Terri completed a 3 day course on the advanced thermal analysis of plastics.

\$ Rick Contento, ESS Lab: Completed a week long ASTM course on Salt Spray and Cyclic Corrosion testing and the evaluation of results.

New Equipment:

New Metallograph: The metallurgy department has recently upgraded it's microscope capabilities with the addition of an Olympus IX50 inverted metallograph.

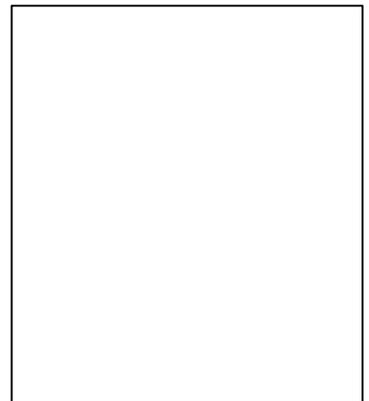


The advanced optics provide finer resolution, while the fluorescence cube aids image analysis when used with our

fluorescent impregnation epoxy. Compatible with our digital cameras, and fully equipped with darkfield, polarized light, and DIC, this microscope is quickly becoming our workhorse.

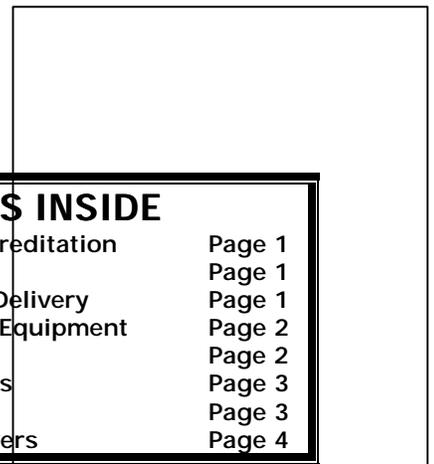
Corrosion Services: Neil Burns, one of our Staff Metallurgists, specializes in corrosion testing and analysis of its effects on metals. He has put together a comprehensive brochure on our corrosion testing capabilities. If you would like a copy, please call Neil or check out our web-site for details. Go to www.imrtest.com, then go to Corrosion Testing.

New Microhardness Tester:
Our new Mitutoyo HM-112 microhardness tester has already proven its efficiency. The turret was designed to accept two indentors and three objectives. The digital X-Y drives provide repeatable hardness profiles. With a load range of 10-1000 grams, this machine can easily handle light-load hardness applications such as PM-particle, plasma coating, phase comparison, and platings.



New Column Saw: We purchased this saw with one thing in mind – being able to cut large objects down to size so that we can make test specimens. It does the job well and complements our arsenal of machine tools

Instron Tensile Tester:



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The Mechanical Department purchased a New Instron Model 5584 30 K tensile tester. In addition we purchased the complete Merlin software package

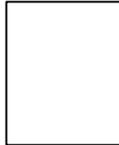
IMR's Open House: Again a Big Hit!

Our third annual open house and technical seminar drew over 150 regional customers to tour our facility, attend seminars and enjoy a Texas sized BBQ put on by the Dinosaur Barbeque out of Syracuse, NY. If you have not attended one of these yet - mark your calendar for this year on Friday October 5th. If you did not receive our Open House Invitation Flyer and would like one in the future please give us a call. We only mail it to customers who are located within a few hundred miles of IMR, but if you want to come from California - that's okay with us!

New Employees/ Promotions:

Lou Koconis joins IMR

Big Lou, as we call him, has joined IMR as Lab Manager of the mechanical and chemistry labs. Lou was with Chicago Spectro Service Laboratories for 7 years as a laboratory technician, then moved onto Charles Kawin / Conam Kawin for 22 years (19 years as Lab Director / Vice President and then 3 years as Division General Manager in Chicago, IL.). "I was looking for a way to get back to Upstate New York, which is where my wife is from and Jeff and Steve created this opportunity for me. They are great guys to work for".



David Feavearyear, Mechanical Engineer

Dave holds a 4 year degree in Mechanical Engineering from Rochester Institute of Technology. He has over 10 years of experience in testing laboratories. In his spare time he enjoys woodworking, sailing and skiing.



Larry Canfield, Machinist in Training

Larry comes to IMR after many years in textile manufacturing. He is working closely with Klaron Smith to become a machinist. So far he's a natural.



John Drake, Sample Preparation Specialist

John was hired into the machine shop sample prep area, which basically means he is the first guy to handle large samples that require cutting. John can handle large things since he can bench press over 450 pounds.



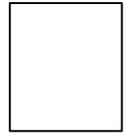
Greg Belanger; Chemical Lab Technician

Greg holds a 4 year degree in Biology and also studied organic and inorganic chemistry. He has one year of prior lab experience. Greg is training on the Optical Emission Spectrometer.



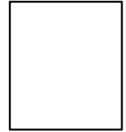
Alan Bradley; Chemical Lab Technician

Al is trained on carbon, sulfur, oxygen and nitrogen analysis, and is training on salt spray. He recently got married and is settling down with his wife here in Ithaca.

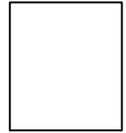


Lisa White; Receptionist

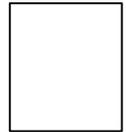
Lisa was hired after the recent promotion of Lisa Greene. She will handle front office reception, report distribution, and the phones.



Lisa Greene has been promoted to Technical Report Specialist for the Non-Metallics, Metallurgical and Failure Analysis Departments.



Klaron Smith has been promoted to Supervisor of the Machine Shop



Visit our Web Site at
www.imrtest.com
 or email us at imr@imrtest.com.

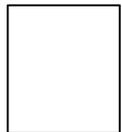
Appointments:

In October, Ron Parrington was elected chairman of the ASM International Failure Analysis Committee. Key responsibilities for this committee include organizing "Practical Failure Analysis: The Symposium", a 3-day event slated for November 5-7, 2001 during ASM's annual conference and exposition (Materials Solutions Week) in Indianapolis. Another important task is to rewrite the ASM Handbook Volume II, "Failure Analysis and Prevention". Ron will be intimately involved in these efforts, serving as session chairman/presenter at the symposium and as an editor/author for the ASM Handbook.

Steve Ruoff, President, was named to the Editorial Board of "Practical Failure Analysis" magazine published by ASM International.

Photographs from IMR:

Ted Turanski, Metallurgist



A part with localized corrosion after salt spray; a fatigue fracture originating at a large inclusion; a cross section through a plating or surface defect; the description of a customized mechanical test set-up...

In these and other situations, a picture is often the best way to communicate results to our customers and their vendors. In the last three years, IMR has successfully evolved beyond using Polaroid® and 35mm film to digital photography. In fact, IMR employees will print more than 11,000 digital photographs this year alone. Print quality and color are quite good, and improving with every

generation of printer.

Photographs are added to IMR reports whenever words just don't get the job done. This doesn't mean you can't get photos for routine exams or simple inspections. Many of our customers do like to see a plating thickness, a "no red rust", or a weld fusion line with their own eyes. In addition to including these photographs in reports, many of our customers have received IMR photos via e-mail. If you prefer an image format other than .jpg, let us know. When file sizes become an issue (your server's firewall settings will eventually kick in), know that IMR can write these photo files onto a CD-Rom.

IMR has two portable Olympus D-500L digital cameras for general photography. A DVC 1300C is installed on our stereoscope. A Polaroid DMC-1 provides microstructure and cross-section images from our metallograph. SEM photographs and EDS maps are obtained by transferring the signal to dPict software. All of these are compatible with our Image-Pro image analysis station. Finally, we've installed six printers around the building.

Don't forget that images can help you explain your situation to us, too! Helping us at IMR to understand the background of your samples (cut layout, mating parts, a die set, a racking system, or a pre-teardown view) can be as simple as including a photograph in your e-mail or package.

**Spring 2000 Contest
Question and Answer:**

**What Three Primary Metals are
Magnetic??**

The answer:
IRON, COBALT, AND NICKEL
(Gadolinium and Dysprosium are also
magnetic)

**IMR Test Labs
Lansing Business and Technology Park
131 Woodsedge Drive
Lansing, NY 14882**

**Winter 2001
Contest Question:**

**What are the seven metals
of antiquity?**

**Bonus to those who put them
in order of discovery.**

**contact Jeff Zerilli with the answer.
email: jeff@imrtest.com**

**First five people with the correct answer
will win an IMR denim shirt!**