



THE ITL NEWSLETTER

Upcoming conference, ISO Re-Registration, Thermal Physical Property Analysis

Message from the President



Dr. Jacob Kleiman,
President

I would like to take this opportunity to wish everyone the very best in the New Year.

I am pleased to announce our successful re-registration to ISO 9001:2000 in November, demonstrating our firm commitment to high-quality management and business process improvement. I would like to thank team members

for their valuable contribution to this great accomplishment.

We are currently working towards the ISO 17025 certification for the automotive industry. We plan to complete the registration process in by the end of 2004.

I also invite you all to visit our web site, which will shortly include our **equipment list**. The site also provides useful information on the products and services we offer, the ITL team, our publications and our certifications. The web site can be accessed through the following address:

<http://www.itlinc.com>

Leading-Edge Technology: Thermal Physical Properties Analysis

ITL has developed a unique series of experimental and theoretical methods for the characterization of thermal physical properties of materials, among which we can mention:

- The ability to measure properties of rough refractory and insulation materials (using a very fast and inexpensive method that allows measurement up to 2000 K and above);
- Evaluation of material properties can be performed at any environmental conditions (high and low temperatures, deep vacuum or high gas pressure) and in any gas environment and/or humidity;
- A large variety of specimen sizes and configurations ranging from single wall carbon nano-tubes and nanoparticles up to normal bricks. The size, structure and shape of the specimens are coordinated with customers;
- Methods to correctly characterize or identify the “best” materials in conditions where application of ASTM Standards is either forbidden or limited. Among such materials one can mention the following:
 - *Semitransparent materials for heat radiation (highly porous insulation, glasses, dense ceramics and refractories, semiconductors)*
 - *Semitransparent materials for gas convection (highly porous insulation)*
 - *Materials that undergo physical and chemical changes (moist materials, frozen materials, sintering, phase transformation, etc).*

Thermal Physical Property Analysis (CONT'D)

ITL also designs and builds thermal equipment according to customer's requirements. One such example is the system for non-destructive measurements of thermal conductivity of thermal barrier coatings on turbine blades that is being now developed. Our scientists are world-renowned experts in the metrology of thermal physical measurements. ITL is positioned among the leading companies worldwide for investigation of rough refractories, insulation materials, ceramics, metals and rocks. The measurements are conducted both according to ASTM/ISO Standards and to original methods approved and published in ASTM STP and leading professional Journals.

Student Programs

In addition to hosting four students last summer, a student from the TU Bergakademie Freiberg in Germany, Severin Seifert, spent at ITL 3.5 months from October the 12th 2003 to January 30th 2004 in partial fulfilment of the Master Degree requirements in Applied Mineralogy. He investigated plasma-sprayed ceramic coatings on space-grade aluminum substrates for space applications. A great deal of his effort was spent on investigation of thermophysical properties of deposited coatings. He also investigated the thermal optical properties α and ϵ before and after exposure to atomic oxygen, another hazard factor in the space environment.

Upcoming ICPMSE-7 Conference

ITL will be hosting the seventh International Conference on Protection of Materials in the Space Environment from May 10 – 13, 2004 in Toronto, Canada. The following topics will be discussed:

- Protection from Space Environment – MIR, ISS, Hubble, NGST, etc. - from past to future
- Environmental Effects (AO/VUV, Radiation, etc.) and Material Protection in LEO, GEO, and Deep Space
- Fundamentals and Predictive Models of Interaction of Matter with Space Environment
- Development, Synthesis and Modification of Materials for Protection in Space
- Space Materials Ground-based and In-flight Testing and Characterization

To register, please visit our website and click on the link to the [ICPMSE CONFERENCE](#).

How You Can Contact Us

You can reach us by calling, writing, faxing, e-mailing or visiting.



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