

# Technical Notes

## Review of the IMAC-XV Impact Testing Panel Session

by Jim De Clerck and Eric Little

*The following is a summary of a successful session held at IMAC. This shows the pro-active philosophy being taken by the participants in this conference. I would like to commend the organizers of this session for taking the initiative to involve live demonstrations in the exhibit hall with the technical program.*

— Kristin L. MacDonald, Publisher

One of the very popular sessions at IMAC-XV in Orlando, Florida, this past February was the Impact Testing Panel. The intention of this session was to review some of the basic concepts of impact testing and provide a forum where conference participants could share their experiences. One participant claimed "That was the best session of the conference." The original idea for this session spurred from the Young Engineer Program first offered at IMAC-XIV in Dearborn, Michigan. The intention was to offer panel sessions on some of the 'modal basics' and repeat some of the more popular topics every few years. With more than one hundred participants, the Impact Testing Panel was certainly popular.

The session was organized such that there were four complimentary opening papers and then an opportunity for questions and discussion. The papers were presented on: Structural Impact Testing Force Spectra by Marty Trethewey; Windows Used for Impact Testing by Bill Fladung; The Strengths of Impact Testing by Chuck Van Karsen; and Weaknesses of Impact Testing by Dave Brown. The second half of the session began in the University Technology Center in the IMAC-XV Exhibit Hall, where Dave Brown and Bill Fladung provided a multi-reference impact testing demonstration on a model bridge. They also discussed how impact testing was applied to a real bridge using a special impact fixture. After the demonstration, the session reconvened for the panel discussion. Both the audience and the panel were eager to share their experiences using impact testing. Much of the discussion centered on impacting non-linear structures and using impact testing to analyze rotating machinery.

If you have any feedback on this method of presentation, or specifically about the IMAC-XV Impact Testing Panel, please contact SEM at [sem@sem1.com](mailto:sem@sem1.com), or call 203-790-6373, or fax 203-790-4472.

**Information about IMAC and other SEM-sponsored programs can be found on SEM's Home Page.**

**Stop by today.**



<http://www.sem.bethel.ct.us/>

OMETRON

## Non-Contact VIBRATION MEASUREMENT

Ometron, the originator of the scanning laser vibrometer, has a full range of equipment to make your vibration measurement easier. Ometron's vibration equipment is the solution for difficult measurement applications and where speed of data acquisition is important.

From Aircraft structures to Washing machines, Ometron's equipment is saving customers time and money.



*Photo Courtesy Ford Motor Company*

***Your equipment paid for itself 2 or 3 times over. We can now do work that we could never do before in a timely manner.***

*Mr. Al Frank, Project Engineer, Whirlpool Corporation*

- Full-field imaging: Up to 512 x 512 (>262,000) measurement points
- Fully integrated FFT & analog signal processing
- Live on-axis color video imaging
- Wide Dynamic Range: >80dB over each amplitude setting
- Built-in interfaces to modal analysis packages
- Modular construction to tailor the systems to particular applications
- Compatible with Ometron's SPATE stress measurement technology

**Contact us today to learn more about our vibration measurement equipment.**

WWW: <http://www2.dgssys.com/~ometron/>

**OMETRON, INC.**

502 Shaw Road  
Suite 101  
Sterling, VA 20166 9435  
**703-478-3201**  
FAX: 703-478-3205

**OMETRON, LTD.**

Kelvin House  
Worsley Bridge Road  
London, UK SE26 5BX  
**+44 181 461 5555**  
FAX: +44 181 461 4628

*Also in France, Germany and Japan*  
E-mail: [info@ometron.com](mailto:info@ometron.com)