

Automotive Front-End Modules 2008



Sponsored by:



February 19, 2008

Sheraton Detroit Novi Hotel
Novi, Michigan USA

Final Program

Automotive Front-End Modules

AGENDA

Please note that conference proceedings are not available

- 7:30-
8:30 a.m. **Registration and Continental Breakfast**
- 8:30 a.m. **Opening Remarks - Evolution of Technical and Business Trends in Front-End Modules**
*Mitra O'Malley, Managing Director
The ITB Group (U.S.A.)*

New Materials and Processes for Front-End Components

- 9:00 a.m. **Fastening Sheet Metal without Grr and Burr...**
Bollhoff Rivnut (U.S.A.)
A number of fastening technologies will be described including self-pierce riveting, clinching, quick snap fastener - snap lock and axial compensator adjustment fastener – Flexitol.
- 9:30 a.m. **Injection Molded D-LFT Front-End Module Carriers**
Krauss-Maffei (U.S.A.)
Injection molded D-LFT front-end module carriers using Krauss-Maffei's "IMC" In-line compounding process offers significant cost advantages compared to the current processes used in North America. This direct process with the Injection Molding Compounder combines the continuous compounding process with a discontinuous injection molding process in one manufacturing cell. The principle and advantages of the process will be introduced.
- 10:00 a.m. **Mid-Morning Break**
- 10:30 a.m. **Ryton® PPS Compounds for Automotive Head Lamp Reflectors**
Chevron Philips Chemical Company (U.S.A.)
A series of injection molding compounds suitable for certain types of automotive head lamp reflectors either with or without a base coat prior to metallization will be introduced. These new materials provide the necessary mechanical strength and heat resistance, while also providing a surface that is acceptable for metallization and lighter in weight than aluminum typically used in projection head lamps.

- 11:00 a.m. **Efficient all Composite Part Production in Fiber Reinforced Thermoplastics**
Dieffenbacher (Germany and Canada)
LFT-D, the direct processing technology of thermoplastic materials and reinforcing fibers, offers a high potential for manufacturing structural and semi-structural parts in an all composite process. The combination of LFT-D with local reinforcements such as fabrics, UD-fibers or profiles allows a flexible adaptation to the specific requirements for each part.

- 11:30 a.m. **New Method for Creating 3-Dimensional, Stronger and Lower Stress Laser Welded Seams in Headlamp Assemblies**
LPKF Laser & Electronics (U.S.A.)
This presentation will introduce the LQ-Hybrid process. Automobile companies continue to push the envelope to try and create designs that are different and more aesthetically pleasing than that of their competition. Unfortunately, manufacturing processes are not always able to take a vision into reality. In the world of front-end modules, the headlamps are the driver for the look of the car, and the packaging of the module. Headlamps are becoming more complicated in both shape and features. LPKF Laser & Electronics have a new method that can help bring creative headlamps into production.

- 12:00 p.m. **Lunch**

Innovations in Energy Management

- 1:15 p.m. **Energy Management Systems**
Plastic Omnium (France)
This presentation will provide an overview of solutions for energy absorption that satisfy customer needs and safety requirements. Plastic Omnium will share their expertise in standard front and rear systems to pedestrian safety systems and their approach in eliminating the prototype phase, going directly to production with confidence.

Exhibitors:

Cadillac Products Automotive Company

Decoma International - the Exteriors Group of Magna International

Expert Corporation

Husky Injection Molding Systems

Norma Products

Valeo

1:45 p.m. Energy Absorbers Made from Injection Molded Olefinic Foam

Cadillac Products Automotive Company (U.S.A.)

A new foamed olefinic thermoplastic energy absorber will be introduced. This injection molded foam has been approved for bumper applications by several OEMs. The approach is an alternative to steam chest molded EPP and injection molded TPO or PC/PBT, and offers several advantages over competing materials.

2:15 p.m. O-Flex / Bayer's New Energy Absorber Designed to Meet Bumper System Requirements

O-Flex Automotive (U.S.A.) and Bayer MaterialScience (U.S.A.)

Results of an evaluation conducted to determine the effectiveness of a new tubular energy absorber in meeting all bumper impact requirements will be discussed. The study compares computer simulations and impact test results. An LS_DYNA model of the absorber with recommend material and property is described that will allow CAE groups to conduct vehicle application studies.

2:45 p.m. Developments in EPP Energy Absorbers

JSP (U.S.A.)

AFEA analysis based on the latest trends in IIHS testing and European requirements will be presented. A virtual test vehicle to predict system performance in relation to overall vehicle dynamics will be part of the presentation. Design tools with EPP such as multiple density zones, geometric optimization and localized inserts will be examined to show compliance with the system requirements.

3:15 p.m. Afternoon Break

3:30 p.m. Achieving Pedestrian Lower Leg Protection while Maintaining Bumper Performance

Darin Evans, President and Dave Gorman, Advanced Product Engineer NetShape International (U.S.A.)

Four critical areas to the development of optimum pedestrian impact solutions will be examined:

1. Parametric development techniques to speed

the development process and understand the contribution of each design variable, 2. Highly developed leg impact FEA capability to reduce expensive testing through excellent predictive correlation, 3. Internal leg impact testing to gain personal experience and facilitate confirmation of design, and finally, 4. Highly tunable and efficient energy absorber and bumper system solutions that simultaneously fulfill IIHS/RCAR, CMVSS, and pedestrian leg impact objectives.

Innovation and Front-End Modules

4:00 p.m. Fender Module Innovation – Worldwide First in the Market

Plastic Omnium (U.S.A.)

This presentation will detail this off-line installed corner module assembly. The module consists of a painted fender, wheel arch lip, headlamp with washer, head impact absorber, water tank, fog lamp, cooler, wheel liner and other components. In addition, the benefits of a corner module in managing vehicle diversity and serviceability will be outlined.

4:30 p.m. * Keynote Presentation Innovation – Why is it the Most Important Success Factor?

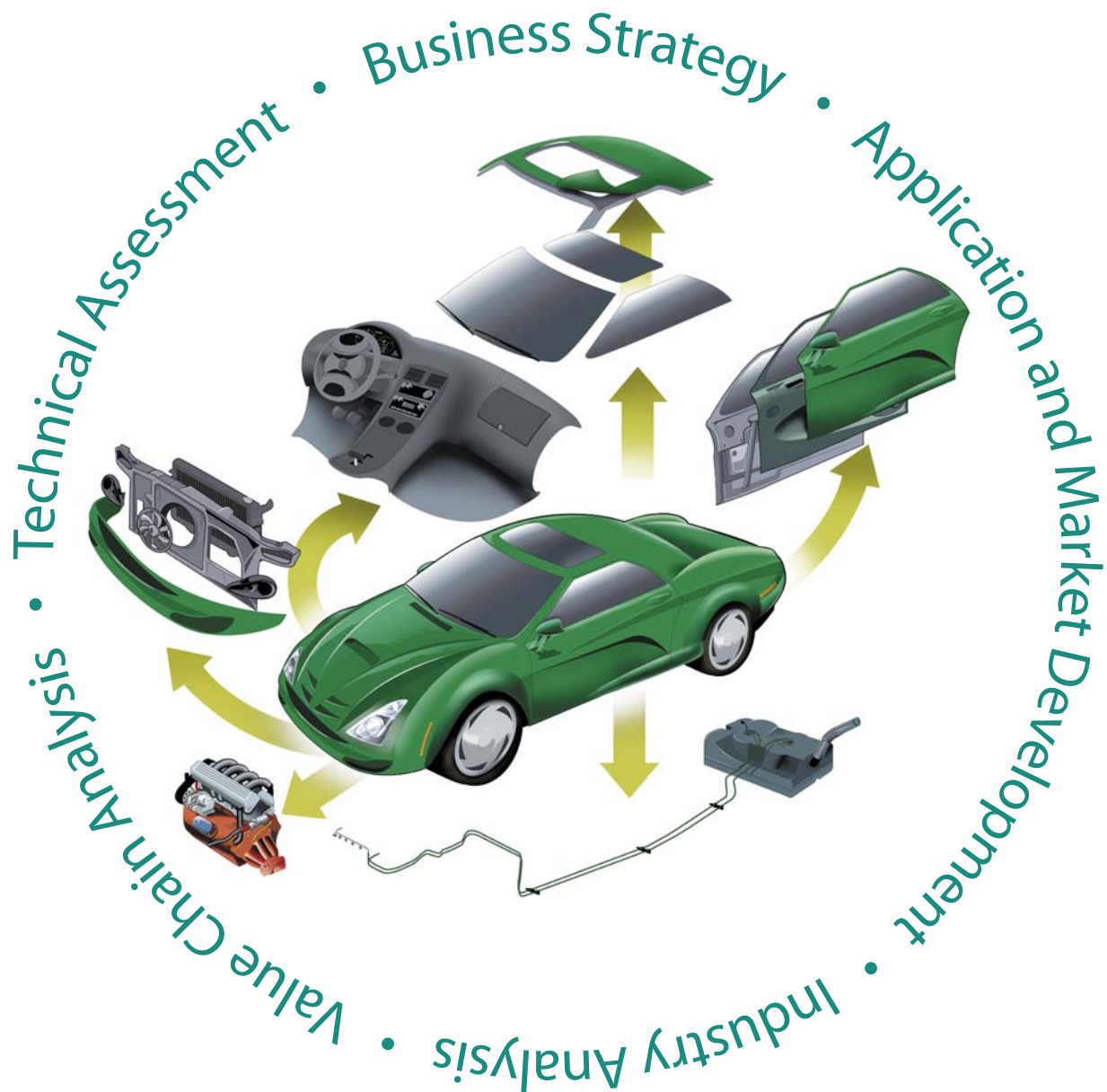
The ITB Group (U.S.A.)

Offering products and services that customers desire but which are not available elsewhere represents a strategic competitive advantage that has the potential to guarantee premium returns to any company. Innovation as an art: a review of the traditional scientific approaches and an introduction to the Strategic Innovation Clinic tool, plus a few considerations on the basic principles of this discipline.

5:00 p.m. Closing Remarks and Cocktail Reception

* Picture Source: Expert Corporation

Consulting Expertise



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