

SAE Fatigue Design & Evaluation Committee Meeting
April 15-17, 2002 - Dearborn, MI
Host: Ford Motor Company

A thirty room block has been held at the Dearborn Hampton Inn. Room rates are \$85.00 per night with continental breakfast included. Please make reservations before April 5, 2002 (the earlier the better - only thirty rooms in the block) and be sure to mention SAE FD&E -- (313) 436-9600. --- The Hampton Inn is located at 20061 Michigan Ave. in Dearborn, MI. 1/2 mile west of Southfield Freeway. 1.5 miles from the Lab.

Other hotel options include:

Dearborn Inn - \$149.00 (mention Ford meeting) -- (313) 271-2700 ---- < 1 mile,
Quality Inn - \$90.00 -- (313) 565-0800 ---- 1 mile,
Courtyard by Marriott - \$129.00 -- (313) 271-1400 ---- >2 miles

Monday Evening, April 15, 2002

7:00 pm Executive Committee Meeting
Kiernans Steak House - 21931 Michigan Ave. Dearborn, MI 48124
- (313) 565-4260
(meal payment - dutch treat)

All technical meetings will be held at the Ford Scientific Research Laboratory (SRL). Park across Village Rd. from SRL in the large employee parking lot or behind SRL in the employee parking lot. DO NOT park in front of SRL in the visitors lot, there is a 2 hour limit. (See attached map).

There will be a \$20.00 registration fee for coffee, donut, pop, etc.

Tuesday Morning, April 16, 2002

7:30 Registration - Coffee, Juice and Donuts

8:00 Main Committee Meeting - Room 1139
Announcements - John Hakala

Welcome - Carl F. Johnson, Manager - Manufacturing Systems Department

Local arrangements - Russ Chernenkoff

8:30 Henry O Fuchs Travel Award and Presentation

9:30 Break

10:00 Structural Analysis Division Meeting - Mary Wickham - Room 1139
Review and approval of the October meeting minutes

"Structural Durability Analysis of an ATV" by Dan Keniray, Paul Kruschka and Trond Arne Svidal

"Optimum Shape Design for Fatigue Application - Notched and Welded Components" by Ireneusz Markiewicz, Witold Bodaszewski (Poland) and Grzegorz Glinka (Canada)

10:00 Surface Enhancement Division Meeting - Jack Champaigne - will run concurrently to the other meeting

- Room 1127

1. Publication of J2277 Coverage, and discussion of next version revisions to include coverage samples.
2. Almen strip saturation curve computer programs

11:00 Material Properties Division - John Bonnen

1) Meera Singh (Univ. of Manitoba) and Alan Kallmeyer (North Dakota State Univ.),

"Effect of Frequency and Mean Stress on the Fatigue Behavior of Short Glass Fiber Reinforced Nylon," 25 min.

2) 2) Hui Zhang (University of Toledo), "Short Crack Growth Under Mixed-Mode Loading,"

20 min.

3) 3) John Bonnen (Ford), "Impact of Strain Life Confidence Bands on the Cyclic Stress-Strain Curve," 15 min.

12:00 Lunch (on own) - SRL cafeteria or local restaurants

Tuesday Afternoon, April 16, 2002

1:00 Surface Enhancement Meeting - Jack Champaigne - Room 1127

Fatigue Life Prediction Division Meeting - Al Conle - Room 1139

1. Chris Williams, Yung-Li Lee, John T. Rilly: "A method for determining reliability-based strain-life curves," DaimlerChrysler. (20min including questions)

2. Fengjie Yin, "Fatigue and Deformation of Case-Hardened Components," University of Toledo (20min including questions)

3. Helmut Dannbauer, "Benchmarking Fatigue Software on Automotive Components and Improvements in Bending-Torsion Predictions," Magna Steyr Engineering Tentative title (20min including questions)

2:00 Road Load Data Acquisition Division - Christoph Leser Room 1127
Approval of Minutes

Technical Presentations

Progress Report on an ATV Loads Model

- NN, University of Toledo

An Exhaust System Load Cell, Design Parameters and Application Scenario

- Glen Grenier, MTS Systems

Automated Road Load Data Analysis for Verification of Data Integrity

- Christoph Leser, MTS Systems

Rainflow Standard

Christoph Leser, MTS Systems

3:00 Break - Pop and cookies

3:30 Component Testing Division Meeting - Paul Lubinski - Room 1139

- Approval of minutes from the meeting of October 2001

- Division vice-chair

- "Calculation of Creep Strains in Notches Using the Neuber-type Approach," Enrique Navarro and

Grzegorz Glinka, University of Waterloo

- "Dynamic Stiffness Method for Determining Fatigue Damage in Spot-Welded Components," Dr. De-

Guang Shang, visiting researcher at the University of Alabama

- Please attend the planning session with ideas for division projects!

- Overview of ATV progress - Ric Mousseau

3:30 Surface Enhancement Division Meeting Room 1127

6:00? Happy hour on own - local pub

Wednesday Morning, April 17, 2002

7:30 Coffee and Donuts

8:00 General Technical Session - Rm. 1139

8:00 Residual Stress Measurements in Automotive Powertrain Components

Mike Brauss, President

Proto Manufacturing, LTD

8:30 Military Packaging

Tom Burmeister

U.S. Army -TACCOM

9:00 Fatigue Performance of Corroded Reinforced Concrete Beams Repaired with Fibre-Reinforced

Polymers

Dr. Sobhy Masoud

University of Waterloo

9:30 Break

10:00 LCF Life of a Centrifugal Compressor at Elevated Temperature

Neil Craft

Williams International

10:30 VIRTTEX Technology
Jeff Greenberg
Ford Motor Company

11:00 Friction Stir Joining -- Basic Principles and Potential
Applications
Prof. Bill Yuh J. Chao
University of South Carolina

Surface Enhancement Meeting Room 1127

11:30am Lunch (on own) - SRL cafeteria or local restaurants

Wednesday Afternoon, April 17, 2002

1:00 Road Load Data Acquisition Division Planning Meeting - Room 1139
1:00 Fatigue Life Prediction Division Planning Meeting - Room 1333
1:00 Surface Enhancement Division Planning Meeting Room 1347

1:45 Component Testing Division Planning Meeting - Room 1139
1:45 Structural Analysis Division Planning Meeting - Room 1133
1:45 Material Properties Division Planning Meeting - Room 1347