

--To: All SAE Fatigue Des. & Evaluation Comm. Members

Hotel Information for Fall Meeting:

Here is the hotel info for the fall SAEFDE meeting:

Days Inn
1507 19th Ave. N.
Fargo, ND 58102
(701) 232-0000

A 50 room block has been held for the nights of
Sep. 30 and Oct. 1. Reservations
must be made by Aug. 30.
The rate is \$59 + tax. Mention SAE
when making the reservation.

The hotel is about 1 mile east of the airport,
across the street from the Fargodome (can't miss
this building) and NDSU. The meetings will
be held in the NDSU Memorial Union, about a 10 min.
walk from the hotel. I will also arrange for some
shuttles for those who don't want to walk, or people
can park in the visitor's lot.

The hotel has an airport shuttle for those who don't
want to rent a car. Fargo is served by Northwest
Airlines (via Minneapolis) and United Airlines
(via Chicago or Denver).

I'll provide more detailed directions, etc. later.

Alan

----- Original Message -----

From: <Jmhakala@aol.com>

To: <alan.kallmeyer@ndsu.nodak.edu>

Sent: Thursday, July 04, 2002 11:26 AM

Subject: Re: SAEFDE Meeting

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Mini-Minutes April 15-17, 2002

SAE Fatigue Design And Evaluation Committee Meeting
Ford Research Laboratories Dearborn, MI
Hosts: J. Bonnen, R. Chernenkoff, C.-C. Chu, A. Conle

These are NOT official minutes. Full minutes will be distributed at a
later date.

The fall 2002 meeting will be held at North Dakota State University on September 30 October 2, 2002. Host: Prof. Alan Kallmeyer.

Monday, April 15, 2002

Members of the FD&E Executive Committee met with representatives of the SAE Troy, MI office to discuss the role of SAE in serving the needs of the FD&E committee (i.e. meeting support, publications, short course, etc.). Several FD&E members listed the contributions of the FD&E committee to SAE over the last 25 years. The SAE representatives said that FD&E was a unique committee in that it covers several areas within the SAE structure, i.e. professional development, engineering meetings, standards. The SAE representatives requested permission to observe the committee meeting on Tuesday, April 16, 2002. The Executive Committee agreed. SAE will contact Chairman John Hakala with suggestions on they can serve the FD&E committee by the next meeting at NDSU.

Tuesday, April 16, 2002

SAE had three representatives on site to observe the FD&E meeting and help with registration.

Main Committee Meeting: Chairman John Hakala called the meeting to order. Local arrangements were reviewed by Russ Chernenkoff. John Bonnen made a call for papers for the "Fatigue Research and Applications" session at the 2003 SAE Congress.

Henry Fuchs Student Award:

The presentation was made by Paul D. Samuel û University of Maryland. The title of his presentation was "Planetary Gearbox Diagnostics".

The Surface Enhancement Division did not meet during the Spring 2002 FD&E Committee Meeting.

Structural Analysis Division - Mary Wickham, Chairperson. -----
The minutes from the October meeting were approved. The following presentations were made:

"Structural Durability Analysis of an ATV" D. Keniray discussed the structural durability analysis of the Honda ATV frame with the objective being to correlate measured strains and make life predictions. FEDEM simulation model was constructed.

"Optimum Shape Design for Fatigue Application û Notched and Welded Components." G. Glinka discussed reducing a Kt in a welded structure by weld shape optimization.

Material Properties Division - John Bonnen, Chairperson. -----
The minutes from the October meeting were approved. The following presentations were made:

"Effect of Frequency and Mean Stress on the Fatigue Behavior of Short Glass Fiber Reinforce Nylon," Alan Kallmeyer showed that strength increased as strain rate increased during tensile tests and fatigue life decreased as frequency increase during fatigue tests (temperature effect?).

"Short Crack Growth Under Mixed-Mode Loading," H. Zhang observed short crack growth rates and paths of SAE 1045 using four point bending specimens with smooth and notched surfaces.

"Impact of Strain Life Confidence Bands on the Cyclic Stress-Strain Curve," J. Bonnen.

"Update on High Mean Stress Project," R. Stephens is working with Caterpillar on mean stress in bolts.

Fatigue Life Prediction Division - Al Conle, Chairperson. -----
The minutes from the October meeting were approved. The following presentations were made:

"A Method for Determining Reliability-based Strain-life Curves,"
C. Williams

"Fatigue and Deformation of Case-Hardened Components," FengJie Yin
analyzed
several models to predict fatigue life of case-hardened components.

"Benchmarking Fatigue Software on Automotive Components and Improvements in Bending-Torsion Predictions," H. Dannbauer discussed differences in fatigue life prediction methods using real world examples - notched shafts and truck wheel.

Road Load Data Acquisition Div. - Christoph Leser, Chairperson.-----
The minutes from the October meeting were approved. The following presentations were made:

"Progress Report on an ATV Loads Model," University of Toledo

"An Exhaust System Load Cell, Design Parameters and Application Scenario," G. Grenier discussed the development of a light weight load cell for loads analysis of an exhaust system from a paper model > computer model > prototype.

"Automated Road Load Data Analysis for Verification of Data Integrity," C. Leser discussed anomaly detection software.

C. Leser announced there was one disapproval for the balloted Rainflow Standard.

Component Testing Division - Paul Lubinski, Chairperson. -----
The minutes of the October meeting were approved. The following presentations were made:

"Calculation of Creep Strains in Notches Using Neuber-type Approach,

" University of Waterloo.

Dynamic Stiffness Method for Determining Fatigue Damage in Spot-Welded Components," D-G Shang discussed the measurement of dynamic response frequencies during fatigue damage of spot welds.

Correlation of Fatigue Crack Growth for Different R-ratios Using σ/σ_{max} Parameters," S. Dinda.

Wednesday, April 17, 2002 =====

Special Technical Session

Residual Stress Measurements in Automotive Powertrain Components
Mike Brauss, Proto Manufacturing, LTD

Military Packaging
Tom Burmeister, U.S. Army -TACCOM

Fatigue Performance of Corroded Reinforced Concrete Beams Repaired with Fibre Reinforced Polymers
Dr. Sobhy Masoud, University of Waterloo

LCF Life of a Centrifugal Compressor at Elevated Temperature
Neil Craft, Williams International

VIRTTEX Technology - simulator
Jeff Greenberg, Ford Motor Company

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

Divisional planning sessions were held concurrently in two rooms. The future work of the five divisions will be coordinated by the chairperson and task group leaders. Documentation of future work plans will be included in the full minutes from the division chairs.

Respectfully submitted by: Russ Chernenkoff SAE FD&E Vice-Chair