



Dear Colleagues, we would like to invite you to visit the lectures:

INFAMOUS FATIGUE FAILURES

and

A REVIEW OF MULTIAXIAL FATIGUE FAILURE CRITERIA BASED ON THE CRITICAL PLANE APPROACH

presented by

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Opole University of Technology

Abstracts:

INFAMOUS FATIGUE FAILURES: The presentation includes a description of selected infamous fatigue failures and short introduction to the fatigue of materials (fundamentals of material fatigue). Each case of catastrophic failure is characterized by number of fatalities, type of loading and the main cause of failure. The survey also includes statistical data about critical design dependent factors contributing to fatigue failure.

Major topics include: Liberty ships (1941-45); De Havilland Comet (1954); Oil drilling platform (1980); Japan Airlines flight 123 (1985); Aloha Airlines Flight 243 (1988); B-747 of El Al Airlines (1992); Eschede train disaster (1988).

A REVIEW OF MULTIAXIAL FATIGUE...: The lecture presents a review of multiaxial fatigue failure criteria based on the critical plane concept. The criteria have been divided into three groups, according to the fatigue damage parameter used in the criterion, i.e. (i) stress, (ii) strain and (iii) strain energy density criteria. The plan of presentation is as follows:

1. Introduction
2. Critical plane approach: definition; assumptions; range of application; general expressions
3. Multiaxial fatigue failure criteria based on the critical plane approach: stress based criteria; strain based criteria; energy based criteria

The lectures will be held

on **Wednesday June 26, 2013 from 12:00-13:00 and 13:15-14:15 respectively**

in the congress hall of the Faculty of Mech. Engng. CTU in Prague (room No. 17),

Technická 4, Prague 6 – Dejvice.

on behalf of FME CTU and CSM committee:

Prof. M. Růžička