MECHANICS COLLOQUIUM

Wednesday, June 28, 2006,
15:00-15:45 h.
Delft University of Technology
Faculty of Mechanical Engineering
Mekelweg 2, Delft
Room C

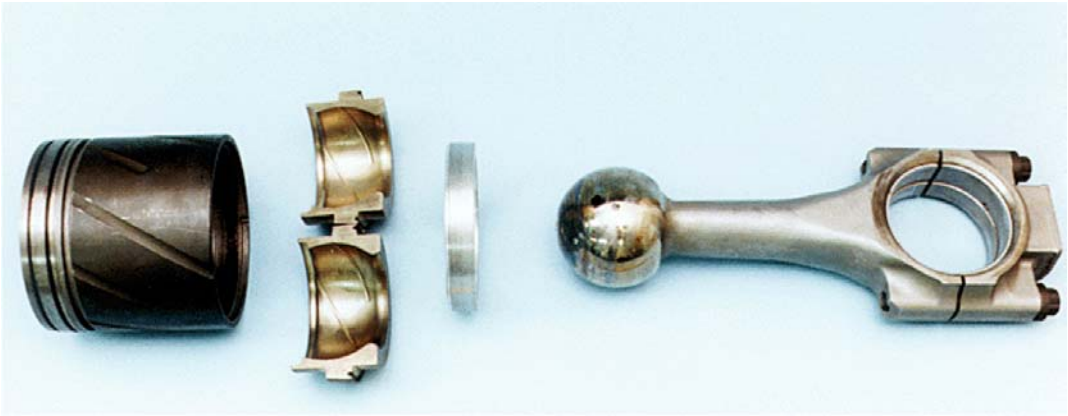
"Never the twain shall meet: Separating solid surfaces with fluid films''

Prof. John F. Booker

Sibley School of Mechanical and Aerospace Engineering
Cornell University
Ithaca, NY 14853 USA

Abstract - Finite element analysis (FEA) of elastohydrodynamic lubrication (EHL) is reviewed symbolically and illustrated numerically by two specific applications:

- production engine conrod bearing (cylindrical)
- proposed engine piston bearing (spherical)



About the speaker – John F. Booker is Professor Emeritus and Graduate School Professor at the Sibley School of Mechanical and Aerospace Engineering of Cornell University. He is a fellow of both the American Society of Mechanical Engineers and the Institution of Mechanical Engineers. Professor Booker specializes in fluid film lubrication, finite element methods, and computer-aided simulation and design of mechanical systems. He and his students have developed numerical methods and software that are widely used for the design analysis of journal bearings. Current research generally concerns effects of structural compliance, geometrical irregularity, and lubricant cavitation on dynamic performance of fluid-film bearing systems in both industrial and biomechanical applications. http://www.mae.cornell.edu/index.cfm/page/fac/Booker.htm jfb5@cornell.edu