Fluid Film Bearing Seminar

By

DELTA JS AG

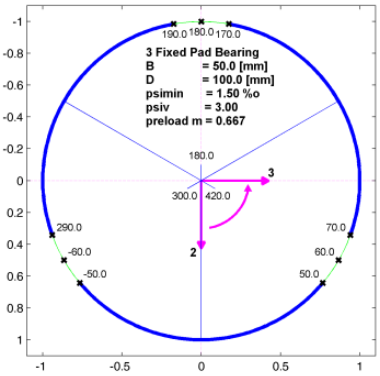
On June 29th and 30th 2017 in Zurich, Switzerland

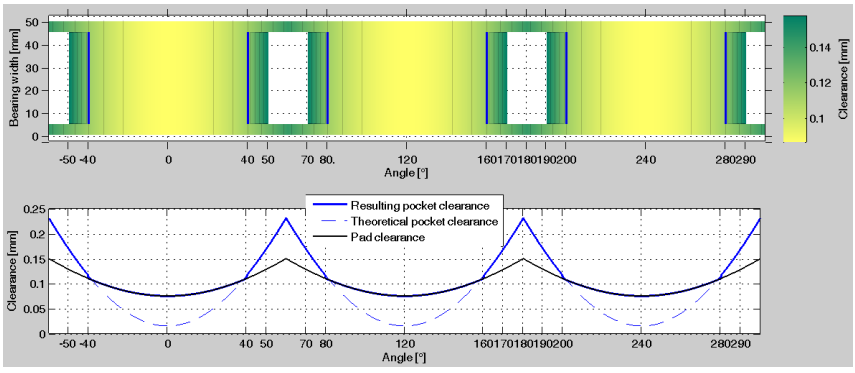
DELTA JS is a leading engineering and consulting company for rotor dynamics. Its in-house developed, commercial software MADYN 2000 with an integrated fluid film bearing module is widely used to simulate the behaviour of fluid film bearings and the dynamics of complex rotor-gear-bearing systems.

Participants will learn the **state of the art in fluid film bearing modelling and design** from a practical point of view. Basic **theory** and **design rules,** fundamental effects of fluids on **rotor behaviour**, different types of bearings and their properties such as temperature, film thickness, oil consumption, power loss as well as **engineering and design standards** are explained. The selection of the appropriate bearing type is presented as well as the optimization of load carrying capacity, power loss and stability. The seminar is concluded with examples from **field experience**.

Attendees will be able to better assess the **design** and anticipate potential **risks** for rotating machines **arising from fluid film bearings**. Thus, the seminar is suited for engineers of manufacturers, plant constructors, contractors and machine end users (rotating equipment specialists, design engineers, commissioning engineers, sales engineers and project managers).

Course instructors are experienced engineers of DELTA JS: Dr. Joachim Schmied, who is the founder of DELTA JS, Dr. Andreas Fuchs, who is a recognised expert in the area of fluid film bearings, and Marco Perucchi, who has a wide experience from many different projects.





Fluid Film Bearing Seminar on June 29th and 30th 2017 in Zurich, Switzerland

Contents of the Seminar (2 days):

- Fluid Film Bearings, Basic Theory
  - Mechanism of Fluid Pressure
  - Velocity Profiles
  - Lubricating Clearance Function (Profile)
  - Main Equations (Reynolds, Energy)
  - Cavitation
  - Dimensionless Numbers (Sommerfeld, Reynolds)
- Instability Caused by Fluids
  - Self-Excitation Caused by Whirling Fluids
  - Cross Coupling Forces
  - Stability Chart
  - Sub-Synchronous Vibration
  - Oil-Whirl, Oil-Whip
- Examples of Radial Fluid Film Bearings
  - Fixed Pad Bearings and their Properties
  - Tilting Pad Bearings, Design Parameters, Properties
  - Design Layout and Optimization of Radial Fluid Film Bearings
- Floating and Semi-Floating Ring Bearings
  - Oil Speeds for Sommerfeld-Numbers in Floating Ring Bearings
  - Ring Speed Ratio, Temperatures, Deformations
  - Modelling of a Floating Ring Bearing, Analysis according to DIN
  - Turbocharger on (Semi-) Floating Ring Bearings
- Examples of Axial Fluid Film Bearings
  - Main Equations
  - Fixed and Tilting Pad Bearings and their Properties
  - Modelling of an Axial Fluid Film Bearing, Analysis according to DIN
- Field Experience
  - Case Studies
  - Bearing Damages and Failures

After each block there will be time for discussions. All attendees will receive seminar documents in English.

Organisational Information

The seminar will take place in the close environment of the Technopark Zurich, where the office of DELTA JS is located. Interested parties will be informed about the exact Seminar location and special hotel rates in due time.

There are several hotels nearby. Upon registration attendees will receive a list of these hotels. Please book your accommodation directly by contacting the hotel of your choice.

Attendees are invited to join an evening event on June 29th.

Registration: Online, fax, mail or e-mail to DELTA JS AG

Deadline for binding registration is June 20th.

Name:	Mrs./Mr.		
Company:			
Department:			
Address:			
Phone:		Fax:	
E-mail:			

DELTA JS reserves the right to cancel the seminar in case too few people sign up at this date.

Fee and Payment

Seminar (2 days): CHF 2'000 including meals (2 lunches, 1 dinner) and refreshments.

Invoice will be issued upon registration.

DELTA JS AG * Technoparkstr. 1 * 8005 Zürich * Switzerland
Phone: ++41 44 445 3130 * Fax: ++41 44 445 3139 * e-mail: contact@delta-js.ch