University of Leoben
Chair of Mechanical Engineering
Head: Univ.-Prof. Dipl.-Ing. Dr. techn. Wilfried Eichlseder
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Journal bearings and other constructional elements - like engine lubricants - in internal combustion engines, increasingly reach their loading limit. Pure empirical improvements, as conducted in the past, are not sufficient to fulfil the demands posed on new generations of engines and their components. In order to optimize the system journal bearing (materials and lubricants) based on scientific results we extend our research team by a

PhD-student in the fields of tribological test engineering and surface analysis

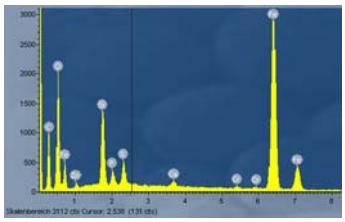
Tasks – job description

- Assisting in optimizing the tribological test methods of the Chair of Mechanical Engineering
- Conduction of tribological experiments to visualize the system properties of interest (Formation of tribological boundary layers due to components of the lubricant)
- Performing additional damage analysis of the surface structure and the surface chemistry using light microscopy, laser confocal microscopy LEXT, SEM/EDX, Raman, AES, micro/nanoindentation, …
- Interpretation of the results also using the assistance of scientific software tools
- Deducing tribological functional models of the processes taking place in the boundary layers

Due to the duration of the project (from 07/2008 to 12/2012) and due to the technical-scientific activities it is possible to compose a PhD-thesis at the University of Leoben.

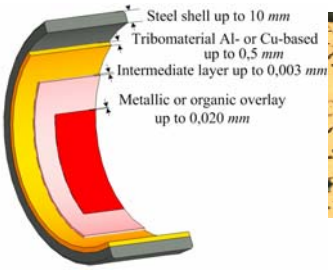
Demands – Qualification

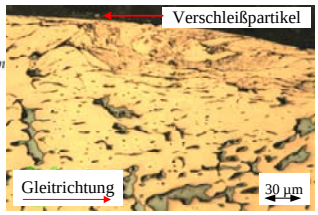
- Master's degree of a technical or natural-scientific university: chemistry, physics, material science, …
- Strong interest in dealing with technical problems applying scientific methods
- Knowledge in chemical-physical analysis
- Interest in technics
- English (spoken and written)
- Ability to work in a team
- Independence and ability to solve problems
- Basic knowledge in scientific software tools (Matlab, …)



Place of employment

Leoben





Application and further information

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