COMET K2

XTriboology
Excellence Centre of Tribology

Main location
Wiener Neustadt (Niederösterreich), Research and Technology Centre

Other locations
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Research programme
Tribology; Lubricants and Surface Interactions, Wear Processes, Integrated Tribodiagnosis and -design, Multiscale Computational Tribology

Planned realisation and outcomes
The centre will carry out an ambitious research programme with high international visibility. Major achievements will be
- advanced lubricant formulation (e.g., ionic liquids/additives) and sensors for condition monitoring,
- functional characterization and design of tribo-active surface structures, design concepts (material/component design) avoiding abrasive wear,
- techniques for in-situ nano wear volume measuring,
- customized friction models for powertrain design,
- multiscale modelling of tribosystems covering material physics (ab initio) to structural dynamics.

History of establishment
AC²T research GmbH, in collaboration with the Vienna University of Technology, has successfully developed the Kplus Center of Competence for Tribology during 7 years. The COMET K2 centre is the logical content-oriented upgrading of this achievement. Furthermore, the convergent topic of the Kind Center of Competence V-Research will be integrated in the intended research programme.

Selected company partners (selection of approx. 50)
1. OMV Refining & Marketing GmbH (A)
2. voestalpine Stahl GmbH (A)
3. Berndorf Band GmbH (A)
4. Hoffmann Elektrokohle AG (A)
5. MAGNA Powertrain AG & Co KG (A)
6. AVL List GmbH (A)
7. Castolin Gesellschaft m.b.H. (A)
8. Schoeller Bleckmann Oilfield Technology GesmbH (A)
9. Collini Wien GmbH (A)
10. Doppelmayr Seilbahnen GmbH (A)
11. Sandvik Mining and Construction G.m.b.H. (A)

Selected scientific partners (selection of approx. 40)
1. Technische Universität Wien (A)
2. Johannes Kepler Universität Linz (A)
3. Luleå University of Technology (S)
4. Cardiff University (UK)
5. Institut National des Sciences Appliquées Lyon (F)

Selected international partners1 (selection of approx. 30)
1. Robert Bosch GmbH (D)
2. Liebherr Maschines Bulle SA (CH)
3. GKN Sinter Metals SPA (It)
4. VAT Vakuumventile AG (CH)
5. Shell Global Solution Deutschland GmbH (D)

Start of the Centre
01/04/2010

Planned number of personnel
150 FTE (of this ~130 researcher)

Total costs2
EUR 58.9 Mio. (for the first 5 year funding period)

Management
AC²T research GmbH, Dr. PAUSCHITZ Andreas, Prof. Dr. Friedrich FRANEK

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1 Company partners with headquarters outside Austria
2 Approved total budget for the first funding period (5 years)