

11. ARNOLD TROSS KOLLOQUIUM

am

5. Juni 2015

veranstaltet durch das

Labor für Maschinenelemente und Tribologie

(MuT)

des Instituts für Konstruktion und Produktentwicklung (IKP)

Department für Maschinenbau und Produktion

Fakultät für Technik und Informatik der

HAW Hamburg



Berichte aus dem Maschinenbau

Erik Kuhn (Hrsg.)

11. Arnold Tross Kolloquium

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PREFACE

The *11th Arnold Tross Colloquium* was organized in two parallel sessions. And it was the special commitment of Doz. Harry van Leeuwen (TU Eindhoven), Dr.T.Hoffman (Leibniz Inst. for Polym.Research Dresden) und Dipl.-Ing. N.Bader (Leibniz University Hannover) that all sessions took place with very interesting and active discussions. We welcomed also new speaker and participants and it was nice to see some students from our Department among the audience.

It was a pleasure to welcome participants from universities and industry. A wide range of topics were presented. Among them were 4 papers that dealt with lubricating greases.

The evening dinner took place in a new location near the river Alster. And all participants enjoyed the nice atmosphere.

Thanks again to all participants. I hope we all deliver a contribution to the further development of TRIBOLOGY.

I'm pleased to welcome you at the next Arnold Tross Colloquium in 2016 in Hamburg.
Prof.Dr. E.Kuhn

PROGRAM - 11th ARNOLD TROSS COLLOQUIUM

10:00 Welcome - Prof.Dr.E.Kuhn (Organizer)

SESSION A (Prof.Dr.E.Kuhn)

10:20 Dr.T.Hoffmann, Dr.D.Lehmann (Leibniz Institute for Polymer Research, Dresden) Dr.S.Küchler (LUM GmbH,Dresden)
Additives based on poly(tetrafluoroethylene) for improving wear resistance

10:50 Dr.-Ing.M.Sommer, Dr.-Ing. F.Bauer, Prof.Dr.-Ing.habil.W.Haas (University of Stuttgart)*Grease rheology in a narrow gaps at high shear rates*

11:20-11.50 Coffee break

11:50 Dipl.-Ing. F.Reichmann, M.Eng.L.Xu (Carl Bechem GmbH)*Calculation of rheometer curves from results of rotary viscosimeters and a comparison to conventional pipe rheometer curves*

12:20 Prof.Dr.E.Kuhn (HAW Hamburg)*Aspects of the irreversibility of the structural degradation of greases*

12:50 - 14:00 LUNCH at the Mensa

SESSION C (Dr.T.Hoffmann)

14:00 Dr. M.Fiedler (Fuchs Europe GmbH, Mannheim)*Future oriented smooth-running shaft oils*

14:30 M.Sc.M.Bäse (HS Magdeburg-Stendal), Prof.Dr.habil.M.Dzimko (University of Zilina), Prof.Dr.U.Winkelmann(HS Magdeburg-Stendal) *Tribological characterization of subsurface zones with the micro-scratch-tester*

15:00 Dr.F.Rühle,(Magdeburg)*Rheological changes of lubricating oils during the operating life*

15:30 M.Sc.M.Werschler, Prof.Dr.-Ing.Dr.hc.P.Gümpel(HS Konstanz)*Approaches to simulation testing of tooth flanks with a twin-disc-tribometer*

SESSION B (Univ.DoZ.H.van Leeuwen)

10:20 M.Sc.A.Seibel, Dr.A.Japing, Prof.Dr.-Ing.habil.J.Schlattmann, (Technical University Hamburg-Harburg)*Uncertainties in the Coefficients of Friction of Bolted Joint Connections*

10:50 Dipl.-Ing. N.Bader, Prof.Dr.G.Poll (Leibniz University of Hannover)*Tribological Fluidmodels for EHL contacts*

11:20-11:50 Coffee break

11:50 Dipl.-Ing.V.Krasmik, Prof.Dr.-Ing.habil.J.Schlattmann (Technical University Hamburg-Harburg)*Real-time detection and optical analysis of wear particles in lubricated tribological systems*
12:20 M.Sc.Haomiao Yuan, Prof.Dr.J.Song, M.Sc.V.Schinow, (University of Appl. Sciences Ostwestfalen-Lippe)*Verification of a model for the linear wear of a contact between a sphere and a flat surface*

12:50 - 14:00 LUNCH at the Mensa

SESSION D (Prof.Dr.G.Poll)

14:00 Univ.DoZ.H.v.Leeuwen(TU Eindhoven)*A paradox in tribosimulation – ball bearing grease friction*

14:30 Dr.Dr.U.Gunst (Analyt.Tribology Network, Münster)
Scientific issues and projects as part of an interdisciplinary competence network of analytical Tribology

15:00 M.Sc.O.I. Abdullah, M.Sc. M. Lytkin, Prof.Dr.-Ing.habil.J. Schlattmann (Technical University Hamburg-Harburg)*The Effect of the surface roughness on the thermo-mechanical Behavior of friction clutches*

The Colloquium is supported by Peekel Instruments GmbH

15:30 coffee in the lab

17:30-21:00 Dinner in the City of Hamburg (Gasthaus an der Alster-Ferdinandstraße 67)



DR.M.FIEDLER
FUCHS EUROPE GMBH



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UNIV.OF APPL.SC. MAGDEBURG



M.SC. M.WERSCHLER
UNIV.OF APPL. SC. KONSTANZ



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