



TORSIONAL
VIBRATION
SYMPOSIUM

Program

1st TORSIONAL VIBRATION SYMPOSIUM
May 21st – 23rd, 2014

Salzburg Congress / AUSTRIA

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Schwingungstechnischer Verein

Thursday: May 22nd, 2014

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| 09:30 | Opening | |
| 09:45 | Keynote: Prof. Georg Wachtmeister TU München, Head of the Institute of Internal Combustion Engines Vibrations: A continuous challenge, a key for reliability, a chance for new features | |
| Session 1: Torsional Vibration - Plenary Session | | |
| 11:00 | Method to validate the simulation of crankshaft torsion J. Stadler, H. Schaumberger, R. Steiner, Prof. A. Wimmer, T. Jauk Kistler Instrumente AG, GE Jenbacher, LEC / TU Graz | |
| 11:25 | Influence of emission regulations and fuel saving technologies on torsional vibrations in large engine applications T. Philipp Geislinger GmbH | |
| 11:50 | Limiting values of dynamic loads in linear oscillators due to transient excitation Prof. H. Dresig TU Chemnitz | |
| Session 2A: Powertrain Components | | |
| 13:30 | Torsional vibrations stresses of alternators used in diesel-electric powertrains of locomotives against the background of increasing cylinder peak pressures P. Stürzl, M. Schuchardt MTU Friedrichshafen GmbH | Session 2B: System Reliability |
| | | Gear problems solved by the analysis of torsional vibrations A. Laschet, B. van den Heuvel ARLA Maschinentechnik GmbH, RWE Power AG |
| 13:55 | Modeling an electric vehicle powertrain and analysis of vibration characteristics R. Schelenz, M. Wegerhoff, O. Drichel IME, RWTH Aachen University | A full scale investigation of torsional vibration failure of a marine propulsion system intermediate shaft. P. Filcek, K. Banisoleiman, J. Stainsby, S. Mathieson Lloyd's Register, EMEA |
| 14:20 | Calculation of an elastic clutch with temperature-sensitive characteristics through system simulation in the time and frequency domains U. Schreiber, Prof. C. Spensberger ITI GmbH, Dresden University | Torsional vibration analysis of an emergency diesel generator (EDG-Set) B. Buchmeier TÜV SÜD Industrie Service GmbH |
| Session 3A: Simulation | | |
| 15:20 | Efficiency boost in product development processes through support by torsional vibration simulation in early development phases B. Juretzki, R. Schelenz, Prof. G. Jacobs IME, RWTH Aachen University | Session 3B: Noise and Vibration |
| | | Noise and vibration challenges due to torsional excited gearbox vibrations P. Tellefsen, K. Cunningham Lloyd's Register Consulting |
| 15:45 | Influence of simulation model detail on determinable natural frequencies Prof. B. Schlecht, T. Rosenlöcher Institute of Machine Elements & Machine Design, TU Dresden | Reduced transfer of structure borne sound in couplings L. Kurtze, T. Philipp Geislinger GmbH |
| 16:10 | Analysis of dynamic interaction between crankshaft and connecting rod through the use of complex nonlinear calculations H. Roeser, C. Windelev Transmarine Propulsion Systems Inc. | Vibration dynamics simulation of a diesel engine coupled system with flexible coupling under misfiring using physical and finite element modeling M. Hasan, J. Holmberg, H. Kirschev Centa Antriebe Kirschev GmbH, Wärtsilä Ship Power |

| | Session 4A: Industrial Applications | Session 4B: Fundamental Engineering |
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| 17:00 | Linear and torsional vibration study for an engine driven compressor system W. Wang, J. Braun, R. Chundi, R. Khan IDC Technical Services | Introduction of the new torsional vibration guideline VDI 2039 under special consideration of damping F. Knopf, T. Philipp Hasse & Wrede GmbH, Geislinger GmbH |
| 17:25 | Lateral-torsional vibration coupling in reciprocating compressors F. Newman, T. Stephens, R. Harris Ariel Corporation | Fuel efficient propeller design and torsional vibrations in propulsion machinery G. Dahler, J. J. Ileskär, J. Holm DNV / GL |
| 17:50 | Experience with torsional vibration measurements and calculations of reciprocating compressors J. Lenz KÖTTER Consulting Engineers | Self-excited torsional vibration phenomenon on specialized vessel electric propulsion systems Prof. D. C. Lee, R. D. Barro Mokpo Maritime University, South Korea |

Friday: May 23rd, 2014

| | Session 5A: Ice Impact | Session 5B: Active Control |
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| 08:50 | Ice impact simulation for propulsion machinery S. Persson MAN Diesel & Turbo, Copenhagen | Active measures to reduce torsional vibrations M. Matthias Fraunhofer LBF, Darmstadt |
| 09:15 | Meeting ice impact analysis requirements through a unified Modeling for transient and frequency domain simulation A. Abel, U.Schreiber ITI GmbH | Active control of crankshaft vibrations M. Steidl, F. Knopf Hasse & Wrede GmbH |
| 09:40 | Simulation of torsional vibration responses in ship propulsion shafting system caused by ice impacts Yu. Batrak, A. Serdiuchenko, A.Tarassenko Intellectual Maritime Technologies, Ukraine | Control and correlation of mainshaft torsional modes on windturbines and off-axis loaded dynamometers W. L. Erdman DNV KEMA |
| | Session 6A: Engine Development | Session 6B: Measurement and Testing |
| 10:20 | Firing sequence optimization for a V20 cylinder diesel engine C. Henninger Liebherr Machines Bulle | Correlation of simulation to test for a flexibly coupled two-bearing generator system R. Zadoks, J. J. Ileskär, T. Utengen Caterpillar Inc., DNV GL |
| 10:45 | Firing order optimization in FEV virtual engine K. Buczek, S. Lauer FEV Krakow, FEV GmbH | Various torsional vibration measurement techniques for optimal trade-off between high accuracy and ease of instrumentation A. Palermo, L. Britte, K. Janssens Universita' della Calabria, Kath. Universiteit Leuven, LMS International |
| 11:10 | Cranktrain design using coupled calculations and multicriteria optimization P. Böhm MAN Diesel & Turbo, Augsburg | Contactless method to determinate the rotation angle in torsional vibration based on video image correlation (VIC-3D) measuring system Prof. I. Száva, S. Vlase, B.P. Gálfi, I. Serban, P. Dani University of Brasov, Geislinger GmbH |
| 11:35 | Crank train torsional vibration optimization C. Priestner, T. Ovari, M. Brunner, F. Zieher AVL List GmbH | The comparison between measured and calculated torsional vibration loads in 2-stroke marine installations M. Barraud, P. Bättig, R. Gläser Wärtsilä |



TORSIONAL VIBRATION SYMPOSIUM

Goal

The goal of the Symposium is to offer a unique event for experts involved in torsional vibration from all over the world.

Social Program

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| | Wednesday: 21st May, 2014 |
| 18:00 | Welcome dinner* , Restaurant "St.Peter Stiftskeller" Salzburg |
| | Thursday: 22nd May, 2014 |
| 20:00 | Gala dinner* , Restaurant "M32" in Salzburg |
| | Friday: 23rd May, 2014 |
| 13:00 | Social program , Wolfgangsee/Boatride/Schafberg - Tour |

Participation fee

We would be delighted to welcome you to the 1stTorsional Vibration Symposium 2014 in Salzburg.

Standard rate*: EUR 990,-

Early bird rate*: EUR 890,- (before January 31st, 2014)

For registration please fill in the registration form at our website: torsional-vibration-symposium.com/registration

** The participation fee includes welcome dinner, gala dinner, program booklet, digital proceedings, coffee breaks and lunch.*

For the third participant from the same company, we will offer a rebate of 30% of the participation fee.

Exhibition and Sponsoring

We can also offer a limited space for your exhibition stands and sponsoring opportunities.

Exhibition floor space cost: EUR 180,- / m² (minimum 6m²).

Contact

The organizer of the event is the Vibration Association (Schwingungstechnischer Verein).

E-mail: info@torsional-vibration-symposium.com

Tel.: +43 662 664146

Website: torsional-vibration-symposium.com

Symposium Location

Salzburg Congress, Auerspergstraße 6, 5020 Salzburg / AUSTRIA