



TORSIONAL
VIBRATION
SYMPOSIUM

Program

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

Salzburg Congress / AUSTRIA

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VIBRA ASSOCIATION
Schwingungstechnischer Verein

Thursday: May 22nd, 2014

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		Session 3B: Noise and Vibration
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	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
17:00	Lateral-torsional vibration coupling in reciprocating compressors F. Newman, T. Stephens, R. Harris Ariel Corporation	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	Linear and torsional vibration study for an engine driven compressor system W. Wang, J. Braun, R. Chundi, R. Khan IDC Technical Services	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
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

	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

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Symposium Location

Salzburg Congress, Auerspergstraße 6, 5020 Salzburg / AUSTRIA