



testXpo

17th International Forum for Materials Testing

October 13 - 16, 2008 at Zwick in Ulm

Contact address:

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www.zwick.com



Competent Consultants



Guided Company Tour



Lunch



Well arranged exhibition areas



Interesting Applications



Visitors from all over the world

Daily Events



The organisation team

Agenda:

- 9:00 a.m. **Forum for Materials Testing begins**
- 9:30 a.m. **Technical Lectures**
to 3:30 p.m.
- 11:45 a.m. **Lunch**
- 5:00 p.m. **Forum for Materials Testing ends**

Participation is free of charge.



Delegation from Spain

Monday, October 13, 2008

Room	Time	English Lectures
V3	9:45 - 10:15 a.m.	Real time digital image correlation: Control of test processes and test machines with optical strain sensors <i>Ralf Lichtenberger, Limes GmbH</i>
	10:30 - 11:00 a.m.	testXpert® II and SAP – a new interface is born <i>Thomas Klemm, Zwick GmbH & Co. KG</i>
	11:15 - 11:45 a.m.	testXpert® II Intelligent and Reliable - a solution for every test requirement <i>Manfred Goblirsch, Zwick GmbH & Co. KG</i>
	1:30 - 2:00 p.m.	Production of plastics test specimen for determining comparable material data <i>Knut Laumen, polymerphys IK GmbH</i>
	2:15 - 2:45 p.m.	Characterisation of Irradiated Material by Instrumented Indentation <i>Dr. Hans-Christian Schneider, Forschungszentrum Karlsruhe</i>
	3:00 - 3:30 p.m.	New Developments in optical Deformation Analysis for Material and Component Testing <i>Dr. Harald Friebe, GOM (Gesellschaft für optische Messtechnik)</i>

Tuesday, October 14, 2008

V3	9:45 - 10:15 a.m.	Prospects of utilizing advanced surface modification techniques <i>Dr. Shahzad Alam, PITMAEM Lahore</i>
	10:30 - 11:00 a.m.	testXpert® II Intelligent and Reliable - a solution for every test requirement <i>Manfred Goblirsch, Zwick GmbH & Co. KG</i>
	11:15 - 11:45 a.m.	Polymer Testing and trouble shooting <i>Prof. Achim Frick, Hochschule Aalen</i>
	1:30 - 2:00 p.m.	Requirements of a service provider company for a flexible universal testing machine <i>Bernd Donat, IMA Materialforschung</i>
	2:15 - 2:45 p.m.	Investigation of the effect of cyclical loading on tendon using an equine in vitro model <i>Charlotte Avella, The Royal Veterinary College (RVC), University of London</i>

Wednesday, October 15, 2008

V3	9:45 - 10:15 a.m.	Application of Interferometric Measurement Methods in Material and Reliability Testing <i>Dr. Stefan König, Polytec GmbH</i>
	10:30 - 11:00 a.m.	Investigation of the thermal deformation of electronic packages with electronic speckle pattern interferometry <i>Dr. Hans Schubach, Dantec Dynamics</i>
	11:15 - 11:45 a.m.	testXpert® II Intelligent and Reliable - a solution for every test requirement <i>Manfred Goblirsch, Zwick GmbH & Co. KG</i>
	1:30 - 2:00 p.m.	Multifunctional testing; a modular setup <i>Filip de Bal, KaHo Gent</i>
	2:15 - 2:45 p.m.	Force under control <i>Markus Gemander, GTM Gassmann Testing and Metrology GmbH</i>
	3:00 - 3:30 p.m.	Modern Wall and Coating Thickness Measurement <i>Dr. Wolfram Deutsch, KARL DEUTSCH Prüf- und Messgerätebau GmbH + Co KG</i>

Thursday, October 16, 2008

V3	9:45 - 10:15 a.m.	Rotational Rheometry: How to measure a Shear Viscosity Curve properly? <i>Torsten Remmler, Malvern Instruments</i>
	10:30 - 11:00 a.m.	Measurement uncertainty in the area of mechanical testing / results of proficiency tests <i>Christian Weißmüller, Institut für Eignungsprüfung</i>
	11:15 - 11:45 a.m.	testXpert® II Intelligent and Reliable - a solution for every test requirement <i>Manfred Goblirsch, Zwick GmbH & Co. KG</i>

Monday, October 13, 2008

Room	Time	German Lectures
V1	9:45 - 10:15 a.m.	Einsatz interferometrischer Messverfahren in der Material- und Zuverlässigkeitsprüfung <i>Patric Gehring, Polytec GmbH</i>
	10:30 - 11:00 a.m.	Neues aus der Kunststoffprüfung <i>Helmut Fahrenholz, Zwick GmbH & Co. KG</i>
	11:15 - 11:45 a.m.	Herstellung von Kunststoff-Probekörpern zur Ermittlung vergleichbarer Material-Kennwerte <i>Knut Laumen, polymerphys IK GmbH</i>
	1:30 - 2:00 p.m.	testXpert® II - Intelligent und Sicher, für jede Anforderung eine Lösung <i>Manfred Goblirsch, Zwick GmbH & Co. KG</i>
	2:15 - 2:45 p.m.	Praktische Kunststoffprüfung und Schadensanalyse <i>Prof. Achim Frick, Hochschule Aalen</i>
	3:00 - 3:30 p.m.	Videoclip trifft Messdatenerfassung in der Materialprüfung <i>Armin Nusser, Dewetron GmbH</i>
V2	9:45 - 10:15 a.m.	EtherCAT-basierende MSR-Systeme zur Prüfstandsintegration <i>Dr. Franz Hillenbrand, Entwicklungsleiter IMC Messsysteme GmbH</i>
	10:30 - 11:00 a.m.	Charakterisierung von Materialien für die Kernfusion mit Hilfe der instrumentierten Eindringprüfung <i>Dr. Hans-Christian Schneider, Forschungszentrum Karlsruhe</i>
	11:15 - 11:45 a.m.	Wenn eine Maschine in die Jahre kommt: Modernisieren oder Ersetzen? <i>Walter Gaissmaier, Zwick GmbH & Co. KG</i>
	1:30 - 2:00 p.m.	Statische Prüfung von Schraubenfedern, Vorstellung eines neuen handbetätigten Federprüfgerätes <i>Achim Stelzer-Roncoletta, Zwick GmbH & Co. KG</i>
	2:15 - 2:45 p.m.	Dynamische Prüfung von Schraubenfedern <i>Dr. Steffen Lutz, STZ-Federntechnik Ilmenau</i>
	3:00 - 4:30 p.m.	Prüfmittelfähigkeitsnachweise in der Federindustrie <i>Günther Müller, Zwick GmbH & Co. KG</i>

Tuesday, October 14, 2008

Room	Time	German Lectures
V1	9:45 - 10:15 a.m.	Methode des Drehwinkel gesteuerten Anzugs in der Schraubtechnik <i>Christoph Otto, Schatz AG</i>
	10:30 - 11:00 a.m.	Anforderungen eines Dienstleisters an einer flexiblen Materialprüfmaschine <i>Bernd Donat, IMA Materialforschung</i>
	11:15 - 11:45 a.m.	Gummi, was ist das eigentlich? <i>Dr. Markus Grass, Freudenberg Forschungsdienste</i>
	1:30 - 2:00 p.m.	Neues aus der Normung auf dem Gebiet der Materialprüfung <i>Dr. Alois Wehrstedt, DIN Berlin</i>
	2:15 - 2:45 p.m.	testXpert® II - Intelligent und Sicher, für jede Anforderung eine Lösung <i>Manfred Goblirsch, Zwick GmbH & Co. KG</i>
	3:00 - 3:30 p.m.	Bildkorrelation in Echtzeit: Regelung von Prüfprozessen/Prüfmaschinen durch optische Dehnungsmessung <i>Ralf Lichtenberger, Limess GmbH</i>
V2	9:45 - 10:15 a.m.	Vom Halbzeug bis zum Fertigteil - ZfP mit Wirbelstrom rund um's Kfz <i>Lutz Lindecke, Gollub Werkstoffprüfung GmbH & Co. KG</i>
	10:30 - 11:00 a.m.	Mechanisch technologische Prüfungen an Grobblechen (- ein Prüfverfahren für Prüfeinrichtungen) <i>Dr. Christoph Dilg, AG der Dillinger Hüttenwerke</i>
	11:15 - 11:45 a.m.	testXpert® II-SAP - gehen Sie eine neue Verbindung ein <i>Thomas Klemm, Zwick GmbH & Co. KG</i>
	1:30 - 2:00 p.m.	SimTOM – Simulationen & Prüfungen in der Zahn-, Mund- und Kieferheilkunde <i>Dr. Heike Rudolph, Universitätsklinikum Ulm, Klinik für Zahnärztliche Prothetik</i>
	2:15 - 2:45 p.m.	Biomechanik in der Implantatprothetik - Der BoneCare® Titanstoßdämpfer <i>Dr. Thomas Laux, Implantologische Zahnarztpraxis Dr. Thomas Laux</i>
	3:00 - 3:30 p.m.	GAMP5 & Qualifizierung <i>Andreas Müller, ServoTech GmbH</i>

Wednesday, October 15, 2008

Room	Time	German Lectures
V1	9:45 - 10:15 a.m.	Neue Entwicklungen in der optischen Deformationsanalyse für Material- und Bauteilprüfung <i>Dr. Harald Friebe, GOM, Gesellschaft für optische Messtechnik</i>
	10:30 - 11:00 a.m.	Pro' and Con's faseroptischer Dehnungssensorik in Material- und Strukturtests <i>Dr. Karl-Heinz Haase, Hottinger Baldwin Messtechnik</i>
	11:15 - 11:45 a.m.	Trends und Möglichkeiten der Prüftechnik zur Charakterisierung der Umformeigenschaften von Blechwerkstoffen <i>Prof. Marion Merklein/Andreas Kuppert, Lehrstuhl für Fertigungstechnologie Uni Erlangen</i>
	1:30 - 2:00 p.m.	Thermische Untersuchungen von elektronischen Packages mittels vollflächiger Verformungsanalyse <i>Dr. Hans Schubach, Dantec Dynamics</i>
	2:15 - 2:45 p.m.	Multisensor Oberflächemesstechnik von der Entwicklung bis zur Produktion <i>Stefan Stöcker, FRT GmbH</i>
V2	9:45 - 10:15 a.m.	Dynamisch Mechanische Analyse (DMA) - Bestimmung des Kriechverhaltens, der Relaxation und des Druckverformungsrestes von Elastomeren <i>Jürgen Zöller, Netzsch Gerätebau GmbH</i>
	10:30 - 11:00 a.m.	Form- und Rauheitsmessung in der Fertigung <i>Michael Hauptmannl, Hommel Etamic</i>
	11:15 - 11:45 a.m.	LEX 3D - konfokale Laser-Scanning-Mikroskopie <i>Dr. Christoph Deusen, Olympus Deutschland GmbH</i>
	1:30 - 2:00 p.m.	Ringversuche - ein zentrales Werkzeug des Qualitätsmanagements <i>Thorsten Helbig, Kunststoff-Institut Lüdenscheid</i>
	2:15 - 2:45 p.m.	testXpert® II - Intelligent und Sicher, für jede Anforderung eine Lösung <i>Manfred Goblirsch, Zwick GmbH & Co. KG</i>
	3:00 - 3:30 p.m.	Angewandte Rheologie - Untersuchungen mittels Rotations- und Hochdruck-Kapillarrheometrie <i>Torsten Remmler, Malvern Instruments</i>

Thursday, October 16, 2008

Room	Time	German Lectures
V1	9:45 - 10:15 a.m.	Farbmessung in der Kunststoff-Industrie <i>Reinhard Feld, X-Rite GmbH</i>
	10:30 - 11:00 a.m.	Die Vicat-Trockenmethode nach ISO 306 - Untersuchung der Methodenvergleichbarkeit an PS <i>André Vilin, Total Petrochemicals France</i>
	11:15 - 11:45 a.m.	Instrumentierte Nano-Eindringprüfung - Wekstoffprüfung an ultradünnen Schichten und miniaturisierten Strukturen <i>Martin Heß, CSM Instruments</i>
	1:30 - 2:00 p.m.	testXpert® II - Intelligent und Sicher, für jede Anforderung eine Lösung <i>Manfred Goblirsch, Zwick GmbH & Co. KG</i>
	2:15 - 2:45 p.m.	testXpert® II-SAP - gehen Sie eine neue Verbindung ein <i>Thomas Klemm, Zwick GmbH & Co. KG</i>
V2	9:45 - 10:15 a.m.	Moderne Wand- und Schichtdickenmessung <i>Dr. Wolfram Deutsch, KARL DEUTSCH Prüf- und Messgerätebau GmbH + Co KG</i>
	10:30 - 11:00 a.m.	Die Kraft im Griff <i>Markus Gemander, GTM Gassmann Testing and Metrology GmbH</i>
	11:15 - 11:45 a.m.	Modernisieren oder Ersetzen? Wenn eine Maschine in die Jahre kommt <i>Walter Gaissmaier, Zwick GmbH & Co. KG</i>
	1:30 - 2:00 p.m.	Messungenauigkeit in der Metallprüfung / Ergebnisse aus Ringversuchen <i>Christian Weißmüller, Institut für Eignungsprüfung</i>
	2:15 - 2:45 p.m.	Neues aus der Kunststoffprüfung <i>Helmut Fahrenholz, Zwick GmbH & Co. KG</i>

testXpo International Forum for Materials Testing 2008

- See extensive exhibits from a large number of co-exhibitors illustrating the latest developments in the world of materials testing
- Experience the widest range of products for materials and component testing applications - all in one location
- Visit lectures where experts will share their knowledge on all aspects of quality assurance
- Hold informal discussions with experts in your own field of testing, and experience highly practical product demonstrations
- Be an active part of the *testXpo* 17th Testing Forum which is a strong annual tradition for global market leaders in the materials and components testing industry
- Join us for a delicious lunch
- Participate free of charge

The forum is organized by specific topic areas so that you can easily locate items of interest to you. This year we focus on: Metal, plastics, automotive, medical technology, building materials, competence centre, „tested for life“, and service/customer support.

Highlights 2008

Some of the items from our extensive portfolio on show this year are:

- Materials testing machine F_{max} 150 kN with three high-temperature furnaces
- Materials testing machine F_{max} 20 kN with temperature chamber for sub-ambient testing using videoXtens extensometer
- Materials testing machine Z020TH with connection from *testControl* to Ethernet, 500Hz synchronised data transfer to PC, slot extension and connection HBM-MGC+
- Motorized Pendulum Impact Tester HIT 50P with 50 joule pendulum
- Drop impact tester HIT 230F with compression after impact (CAI)
- Materials testing machine Z250 with Macro-extensometer and videoXtens for the measurement of transverse strain
- New fatigue and impact testing laboratory
- *testControl II* - New digital controller for servo-hydraulic machines
- Robotic testing system ,roboTest R' with colorimeter for reflection and transmission measurement
- Robotic testing system ,roboTest P' with materials testing machines Z2000H and Z600E
- Latest tools for global remote diagnostics and maintenance of testing machines

Whether you work in Academia, R&D, or quality / production control you will find many opportunities to explore state-of-the-art testing systems. Why not use this occasion to participate in a guided tour of our modern production facilities, and at the same time improve your personal network through discussions with industry experts from around the world?

Come and meet our teams and see for yourself how our high quality products are manufactured.



,roboTest P' robotic testing system



Different Industries Area



Technical Presentations from Industry Experts





ADDITIVE GmbH
Max-Planck-Str. 22B
61381 Friedrichsdorf

- Universal measurement systems
- Noise and vibration analysis
- Mobile Measurement Engineering
- Electric motor testing
- Test rig design, consulting, system integration, training



Binder GmbH
Im Mittleren Ösch 5
78532 Tuttlingen

- Simulation chambers for scientific and industrial laboratory applications
- Environmental simulation chambers



CaTs³ Limited
21 Lindisfarne Drive
Kenilworth, Warwickshire
CV8 2PQ, UK

- Software systems for single and multi-axis servo-hydraulic test rigs



CSM Instruments
Basler Straße 115
79115 Freiburg

- Coating and surface measurements
- Instrumental hardness
 - Adhesion, Scratch resistance by coatings and wear resistance by coatings



Dantec Dynamics GmbH
Kässbohrer Str. 18
D-89077 Ulm

- Strain, stress & vibration analysis 3D based on ESPI and Digital Image Correlation (DIC)
- Non-destructive Testing (NDT) with Shearography
- Laser optical measurements in fluid dynamics
- LDA, PDA, CTA, PIV, LIF



ddw GmbH
Danziger Straße 1
23564 Lübeck

- CAQ systems, LIMS, failure documentation, analysis of weakest points



Dewetron GmbH
Daimlerstr. 2
73249 Wernau

- Portable measurement instruments, battery powered
- Signal conditioning amplifiers with differential and isolated inputs
- Strain – gage applications
- Synchronus data and video measurement



**Freudenberg
Forschungsdienste KG**
Forschungsdienste KG
Höhnerweg 2-4
69465 Weinheim

- Elastomers and plastics:
Chemical analysis, computer aided engineering,
surface technology, damage analysis, materials testing



measurement with confidence

**Hottinger Baldwin
Messtechnik GmbH**
Im Tiefen See 45
64293 Darmstadt

- Measurement solutions for the electrical measurements of mechanical quantities for all fields of industry as well as research and development.
- Application fields
Experimental Stress Analysis, Industrial Process Control, Torque Measurement, Test & Measurement, Weighing Technology, Calibration
 - Products
Sensors and Transducers, Measurement Systems and Software, Components for weighing technology, Customized Sensors



imat-uve GmbH
Krefelder Straße 687-689
41066 Mönchengladbach

- Planning, testing, simulating and analyzing
- Independent service test provider for component supplier's of the automobile and aircraft industry.



**KARL DEUTSCH
GmbH + Co KG**
Otto-Hausmann-Ring 101
42115 Wuppertal

- Ultrasonic Testing
- Coating Thickness
- Crack Depth Measurement
- Magnetic Particle Testing
- Penetrant Testing



LIMESS GmbH
Walther-Rathenau-Str. 13
75180 Pforzheim

- Systems for optical and full field 2D measurement of deformations, measurement of high speed events and large strains, customer specific development of image analysis systems



Malvern Instruments GmbH
Rigipsstraße 19
71083 Herrenberg

- Viscosimeter
- rotational rheometer
- DMA/DMTA
- high-pressure capillary rheometer



Hochtemperatur-Vakuum-Prüfsysteme

**MAYTEC Mess- und
Regeltechnik GmbH**
Im Haselbusch 16
78224 Singen

- High temperature vacuum test systems for materials testing, thermal range = room temperature up to 2200°C



Mettler-Toledo GmbH
Ockerweg 3
35396 Giessen

- Balances and analytical instruments



NETZSCH-Gerätebau GmbH
Wittelsbacherstraße 42
95100 Selb

- Thermoanalytical instruments (DSC, TGA, DMA, etc.)



FRT - Fries Research & Technology GmbH
Friedrich-Ebert-Straße
51429 Bergisch Gladbach

- FRT develops, produces and distributes metrology tools for the destruction free measurement of roughness, contour, topography and other surface properties.



Gollub Werkstoffprüfung GmbH & Co. KG
Viktor-Scheffel-Str. 8
74177 Bad Friedrichshall

- Eddy currents testing machines



GOM - Gesellschaft für optische Messtechnik mbH
Mittelweg 7-8
38106 Braunschweig

- Optical deformation analysis
- 3D-digitizing



Graphikon GmbH
Mandelstr. 16
10409 Berlin

- Machine vision solutions: Inspection systems for manufacturing and logistics



GTM Gassmann Testing and Metrology GmbH
Philipp-Reis-Str. 6
64404 Bickenbach

- Precision in the Force- and Torque Measurement
- Multi-Component Measurement
- DKD calibration



Hochschule Aalen Kunststofftechnik
Beethovenstraße 1
73430 Aalen

- Polymer technology and recycling



HOMMEL-ETAMIC GmbH
Alte Tuttlinger Straße 20
78056 VS-Schwenningen

- Roughness, topography and contour measurement systems, form measurement



OLYMPUS Deutschland GmbH
Wendenstraße 14-18
20097 Hamburg

- Stereo microscopes
- Digital imaging and digital photography
- Reflected light microscopes
- Industrial endoscopes



Polytec GmbH
Polytec-Platz 1-7
76337 Waldbronn

- High-quality laser measurement systems for the analysis of vibration, length, velocity and surface topography



SCHATZ AG
Kölner Straße 71
42897 Remscheid

- Systems for testing nuts, bolts and components, torque tools and assembly processes, network based software for the quality management



Textechno Herbert Stein GmbH & Co. KG
Dohrweg 65
41066 Mönchengladbach

- Measurement of lowest forces, resolution up to 0.1 µN
- Automatic testers for the determination of Linear Density, Breaking strength, Crimp, Shrinkage, Evenness, and Friction properties on fibres and yarns



X-Rite GmbH
Siemensstr. 12a
63263 Neu-Isenburg

- Visual color matching
- Color measurement
- In-Line spectrophotometer
- Color management and Color formulation



zebris Medical GmbH
Max-Eyth-Weg 42
D-88316 Isny

- 3D Real Time Motion Analysis
- Navigation
- Measurement of Force Distribution
- EMG



Toni Technik Baustoffprüfsysteme GmbH
Gustav-Meyer-Allee 25
13355 Berlin

- Servohydraulic (static) building materials testing machines
- Equipment for complete cement and concrete laboratories
- Retro fits and modernizations, certified calibration services



Zwick GmbH & Co. KG
August-Nagel-Straße 11
89079 Ulm

- Servohydraulic testing machines
- Hydraulic high-speed testing machines
- Sheet metal ductility testing machines
- Materials testing machines
- Automated test systems
- Hardness testers, extrusion plastometers and pendulum impact testers
- Retro fits and modernizations, certified calibration services

How to get to Zwick

Approach from Stuttgart/Munich

Autobahn A8 – Exit Ulm West. Stay on the B10 towards Ulm. Second exit after the tunnel (at the Esso petrol station) turn right into the roundabout to the B311. Follow signs to Sigmaringen/Donaeschingen.

Stay on the B311 to the junction Ulm-Einsingen (app 10 km). Turn right towards Einsingen. At the first junction turn right onto the August-Nagel-Straße (follow the Zwick/Roell signs).

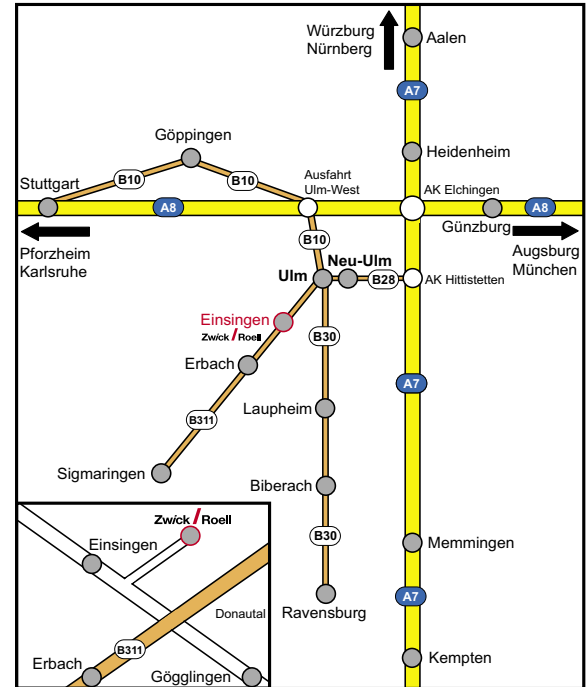
Approach from Aalen

Autobahn A7 – at junction (Autobahnkreuz) Ulm-Elchingen take the A8 Autobahn towards Ulm, exit Ulm-West, follow above directions

Approach from Kempten

Autobahn A7 – at junction (Autobahnkreuz) Hittistetten take the B28 highway towards Senden. At the Neu-Ulm interchange take the B30 highway towards Laupheim/Biberach. Exit at Ulm-Wiblingen.

Turn left at junction towards Gögglingen. In the village center turn right towards Einsingen. At the traffic lights straight on to Einsingen. Turn right at the first junction after the traffic lights onto August-Nagel-Straße.



Address

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August-Nagel-Str. 11
89079 Ulm-Einsingen
Germany