



WFO TECHNICAL FORUM
**"Lightweight Construction and Component
Optimisation through innovative Production Engineering"**



Technical lectures - Índice de ponencias

Do the actual organic binder systems satisfy the future requirements ?

Dipl. Ing. A. Serghini, HÜTTENES ALBERTUS
Chemische Werke GmbH, Düsseldorf

INOTEC® The inorganic binder system proved in production.

Dr J. Müller, Dr. D. Koch, G. Weiker, J. Körschgen, S. Schreckenber
ASHLAND-SÜDCHEMIE-KERNFEST GmbH

Application of inorganic binder systems in series production.

Dipl. Ing. K. Löchte, R. Boehm, Dr. C. Lustig
HÜTTENES ALBERTUS Chemische Werke GmbH

New Buhler concepts to increase the economic efficiency in high pressure die casting.

Dipl. In. M. Fuchs
Bühler Druckguss AG

Malfunction of die-casting dies. Ways of prediction ate relevant units.

J. Beck*, T. Batsch**, Dr. Ing. D. Renker***

*AWEBA Werkzeugbau GmbH, ** BITSZ Büromat IT Systeme GmbH, ***TU BA Giesserei Institut
Freiberg

**Low pressure die casting compared to gravity die casting and counter pressure casting regarding
economic efficiency and casting quality.**

L. Hartmann
KURTZ GmbH

Aluminium casting: the transition to vertical greensand moulding

Ph. D. N. W. Ramussen
DISA Industries A/S

Cupola melting and coke consumption.

Dr. M. Lemperle
Küttner GMBH & Co. KG

**The application of compressor core technology for feeding systems in a mass iron automotive
foundry**

Seify Degirmenci
DOKTAS AS

Difficulties in controlling and measuring flake skin in CGI.

F. Duncan
ASHLAND Casting Solutions

Transition controlled semi-solid moulding of ductile iron by Lost Foam process

Norihiro Asano, Tatsuhiko Katou, Dr. Masahito Goka
SINTOKOGIO Ltd., HITACHI Metals Ltd.

Blast cleaning and sand removed of fastidious cast parts.

Dipl. Ing. F. Herbst
Oberflächentechnik, GmbH

A new approach for the reduction of moulding sand emissions by 50%

Y. Paniaras, C. Grefhorst, Dr. O. Podobed
S&B Industrial Minerals GmbH

Two-phase flow analysis of aeration sand filling for green sand molding machine.

Prof. WU Jujiao, Dr. LI Wenzhen, Dr. Hiroyasu Makino, Minoru Hirata
Tsinghua University of Beijing, Sintokogio Ltd

The use of oxygen activity measurement to determine optimal properties of ductile iron during production.

Dr. F. Mampaey, D. Habets, Dipl. Ing. F. Seuterns, Dr. J. Plessers
WTM Materials Processing, Heraeus Electro-Nite International

Modelling of solidification properties and functionality of structural light weight castings.

Dr. Ing. K. Weiss, Ch. Honsel Dr. A. Wendt
RWP GmbH

Energy efficiency in foundries.

Dipl. Ing. P. Mikoleizik
Siempelkamp Giesserei GmbH

Energy absorption and structural ductility of Al-Si die-castings.

Dr. H. Laukli
HYDRO Aluminium Metal

Improvement and optimization of aluminium die casting technology with parameter design of quality engineering.

Akihiko Ogasawara
Honda Motor Co. Ltd.

Tailor-made foundry alloys by SAGA aluminium foundry

Ing. G. Trenda
SAG Aluminum Foundry GmbH

Low mass runners for improved yield in HDPC

M. Givord
CSIRO-CMMT

Development of next generation water free die lubricant and small amount spray application.

Ryusuke Izawa, Koji Togawa, Hirobumi Ohira, Masanao Kobayashi, Isami Yamaguchi
Ryobi Ltd., Aoki Science Institute Co., Yamaguchi Giken Co.

MTS 1500 – an automated melt treatment system for aluminium alloys utilizing granular fluxes.

Dipl. Ing. R. Simon, Dipl. Ing. T. Smetek
FOSECO GmbH, Ronal Polska Sp. Z.O.O.

Innovative new Foce Control technology increases productivity in robotic machining&finishing.

Mathys Pirk

ABB Automation GmbH

A study of a new core shooting process for the improvement of core quality.

Prof. Dr. Ing. Jürgen Blast, Dipl. Ing. Peter Schmidt

Institut für Maschinenbau TU BA

Modelling the production of cores. Physiscal models, process simulation, experimental investigations.

M. Schneider, A. Seghini, A. Kessler

MAGMA Giessereitechnologie GmbH, Hüttenes Albertus Chemische Werke GmbH, IfG

3D Simulation of the compactation of clay-bonded moulding sands

Dr. Ing. Regina Lenz

IfG – Insitut für Giessereitechnik

C.A.S. 2010 Cycle time and drive diagnostic system

Dr. Ing. M. Dittrich

Hainrich Wagner Sinto Maschinenfabrik

Automatic Visual Inspection Techniques for Holistic quality assurance in modern foundries.

Dipl. Ing. Dirk vom Stein

Inspectomation GmbH



NEWCAST FORUM

"Constructing with Casting Materials"

Technical lectures - Índice de ponencias

Secret design rules in nature. Shape optimization without computer.

Prof. Dr. Claus Mattheck. Karlsruhe

Casting components in engineering structures.

Dipl. Ing. Gerhard Steidl. Karlsruhe

Functionality and production thought ahead. Application of optimization and simulation tools at the development of cast structural components.

Dr. Thorsten Schmidt. Mölln

Survival of the fittest. Topology optimization for developing tailored castings.

Dipl. Ing. Johannes Beckmann. Gütersloh

The design process chain: using quantitative property predictions for innovative casting design.

Dr. Jörg Sturm. Aachen

The world of ductile cast iron.

Prof. Ernst. P Wranke. Krefeld

New trends in the production of high stress aluminium decast components.

Dr. Ing Norbert Grov, Dr. Ing. M. Wappelhorst, Dipl. Ing. Tanja Kinzler. Gerstenden

Intelligent system solutions in Zinc.

Gerd Bühner. Rudersberg-Necklinsberg

Aluminium transmission housings for heavy truck produced by HPDC.

Dipl. Ing. Ansgar Pithan. Meschede

Aluminium lightweight construction for high performance engine blocks.

Dr. Klaus Lellig. Dillingen

Light reliable and cleverly designed thin wall steel castings for automotive applications.

Dr. Ing. Jens Schreiner. Leipzig

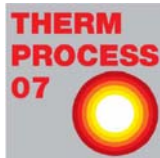
Dynamic behaviour of different materials and filters for cast structural components.

Dr. Ing. Falco Paepenmüller. Aachen

Fatigue on flake graphite cast iron. Review of test data and aspects for analytical fatigue strength assessment.

Dipl. Ing. Franz Klubberg

Pro. Dr. Ing. Paul Beiss. Aachen



THERMPROCESS SYMPOSIUM

Technical lectures - Índice de ponencias

Heating, heat treatment and diffusion

Reduction of NOX in a SER Burner System.

Kanthal GmbH, Mörfelden-Walldorf
Thomas Lewin, Dirk Gerlach

Modification of the use of recuperated burners in various applications thanks to suitable control concepts.

Aichelin Entwicklungszentrum und Aggregatebau GmbH, Oederan
Dr. Roland Rakette, Dirk Mäder

Technical and economical aspects of regenerative heating systems on industrial furnaces

Bloom Engineering (Europa) GmbH, Düsseldorf
Jörg Teufert, Dr. Hansjochen Oertel, Josef Domagala

Tenova Flexitech flameless low Nox burners: industrial applications

Techint, Milano
L. Ballarino, M. Fantuzzi, M. Senarega

Energy saving potentials for gas fired industrial furnaces

WS Wärmeprozess Technik GmbH, Renningen
Dr. Joachim G. Wünning

Innovative applications for microwave heating: melting and controlled solidification of metals, drying of casting cores, moulds and refractory materials.

Linn High Therm GmbH, Eschenfelden
Malte Möller

Catalytic gas nitriding. Inconceivable results with inimitable austerity. Review of 10 years experience.

JSC Scientific Prod. Company, Nakal, Moskau
Vladimir Syropiatov

HPH®-Bell Type Annealing Furnaces and Explosion Prevention and Protection Directives ATEX - Consequences for Operators and Manufacturers.

LOI Thermprocess GmbH, Essen
Dr. Michal Buryan, Dr. Wolfgang Mundel, Janus Drewniok

Use of high speed gases in heat treatment processes.

Linde AG – Linde Gas Division, Unterschleißheim
Sami Ahonen, Christoph Laumen, Thomas Mahlo, Gerd Waning

Metall processes, MIM

Plants for MIM, CIM and sintering processes.

Tisoma Anlagenbau und Vorrichtungen GmbH, Immelborn
Fredo Amstein

Fully integrated continuous MIM process.

Elino Industrie-Ofenbau Carl Hanf GmbH & Co. KG, Düren
Dr. Reinhard Schummers, Peter Vervoort

State of the art extrusion plant from casthouse to packing.

Elhaus Industrieranlagen GmbH, Rielasingen
Dr. Dirk Menzler

Quality aspects of HPH annealed strip steel.

LOI Thermprocess GmbH, Essen
Frank Maschler, Dr. Peizhong Wang, Dr. Peter Wendt

Quenching and tempering of carbon steel heavy plates, train wheels and tubulars.

LOI Thermprocess GmbH, Essen
Dr. Friedhelm Kühn

Steel strip hardening and tempering lines for medium and high carbon steels and alloyed grades.

Ebner Industrieofenbau Ges.m.b.H., Leonding
Heribert Lochner

Vertical bright annealing lines for stainless CrNi and Cr steels and copper alloys.

Ebner Industrieofenbau Ges.m.b.H., Leonding
Heribert Lochner

Heat treatment, vacuum technology, induction.

Plasma combination treatment in engine applications.

Sulzer Metaplas, Bergisch Gladbach
Dr. Jürgen Crummenauer, Dr. Thomas auf dem Brinke

Modern production concepts in plasma nitriding.

Eltro GmbH, Baesweiler
Dr. Uwe Huchel, Dr. Siegfried Strämke

Development of customized solutions – an interesting challenge of modern induction heating.

Hüttinger Elektronik GmbH + Co. KG, Freiburg
Jens-Uwe Mohring, Dr. Elmar Wrona

KS–S: A Modular line of furnaces for temperatures from 200-1200 °C with controlled atmospheres and vacuum.

Linn High Therm GmbH, Eschenfelden
Roland Waitz

Integrated sub zero systems in modern vacuum furnaces.

Schmetz GmbH, Menden

Björn Zieger

Operating Experiences with the Flexible Vacuum Heat Treatment System ModulTherm® in Serial Production.

ALD Vacuum Technologies GmbH, Hanau

Dr. Klaus Löser

Latest generation dry compressing vacuum pumps for use in demanding heat-treatment applications.

Oerlikon Leybold Vacuum GmbH, Köln

Uwe Zöllig

Hardening & tempering for tubes and bars: advantages of induction heating technology.

SMS Elotherm GmbH, Remscheid

Dr. Guido Opezzo

Age Hardening Plants for Aluminium with Flexible Quench Facilities.

LOI Thermprocess GmbH, Essen

Adolf Hanus

Low pressure nitriding ALLNIT®.

BMI Fours Industriels, Saint Quentin Fallavier

Ghislain Perez, Patrick Pouloux