

Session Program

11-15 Sept 2017



20th International Forgemasters Meeting - IFM 2017

Advanced and new production technologies

Congress Graz, Austria
Albrechtgasse 1 8010 Graz Austria

Monday 11 September

15:20

15:40

16:10

Advanced and new production technologies: C-HT

Session | **Location:** Congress Graz, Austria, Room C, Albrechtgasse 1 8010 Graz Austria

Advanced and new production technologies: C-HT

Session | **Location:** Congress Graz, Austria, Room C, Albrechtgasse 1 8010 Graz Austria

16:10–16:30

Direct quenching after forging and inductive re-heating - a new efficient process technology

Speakers

Dr Frank Hippenstiel, Mr Michael Müller

16:30–16:50

Potential Detrimental Consequences of Stringent PWHT on Pressure Vessel Steel Forgings

Speakers

Mr Anirudh Shastri, Mr Neeraj Borwankar

16:50–17:10

ESTABLISHMENT OF ULTRA-MODERN QUENCHING SYSTEM & STUDY OF COOLING RATES OF HEAVY FORGINGS

Speaker

Mr VENKATARAMANA TENTU

17:10–17:30

ON THE INTERMEDIATE HEAT TREATMENT OF THE FORGED WHITE CAST IRON ROLL

Speaker

Mr Wataru YAMADA

17:30–17:50

USE OF REGENERATIVE BURNER SYSTEMS IN BATCH-WISE FURNACE OPERATION

Speakers

Mr Erwin Tschapowetz, Dr Krzysztof Hornig

17:50

Tuesday 12 September

09:00

Advanced and new production technologies: C-steel ESR

Session | **Location:** Congress Graz, Austria, Room A, Albrechtgasse 1 8010 Graz Austria

09:00–09:20

Improvement on the quality of Vacuum Casting Ingots by applying the Multiple Layered Refractory and the Various Sensing Equipments

Speaker

Mr Yuta Shinkai

09:20–09:40

Macro cleanliness of big forging ingots - influence of casting parameters

Speaker

Mr Florian Schneller

09:40–10:00

Advanced Teeming System - Development, design and operational experience with a new high performance ingot casting system

Speakers

Dr Christian Redl, Wolfgang Wichert

10:00–10:20

A NOVEL MANUFACTURING PROCESS FOR HEAVY FORGINGS: ADDITIVE FORGING

Speaker

Mr Mingyue Sun

10:20

10:50

Advanced and new production technologies: C-steel ESR

Session | **Location:** Congress Graz, Austria, Room A, Albrechtgasse 1 8010 Graz Austria

10:50–11:10

Effect of the slag composition and a protective atmosphere on chemical reactions and non-metallic inclusions during electro slag remelting of a hot-work tool steel

Speaker

Mr Manuel Molnar

11:10–11:30

Ni-Base Forgings from Large Remelted Ingots

Speaker

Mr Andreas Diwo

11:30–11:50

ESR PROCESS AS ADDITIVE MANUFACTURINGTECHNIQUE FOR HEAVY INGOTS AND METAMATERIALS: EXPERIENCE AND PROSPECTS

Speaker

Prof. Lev Medovar

11:50–12:10

HEAT TREATMENT EFFECTS ON MICROSTRUCTURE, MECHANICAL PROPERTIES AND DURABILITY OF UNS N06625 ROLLED RINGS FOR OIL & GAS APPLICATIONS

12:10

Speaker

Mr Giordano Camicia

14:00

Advanced and new production technologies: C-steel ESR**Session** | **Location:** Congress Graz, Austria, Room A, Albrechtgasse 1 8010 Graz Austria

14:00–14:20

SUPERSIZED ESR - STRATEGIES FOR THE FURTHER OPTIMIZATION AND SIZE INCREASE OF THE PROCESS**Speaker**

Mr Matthias Knabl

14:20–14:40

DEVELOPMENT OF A NITROGEN ADDITION METHOD IN ESR PROCESS**Speaker**

Mr Yuta Seki

14:40–15:00

DEVELOPMENT, IMPLEMENTATION AND RESULTS OF LARGE BOTTOM POURED INGOTS AT ELLWOOD QUALITY STEELS**Speaker**

Mr Bjorn Gabrielsson

15:00–15:20

The Application of Low Frequency Melt Power in the Production of Large Scale Electro-slag Re-melted Ingots**Speaker**

Mr Craig Miller

15:20

15:50

Advanced and new production technologies: C-steel ESR**Session** | **Location:** Congress Graz, Austria, Room A, Albrechtgasse 1 8010 Graz Austria

15:50–16:10

Qualification of Hollow Ingot Technology in Safety Critical Forgings and Fabrications**Speaker**

Dr Michael Blackmore

16:10–16:30

Manufacturing of Ø1,000 grade large diameter round bloom and development of cost effective hot forging process using the round bloom**Speaker**

Mr HiSang Chang

16:30–16:50

Hydrogen Embrittlement Mitigation Techniques in High Strength Steel Manufacture**Speaker**

matthew draper

16:50–17:10

Review and Recent Trends in Main Topics of IFM-Conferences 1954 - 2017 and Conclusions

Speaker

Dr Dieter Bokelmann

17:10–17:30

Dimensional control during forging: the 3D Laser Measurement System

Speaker

Mr Connor Chesman

17:30

Wednesday 13 September

09:00

Advanced and new production technologies: C-Forging

Session | **Location:** Congress Graz, Austria, Room A, Albrechtgasse 1 8010 Graz Austria

09:00–09:20

Application of Optimum Forging Pass Schedule for the void consolidation

Speaker

Mr Akihiro Sato

09:20–09:40

Manufacturing technology development of the large forgings for replacement nuclear power plant

Speaker

Mr DONG KWON KIM

09:40–10:00

New forging drive system for radial forging based on double stroke mechanism

Speakers

Mr Martin Auer, Mr Robert Koppensteiner

10:00–10:20

LATEST DEVELOPMENTS IN ABRASIVE CUTTING AND GRINDING OF LARGE-SCALE FORGINGS

Speaker

Mr Norbert ASAMER

10:20

10:50

Advanced and new production technologies: C-Forging

Session | **Location:** Congress Graz, Austria, Room A, Albrechtgasse 1 8010 Graz Austria

10:50–11:10

New design solutions of four-die forging devices (FDFD) and open-die forging technologies

Speakers

Mr Dmitriy Lazorkin, Mr Sergey Kuralekh

11:10–11:30

A New Experimental Methodology for Predicting Through Thickness Property Variation in Large Forgings

Speaker

Mr Jared Kitchen

11:30–11:50

Development and Manufacturing of Monoblock Low Pressure Rotor Shaft Forged from 650 Ton Ingot

Speaker

Dr Duk-Yong Song

11:50-12:10

The forging method of high chromium steel to achieve both forming and forging in 3,000Ton vertical press**Speaker**

Mr Tomoharu Shigeta

12:10

14:00

Advanced and new production technologies: C-Forging**Session** | **Location:** Congress Graz, Austria, Room A, Albrechtgasse 1 8010 Graz Austria

14:00-14:20

Analysis of two-die and four-die forging processes implemented on hydraulic forging presses and RFM**Speakers**

Mr Dmitriy Lazorkin, Mr Sergey Kuralekh

14:20-14:40

Comparison between Four Die Forging Device and Conventional Forging Processes of Cold Work Tool Steel**Speaker**

Mr Roberto Tiburcio Frota Junior

14:40-15:00

On the deformation of dead metal zones at ingots' ends areas during upsetting**Speaker**

Mr Yunlai Ren

15:00-15:20

On the multi-ram forging for large marine crankthrows**Speaker**

Mr Yunlai REN

15:20-15:40

Development and Integration of Digital Technologies in Forging Processes**Speaker**

Dr Celalettin Karadogan

15:40

14:00

Advanced and new production technologies: C-Ring rolling**Session** | **Location:** Congress Graz, Austria, Room B, Albrechtgasse 1 8010 Graz Austria

14:00-14:20

Manufacture of large disc and ring forgings in Alloy 600**Speaker**

Mrs Estelle Baumbach

14:20-14:40

A novel method for manufacturing qualified special steel by Forging Solidifying Metal**Speaker**

Mr Bin Xu

14:40-15:00

The Hot Ring Rolling Process for manufacturing Large Rings with As-cast Ring-shaped Billets

15:00

Speaker

Mrs Huiqin Chen

16:10

Advanced and new production technologies: C-Forging

Session | **Location:** Congress Graz, Austria, Room A, Albrechtgasse 1 8010 Graz Austria

16:10–16:30

Process integrated production of complex workpieces in open-die forging

Speaker

Mr Martin Wolfgarten

16:30–16:50

Quality Control in Manufacturing Process of Large Forgings

Speaker

Mr Jingguo Li

16:50–17:10

STUDY ON THE KEY TECHNOLOGY & THE ROUTINE OF INTELLIGENT MANUFACTURING FOR OPEN DIE FORGING

Speaker

Mr Zuoyu Qi

17:10