

United Aluminium World at

# **ALUMINIUM TWO THOUSAND**

## 11<sup>th</sup> World Congress

In collaboration with Department of Industrial Engineering, Sector of Technologies and Processing Systems University of Bologna

# BHR Hotel, Treviso

## Treviso/Venice

# 9 - 13 April 2019

*Meet the Specialists for successful business* 

# CALL FOR PAPERS

As a potential speaker, you are invited to submit a title (with list of the authors) for a proposed presentation before 28 February 2018.

An abstract (maximum 1 page, following the template available on websites) should be submitted to aluminium2000@interall.it before 30 April 2018.

### ALUMINIUM TWO THOUSAND CONFERENCE TOPICS

MARKETS & STRATEGIES: The traditional markets: Europe, USA, Canada, Middle East, The Gulf, Far East -BRIC Countries (Brazil, Russia, India, China) and their present and future role - New emerging countries: Mexico, Central and South America

ALLOYS BILLETS & RELATED EQUIPMENT: Foundry - Aluminium casthouse technology - Billet quality -Billet casting - Homogenization - Use of primary aluminium and scrap - High speed alloys

**ROLLING TECHNOLOGY**: Innovative equipment - New application of aluminium coil and sheet in the industry

ARCHITECTURE & SPECIAL USES: Building systems - Curtain walls - Design & Construction - CAD/CAM -Exterior & Interior Finishing - Renewal and Maintenance - Windows & Doors - New applications

TRANSPORT & AUTOMOTIVE INDUSTRY: Product and process innovations - Aeronautics - Nautical -Automotive - Rail sectors - Patents - Computer technologies - Mechanical processing - Alloys - Design and innovation

### **EXTRUSION:**

• PROCESS SUSTAINABILITY: Eco-equipment - Eco-plants - Sustainable Production - Energy Savings

• PROCESS MANAGEMENT: Economical-driven Decisions - Process Control - Process Savings - The "Small Lots" Problem Architectural and Non-Architectural Systems

• PROCESS MONITORING: Sensors Effectiveness - New Devices - Data Management Systems - Data Warehouse

• PLANT & PROCESS: Furnaces - Presses - Handling equipment - Ovens and Heating Systems - Saws and shears -Downstream equipment - Automation - Hard and Big Profiles - Packaging - Lubricants - Cooling Devices - Nitrogen Cooling



• PROCESS SIMULATION: Models - Validation - Optimization - Material Flow - Friction - Stress State Prediction

• **PRODUCT QUALITY**: Defects - Distortions - Seam/Charge Welds - Maximum Production Rates - Microstructure - Metallurgy for High-Speed Extrusion - Metallurgy for Paint Adhesion

• ALLOYS: Hard/New Light Alloys - Magnesium Alloys - Lithium Alloys - Composite Alloys

• **DIES**: Die design and manufacturing - Die correction - Die cleaning and polishing - High Production Rates – Oriented Design - Die Life - Coatings - Correction Strategies - Die Cooling systems

• NEW PROCESSES: Conform - Thixoextrusion - Rollforming Extrusion - Hot Profile Bending - Chip Extrusion - Composite Extrusion

**ANODIZING:** Racking & Jigging - Pretreatment - Mechanical & Chemical Etching - High-Speed Anodizing - Anodizing and colouring of special alloys from casting and die casting - Hard Anodizing - Rectifiers - New Dipping & Electrocolouring Colours - Patterned Effects - Advances in Sealing - Nickel free cold sealing - Vertical Plants – Automatic Racking

**COATING**: Powder & Wet Processes - Pretreatments - Chrome-free products - High-Performance Polyesters - Powder Coil Coating - Small Lots Handling - Vertical & Horizontal Plants - Compact Plants - Filiform and Point Defects -Adhesion Problems - New Powder Application Methods - Wood effects - Paints - Coating materials - Raw materials for paints - Paint production systems for powder coating

### NANO TECHNOLOGIES applied to aluminium

**AUTOMATION**: The "Intelligent Plant" - Automatic Extrusion - Anodizing with Automatic Racking - Fully Automatic Coating Plants - Automation in Profile Packing - Automatic Warehouse - Internet for aluminium technologies

**MEASURING, TESTING & QUALITY TECHNIQUES**: Certification - Computerized Technologies - Measurement and control techniques - Measurement Instruments - Quality Management & Control - Testing - Materials analysis

ADVANCED APPLICATIONS & RESEARCH: Materials handling - Automation systems - New patents - New applications - Aluminium and Sportive equipment

**ENVIRONMENTAL PROTECTION & RECYCLING:** Accident Prevention - Anti-pollution machinery - Innovative plants - Environmental Technology - Recovery and Materials recycling - Safety Equipment - Technology and processes - Effluent and Fumes Treatment - Water saving - Zero discharge - Ecological systems and equipment - Sludge reduction - Sulphate reduction in the effluents

**CASTING & DIE CASTING**: Casting processes - Solidification - Simulation - Rapid casting - Innovative processes – New materials and alloys - Defects - Microstructure and Properties - Heat treatments - Mould design

• **PROCESS MANAGEMENT**: The Challenge For Competitiveness: Innovative Technologies Introduction on the Shop Floor - Management Strategies - Process Development - Quality Assessment

• **PROCESS QUALITY**: Charge Materials - Pre-Furnace Treatment - Melting - Fluxing - Grain Refinement - Filling and Feeding Systems - Grain Refinement - Cast Microstructures and Defects

• **PROCESS MONITORING:** From Raw Material to the Final Casting: Sensors - Analysis Devices - Data Management - The role of ERPs within the Process Monitoring

• PROCESS INNOVATION: Novel Technologies or Technology Enhancement: Innovation in Casting Practice

• **PROCESS SIMULATION**: Prediction Models - Validation - Optimization - Codesign/Cross Linking Between Process - Structural Simulation

• NEW ALLOYS: The Role of New Alloying Elements on Product Performances and their Compatibility with Casting Process

#### **ORGANIZED BY:**

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