



# Liquid Metal Processing & Casting Conference - LMPC 2024

## Monday 23 September 2024

### Session 1: ESR (09:10-10:10)

**-Conveners: Alec Mitchell**

time	[id] title	presenter
09:10	[20] Effect of Si Content in Electrode and SiO <sub>2</sub> Additions to the Slag during Electroslag Remelting	DETROIS, Martin
09:30	[70] Simulation of Remelting Processes: Challenges and Emerging Perspectives	KHARICHA, Abdellah
09:50	[3] THE DEVELOPMENT OF SIMULATORS FOR THE ESR AND VAR REMELT PROCESSES	BALLANTYNE, A. Stewart

### Session 1: ESR 2 (10:30-11:50)

**-Conveners: Harald Holzgruber**

time	[id] title	presenter
10:30	[25] Effects of Size on Characteristics of Electroslag Remelted (ESR) HAYNES®282® alloy ingots	Dr KRISHNAMURTHY, Ramanathan
10:50	[32] On the Generation Mechanism of Large-size CaO•Al <sub>2</sub> O <sub>3</sub> Inclusions in Die Steel during the Electroslag Remelting Process: at Atomic Scale	Dr TIAN, Jialong
11:10	[36] Monitoring the internal processes of electroslag remelting through an external array of magnetic field sensors	Dr KING, Paul
11:30	[39] Effect of double circuits electroslag remelting process on the ingot quality and corrosion resistance of S136 steel	Prof. DONG, Yanwu

### Session 1: ESR 3 (13:30-14:50)

**-Conveners: Martin Detrois**

time	[id] title	presenter
13:30	[49] Validation of electroslag remelting process simulation of an industrial scale martensitic stainless tool steel ingot	Mr HASTER OLSSON, Daniel
13:50	[17] Development of an optimized SEM-EDS testing method for non-metallic inclusions and its application to evaluate the cleaning effect of different ESR-slugs	SCHNEIDER, Reinhold
14:10	[11] Segregation sensitivity study of Ni-based superalloys for turbine discs application	Dr GARRIGUE, Mathieu
14:30	[18] A Metamodel for VAR Processing of Alloy 718	Dr HILBINGER, Michael

### Session 1: ESR 4 (15:10-16:10)

**-Conveners: Paul King**

time	[id] title	presenter
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15:10	[30] Influence mechanism of feeding on the removal of inclusions and shrinkage cavity defect during electroslag remelting process	JIANG, Zhouhua
15:30	[5] The Role of Solidification Irregularities in Freckle Formation	Dr MITCHELL, Alec
15:50	[37] Statistical Evaluation of Arc Dynamics Measured During an Industrial VAR Melt of IN718 Under Various Arc Gaps	Mr MOTLEY, Joshua