

FACULTY OF ENGINEERING
DEPARTMENT OF MECHANICAL AND AUTOMOBILE ENGINEERING
REPORT - GUEST LECTURE

“Role of Water Cooling in Heat Treatment of Metals,

Date: 9th February 2018

Time: 12pm to 1pm

Venue: 1st Block Auditorium

Resource Person:

Dr. Ing. ASHOK KUMAR NALLATHAMBI

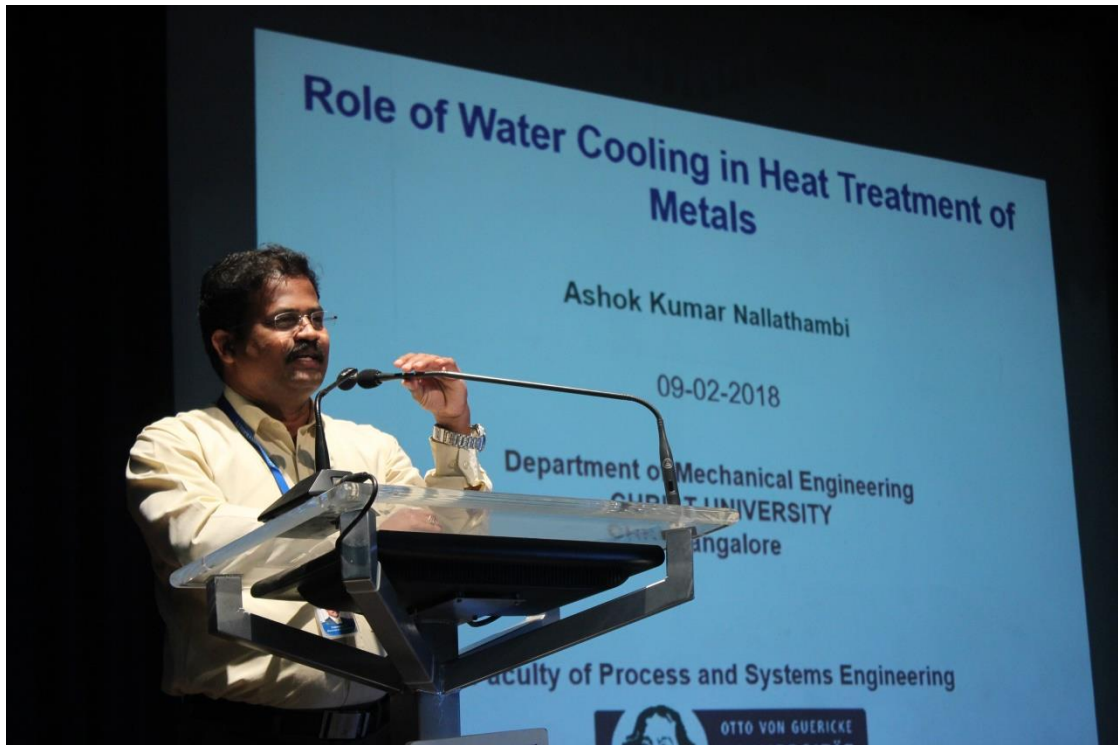
Faculty in Faculty of Process and Systems Engineering,
Otto Von Guericke University, Magdeburg, Germany

Sequence of Events:

- Welcome address by Prof. Dr. P. Pal Pandian
- Introduction of Resource Person by MAAC student representative
- Lecture session by Dr. Ing. Ashok Kumar Nallathambi
- Vote of thanks by Student representative

Lecture Session:

- The lecture started with the resource person describing Direct Chill Aluminum Casting and the melting temperature followed by how the process is carried out.
- Further discussion on the Thermal Field with Phase Change; equation and assumptions.
- Ingot casting - DC- EM, the casting speed, water flow rate and the EM slit.
- Analysis of the Thermocouple at different heights as carried out during his research to analyze the melt level.
- Further emphasis on the Jet behavior on Hot surfaces to seek the Leidenfrost effect when using Liquid water and Vapor Film.
- Description of the water ejection- Modelling Challenge
- Comparison of the water stream on hot surfaces using Static Mold and Moving Mold.
- Showcase of the experimental setup and the dynamic Boiling Curve.
- Validation by comparing the temperature against the Time
- Finally concluding remarks with relevance to Steel continuous casting and the thermal stresses.



Welcome Address by Prof. Dr. P. Pal Pandian



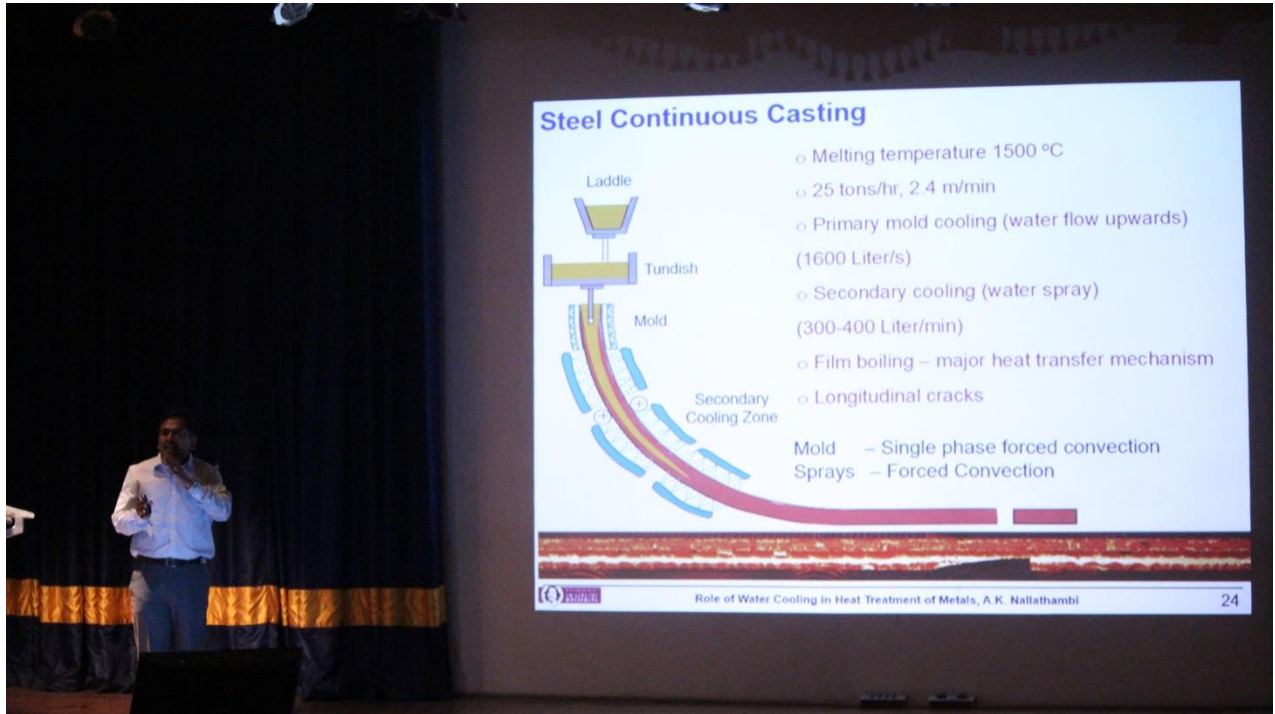
Introduction of Resorce Person by MAAC volunteer



Welcoming the Resource Person Dr. Ing. ASHOK KUMAR NALLATHAMBI by a sapling



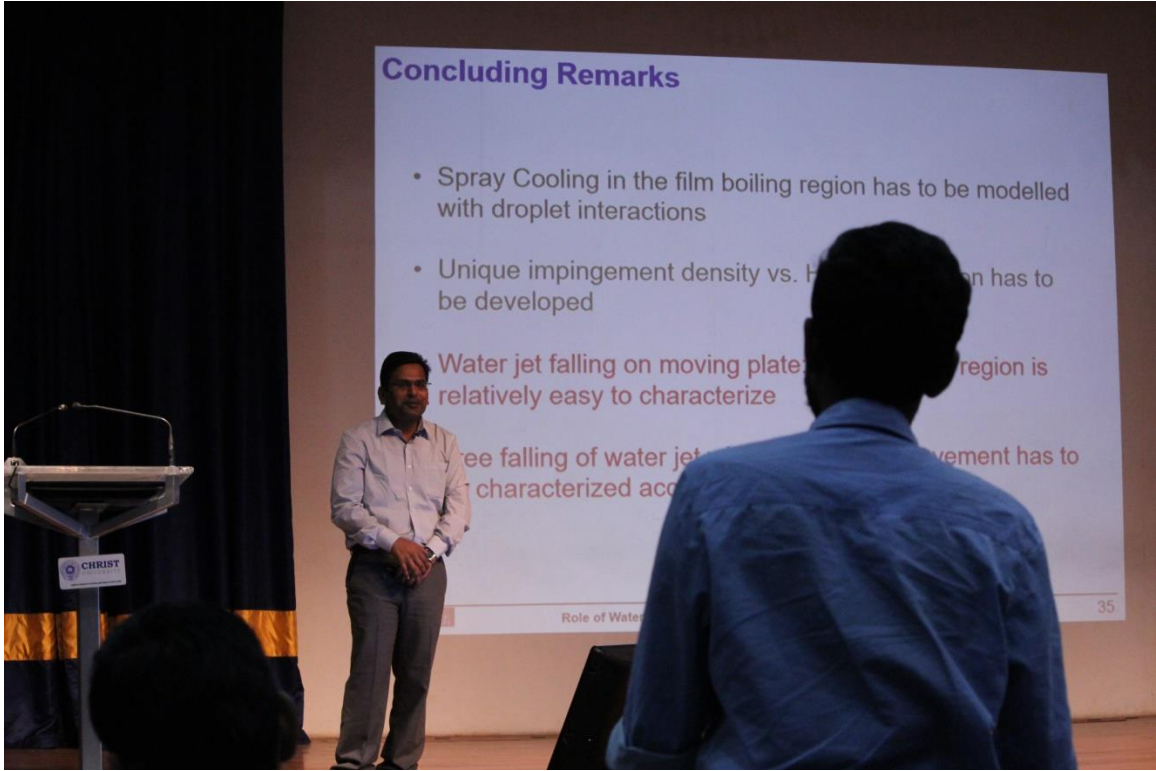
Guest Lecture by Dr. Ing. ASHOK KUMAR NALLATHAMBI



Guest Lecture by Dr. Ing. ASHOK KUMAR NALLATHAMBI



Memento to Resource Person by Prof Reena Joseph



Question & Answer Session



Vote of Thanks by MAAC volunteer