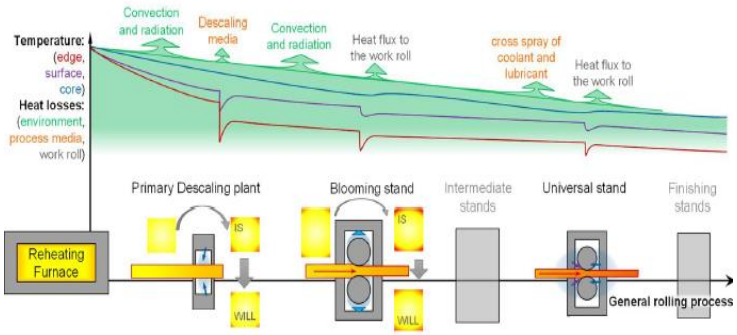
Seminar with TEAMS meeting

Reduction of heat losses during hot rolling of long products



Overview of heat losses along the rolling process of long products

24 September 2024
8.45 a.m. to 15.30 p.m. CET

Aim

Hot rolling mills strive to produce as efficiently as possible. For this reason, hot rolling mills take high production costs into account. High heat losses during the whole hot rolling process play one major role. Heat losses are caused by heat sinks related e.g. to descaling, work roll cooling, cross sprays and conveyer rolls. The seminar gives an overview of proposing solutions that can be implemented with limited efforts in terms of design or process engineering to reduce heat losses and to increase their economic efficiency. They are mandatory for the future perspective to achieve better product quality, to improve work roll performance, to save energy costs and thus, to increase economic efficiency in hot rolling of long products.

The ReduHeatLoss Project

The seminar is organised as a workshop activity within the project “ReduHeatLoss” (Reduction of heat losses during hot rolling of long products). This is a project sponsored by the Research Fund for Coal and Steel (RFCS; Project No. 899290). The aim of this project is to reduce heat losses during hot rolling of long products by optimised descaling and work roll cooling to improve the efficiency of the rolling process combined with intelligent online control system for descaling and roll cooling. The project was started the 1st of July 2020 and ends in 2024. By this seminar the European steel plants will be informed about the activities and selected practical results in the ReduHeatLoss project.

Who should participate

- European steel industry
- Supplying industry for descaling, roll cooling and lubrication
- Supplying industry for surface inspection
- Operating staff / engineers from furnace and hot rolling mills
- Staff from innovation departments or production optimization
- Plant manufacturers for the steel and related industry

Registration

Please send your registration to:

seminare@vdeh.de

The TEAMS meeting is free of charge.

Organisation

VDEh-Betriebsforschungsinstitut GmbH
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40237 Düsseldorf, Germany
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Our partner in Organization

Steel Institute VDEh | Steel Academy
40237 Düsseldorf, Germany

The Project Group

The seminar is organised as an activity within the project “ReduHeatLoss” (Reduction of heat losses during hot rolling of long products).
The project is sponsored by the Research Fund for Coal and Steel (RFCS). The project group consists of:

- VDEh-Betriebsforschungsinstitut GmbH, Germany
- Mannstaedt GMH Gruppe, Germany
- Hauhinco Maschinenfabrik GmbH & Co. KG, Germany
- Centre Research Métallurgique, Belgium
- ArcelorMittal Innovacion Investigacion Inversion S.L., Spain
- Brno University of Technology, Czech Republic
- Omron Electronics GmbH, Germany

Seminar with TEAMS-Meeting

Two days before the Seminar, TEAMS meeting is starting you receive an e-mail with an invitation and a link. The link leads you to Microsoft Teams where you can participate.

PROGRAMME 24 SEPTEMBER 2024

08:45 **Welcome and introduction to the seminar**

New Descaling Strategies

09:00 **Enhancement of high-pressure water descaling and shot blasting**
Hugo Uijtdebroeks

09:20 questions and answers

09:30 **Innovative controlled hydro mechanical rotary descaling**
Dirk Schulze Schencking

09:50 questions and answers

10:00 **Impact pressure and HTC's of new descaling systems**
Milan Hnizdil

10:20 questions and answers

10:30 **Scale growth model for intelligent descaling strategy**
Martin Wunde

10:50 questions and answers

Optimised roll cooling and lubrication strategies

11:00 **Roll cooling and lubrication system for a Universal Rolling Stand**
Hugo Uijtdebroeks

11:20 questions and answers

11:30 **Optimum work roll cooling strategies**
Milan Hnizdil

11:50 questions and answers

12:00 Lunch Break

13:00 **Reduction of thermal induced tensile stresses during work roll cooling in hot rolling**
Tuncer Ümit

13:20 questions and answers

Intelligent control systems

13:30 **AI-supported control systems**
Andreas Wittkamp, Mehdi Salehi

13:50 questions and answers

14:00 **Intelligent iterative learning control system for optimised descaling**
Achille Fabien Nkwitchoua Djangang

14:20 questions and answers

Results of industrial trials

14:30 **Evaluation of new descaling, roll cooling and lubrication systems at AM**
Aran Matias

14:50 questions and answers

15:00 **Evaluation of new descaling, roll cooling and online control systems at MWT**
Michael Wirtz

15:20 questions and answers

=> afterwards: end of seminar

SPEAKERS

Achille Fabien Nkwitchoua Djangang, VDEh-Betriebsforschungsinstitut GmbH, Germany ▪ Milan Hnizdil, Brno University of Technology, Czech Republic ▪ Aran Matias, ArcelorMittal Innovacion Investigacion E Inversion S.L., Spain ▪ Mehdi Salehi, Omron Electronics GmbH, Germany ▪ Dirk Schulze Schencking, Hauhinco Maschinenfabrik GmbH & Co. KG, Germany ▪ Tuncer Ümit, VDEh-Betriebsforschungsinstitut GmbH, Germany ▪ Hugo Uijtdebroeks, Centre Research Métallurgique, Belgium ▪ Michael Wirtz, Mannstaedt GMH Gruppe, Germany ▪ Andreas Wittkamp, Omron Electronics GmbH, Germany ▪ Martin Wunde, VDEh-Betriebsforschungsinstitut GmbH, Germany