



InFire Seminar on

29 October 2020, webinar

Improving surface quality in hot strip rolling

Image Property of Tata Steel

Aim

Achieving high surface quality of hot rolled high strength steel strip remains challenging. Primary scale residues and scale formed during hot rolling and coil cooling lead to surface impairments. New steel grades (AHSS, HSLA) face new challenges which have to be solved as the customer demands for a hot rolled surface with no defects is increasing.

This seminar will present evaluations of scale monitoring and the interrelations with the process conditions, together with both novel and optimized methods to control scale growth and fracture behaviour.

The InFire Project

The seminar is organized as a workshop within the project “Infire” (Strategy to increase the hot strip rolling performance in terms of surface quality, final properties, and reproducibility). This is a project sponsored by the Research Fund for Coal and Steel (RFCS; Project No. 754071).

The aim of the project is to define guidelines of how to master surface defects and deliver high yield final products. The project was started the 1st of July 2017 and ends in 2020. By this seminar, the European steel plants will be informed about the activities and selected practical results in the InFire project.

Who should participate

People from the European steel industry such as:

- Operating staff / engineers from hot rolling mills
- Staff from innovation departments or production optimization
- Technical purchasing agents in the steel and related industry
- Plant manufacturers for the steel and related industry
- Supplying industry for scale conditioning or descaling equipment

Price and registration

The seminar is free of charge. To register for the webinar, please send contact details to Wanda Melfo at wanda.melfo@tatasteel.com

Organizers

The seminar is organised as an activity within the project “Infire”. The project group consists of:

- Swerim, Sweden
- SSAB EMEA, Sweden
- VDEh-Betriebsforschungsinstitut GmbH, Germany
- thyssenkrupp Steel Europe, Germany
- Tata Steel, The Netherlands
- Centre Research Métallurgique, Belgium
- ArcelorMittal Maizières Research, France
- ArcelorMittal Gent R&D (OCAS), Belgium

Programme

9.00 – Welcome

9.15 – Session 1. Scale formation

- Oxide growth and its influence on friction and tribological effects
Martin Wunde, BFI
- In-situ oxide formation
Wanda Melfo Prada, Tata Steel
- Modelling temperature and oxide growth through the hot strip mill
Patrik Sidestam, Swerim

Break

10.45 – Session 2. Scale decomposition

- Improving scale aspect on black coils
Michel Picard, AMMR

Lunch

12.30 – Session 2. Scale conditioning

- Impact of roll bite actuators and oxygen depletion on strip surface quality
Hugo Uijtdebroeks, CRM
- Evaluation on scale suppressive coatings
Jessica Schindhelm, BFI

Break

14.00 – Session 4. Industrial experience

- Scale study in the hot strip mill
Christer Jonsson, SSAB and Patrik Sidestam, Swerim
- Sensitivity analysis for scale detection using different machine learning techniques
Christian Müller, tkSE and Marcus Neuer, BFI

15.00 End of workshop