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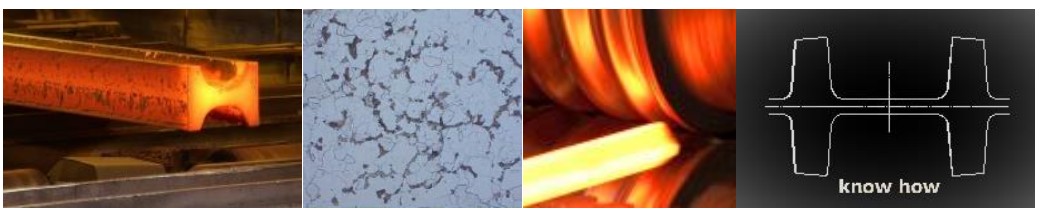
Training Course – HOT ROLLING of Long Products

Two Working Days 14th and 15th March 2017, in Madrid (Spain)



"Practical knowledge to use in your company"

Overview

This course combines both the contribution of scientific and technological knowledge with the form and vision for its direct application in a hot steel rolling mill for long products. Attendees will take with them technical criteria and knowledge that can be used in the modernization of a rolling mill, in the development of new pass designs, in the expansion of the product range and steel qualities, in the understanding of rolling issues, in solving quality problems, in selecting heating practice and energy consumption, fundamentals of roll pass design for long products, semis design, rolling mill down time reduction, production yield optimization, and a long etcetera. This course will provide attendees with tools to identify and understand problems arising in a rolling mill, and deal with them.

There is no doubt this course can benefit your company. Practical knowledge, based in technical or engineering principles that can be used directly in your rolling mill to enhance productivity is one of the best things you can bring in your company.

Program description

The hot rolling of long products requires to focus on three main aspects that are reviewed in this course, steel as material and different qualities that can be obtained,

long product form – roll pass design for different sections, and aspects of productivity, layout and facilities. All these contents are not disconnected one from each other, and are actually intimately related among them.

An initial metallurgical overview of the steel as a material together with its behavior in a rolling mill will be described related to product quality, product mechanical properties, 'new' qualities and to act about them.

A revision of Roll pass design for long products will be made, including specific aspects for different shapes, providing an overview of methods, calculations and parameters towards the development of new pass design and how to review existing roll pass designs. All parameters (temperature, groove shape and material shaping, guiding, etc) and their influence will be explained.

An overview of productivity and overall process efficiency will be described from the end of a continuous casting to the final product stock yard and certification, including a revision of quality issues and how to manage then from an overall view and specific improvements.

Style

This two day event has been called 'training course' since technical content will be explained using presentations in a lecture style, and accepting any discussions brought by attendees, always ensuring to fulfill the course contents program. Current sector and manufacturing performance, rolling organization and strategies will be discussed in terms of product mix, plant layout and technology.

Attendee profile

Any rolling mill plant staff and/or personnel will find this course suitable, the following positions will find good value in this training course:

- **Plant managers:** the described content makes it evident, they can improve in projects focusing, activity assessment, BPM and Dashboards.

- **Plant Assistants and supervisors:** This course will speed up their learning curve and will let them understand the overall technics in a rolling mill together with specific knowledge to apply.
- **Engineers:** they will obtain a greater understanding of roll pass design, metallurgy and overall process key parts and issues.
- **Roll Shop managers:** they will obtain further expertise in roll pass design, guiding, etc, plus process overview and metallurgy.
- **Mill rollers:** they will understand how the process is designed, why things happen and the purpose of many different steps and technics in a rolling mill, so they will gain knowledge to solve problems and keep rolling mill rolling.
- **Quality managers:** these contents will let them improve their expertise and gain new knowledge in specific rolling mill product manufacturing, process areas and design, material analyzing, product defects, claims, and product specifications and norms.
- **Maintenance managers:** this course will let them understand the purpose of installations to establish criteria for maintenance strategies.
- **Sales:** this course is also very interesting for sales managers and personnel, since we will describe technologies affecting product quality, possible proposals to widen product ranges offer, product defects and claims and product specifications and norms.

Content

Metallurgical overview of the hot steel rolling process

- Steel structure and transformations
- Metallurgical temperatures and the rolling mill
- Grain structure and distribution
- Chemical composition and alloying elements
- Metallurgical Strategies and chemical composition
- Steel composition and final steel quality
- Thermomechanical treatments

- Metallurgical prediction

Roll Pass Design

- Constant volume and material flow
- Pass filling and not filling
- Rolling conditions
- Types of rolls
- Plastic yield stress and influencing factors
- Temperature, profiles and round
- Roll groove dimensions
- Force, Moment, Power & Motors
- Roll Pass design for Profiles
- Roll Pass design for angle
- Roll Pass design for rounds
- Initial sections
- Rolling defects

Rolling mill productivity and efficiency

- Reheating furnace, types and strategy
- Rolling mill production capacity
- Initial sections definition
- Layout influence in quality
- Finishing mill
    - Cooling
    - Cutting
    - Straightening
    - Stacking & Labelling
- Quality certification systems

Location and hotel

This training course will take place at the 'Hotel Meliá Avenida de América' (Melia Hotel, Avenida de América), quite near Madrid airport. To register for the course, please fill the 'Registration form" and send it to **info@atecid.com**, so we can book your seat as soon as possible.

For room reservations at this hotel you can contact Cristina Lozano, hotel responsible at **cristina.lozano@hotelavenidaamerica.com**, do not forget our reference code**: 697425 ATEC+ID**.

Venue/hotel address:

Hotel Meliá Avenida de América
C/ Juan Ignacio Luca de Tena, 36
28027 Madrid
SPAIN

Link to hotel website: http://bit.ly/2hPwYSq
Link to google maps: http://bit.ly/2hDLbn5