COURSE OVERVIEW ME0841
Slit Rolling in Steel Industry

Course Title
Slit Rolling in Steel Industry

Course Date/Venue
Session 1: April 20-24, 2025/Crowne Meeting Room, Crowne Plaza Al Khobar, KSA
Session 2: November 23-27, 205/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference
ME841

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This hands-on, highly-interactive course includes practical sessions and exercises where participants will visit the industrial facility and they will be introduced to various slit rolling equipment and steel making process. Practical sessions will be performed using one of the slit rolling equipment in order to apply the theory learnt in the class.

Steel with over 700,000 million tons produced annually, is the world's most important material. Without steel, the world as we know it would not exist. The course will focus on slit rolling outstanding points related to steel industry of course.

The main topics of the course are steel hot rolled, pickled, cold rolled, coated steel & milled steel.

The course will train participants how to understand rolling, forging, extrusion, drawing, deep drawing, shot peening, laser peening, annealing and stress relief, surface preparation, electroplating, steel/mill making, ladle refining, deoxidation of steel and desulfurization of steel.

The course will discuss steelmaking with technical requirement and process design. Ladle refining and continuous casting technical process and explaining different stages will be covered as well as hot & cold rolling process, heat treatment and finally protective coating

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on slit rolling in steel industry
- Discuss slit rolling philosophy and procedures including its types, components, process, set-up and safety legislation
- Identify the proper procedures, requirement and controlling elements of slit rolling operations, steelmaking, ladle refining, hot & cold rolling, heat treatment and protective coating
- Recognize the requirements for slit rolling
- Inspect the validity and certification of slit rolling equipment
- Perform slit rolling mechanisms and common operations and troubleshooting
- Carryout slit rolling operation risk assessment methodology
- Perform practical exercise in the steel manufacturing site and discuss the theory of integrated steelmaking process versus mini mills as well as hot rolling, cold rolling and basic metallurgy of materials theory
- Apply defects and inspection methods of steel during production

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of slit rolling in steel industry for slit rolling & steelmaking engineers, supervisors, foremen and inspectors. Further, the course is essential for steel mills plant engineers, managers, safety program managers and all senior personnel involved in slit rolling operations.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Course Fee

US$ 10,000 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Maged Eltonsy is a **Senior Mechanical Engineer** with over **25 years** of extensive experience in the areas of **Rolling Mill & Steel Manufacturing**, **Roll Pass Design & Mill Operation**, **Heavy Section Mills**, **Steelmaking & Rolling Mills Operation**, **Hot Rolling Concepts**, **Mill Layouts & Equipment Considerations**, **Flat Pass Design**, **Round & Rod Pass Design**, **Angle Pass Design**, **Beam Pass Design**, **Channel Rolling Sequences**, **Slit Rolling**, **Multi-slit Rolling Technology**, **Steel Manufacturing & Process Troubleshooting**, **Furnace Operations & Troubleshooting**, **Fired Process Heaters**, **Metallurgy**, **Bearing Maintenance & Operation**, **High Pressure Hydraulics Applications**, **Air Compressors**, **Overhead Cranes**, **Hydraulic Systems**, **Fuels & Combustion**, **Machinery Troubleshooting**, Total Productive Maintenance **(TPM)**, Key Performance Indicator (**KPI**), Total Quality Management (**TQM**), Maintenance Budget**,** Cost Estimation & Control, Maintenance Cost Control, **Mechanical Maintenance** in Industrial Plants, **Inventory Optimization & Spare Parts** Management, **Quality Control** in Manufacturing & Process Industries, **Data Analysis** Techniques and **Production Operation Facilities**. Further, he is also well-versed in Feasibility Study Preparation, Technical Proposal Evaluation, Bidding & Commercial Negotiation, Tender Preparation, Supply Chain Management, Plant Management & Operational Parameters, Planning & Scheduling, Troubleshooting & Analysis, Budget Preparation & Control, Plant Maintenance, Start-up & Commissioning and Cost Reduction & Productivity Enhancement. He is currently the **Steel Rolling Mill Plants Director** wherein he is responsible in directing all rolling mill department engineers and rolling mill department engineering functions as well as develop and recommend plans, procedures and schedules to process efficiently rolling mill operation.

During his career life, Mr. Maged has gained his practical and field experience through his various significant positions and dedication as **Steel Rolling Manager**, **Steel Rolling Section Manager**, **Rolling Mill Shop Manager**, **Bar Mill Plant Rolling Manager**, **Rolling Plant Manager**, **Steel Rolling Department Manager**, **Steel Projects Manager**, **Technical Manager**, **Steel Rolling Engineer** and **Steel Rolling Section Chief** for various metals and steel companies such as the Alexandria National Iron & Steel Dekhila (ANSDK), Egyptian American Steel Rolling Company, Alexandria National Iron & Steel Company (EZDK), Alrajhi Steel Industries, Abu Dhabi National Company, Danieli Service Middle East North Africa, Suez Steel Rolling Mill Plants just to name a few.

Mr. Maged has a **Bachelor** degree in **Mechanical Power Engineering**. Further, he is a **Certified Instructor/Trainer** a **Board Advisor** of BILDCO and has delivered numerous courses, trainings, workshops, seminars and conferences internationally.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Slit Rolling Philosophy & Procedures*** *Types of Slit Rolling ● Slit Rolling Components*
0930 – 0945	*Break*
0945 – 1100	***Slit Rolling Philosophy & Procedures (cont'd)*** *Steps in Slit Rolling Process Setup on Sites ● General Slit Rolling Procedures*
1100 – 1230	***Safety & Slit Rolling*** *Health & Safety Legislation ● Inspection Definitions*
1230 – 1245	*Break*
1245 – 1420	***Safety & Slit Rolling (cont'd)*** *Safe Use Suitable Equipment ● Correct Controlling Elements ● Safe Use of Slit Rolling Control Equipment ● Required PPE*
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Slit Rolling Operations*** *Procedure ● Requirement ● Controlling Elements*
0930 – 0945	*Break*
0945 – 1100	***Steelmaking & Ladle Refining*** *Procedures ● Requirement ● Controlling Elements*
1100 – 1230	***Video & Case Study***
1230 – 1245	*Break*
1245 – 1420	***Hot & Cold Rolling*** *Procedures ● Requirement ● Controlling Elements*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Heat Treatment*** *Procedures ● Requirement ● Controlling Elements*
0930 – 0945	*Break*
0945 – 1100	***Protective Coating*** *Procedures ● Requirement ● Controlling Elements*
1100 – 1230	***Recognize the Requirements for Slit Rolling***
1230 – 1245	*Break*
1245 – 1420	***Video & Case Study***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

0730 – 0930	***Inspection of Slit Rolling Equipment*** *Validity & Certification of the Equipment*
0930 – 0945	*Break*
0945 – 1100	***Slit Rolling Mechanisms and Common Operations & Troubleshooting***
1100 – 1230	***Slit Rolling Operations & Troubleshooting*** *Open Discussion & Information Sharing ● Case Study*
1230 – 1245	*Break*
1245 – 1430	***Slit Rolling Operation Risk Assessment Methodology*** *Fatality Reports ● What Causes Accidents? ● Personal Slit Rolling Techniques ● Personal Safety Equipment ● Special Considerations*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Practical Session*** *Theory of Integrated Steelmaking Process vs Mini Mills*
0930 – 0945	*Break*
0945 – 1100	***Practical Session (cont'd)*** *Hot Rolling ● Cold Rolling*
1100 – 1230	***Practical Session (cont'd)*** *Basic Metallurgy of Materials Theory*
1230 – 1245	*Break*
1245 – 1345	***Practical Session (cont'd)*** *Defects and Inspection Methods of Steel During Production*
1345 – 1400	***Course Conclusion***
1400 – 1415	***POST TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions/Site Visit

Site visit will be organized during the course for delegates to practice the theory learnt.

Course Coordinator

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