COURSE OVERVIEW FE0458
Processing & Reusing Technologies for Steelmaking Slag

Course Title
Processing & Reusing Technologies for Steelmaking Slag

Course Date/Venue
Session 1: June 22-26, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: October 19-23, 2025/Crowne Meeting Room, Crowne Plaza Al Khobar, KSA

Course Reference
FE0458

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

Course Description

This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

Iron and steel ("Iron/steel") slag is a by-product of manufacturing iron/steel products. Almost all iron/steel slag generated in the course of iron/steel manufacture is effectively used in multiple ways, such as a raw material for cement, a road base course material, a civil engineering work, and a raw material for fertilizer. However, the supply–demand structure in the iron/steel slag market has been rapidly changing in recent years reflecting not only the sluggish demand for domestic public works and construction projects but also social changes.

This course is designed to provide participants with a detailed and up-to-date overview of processing and reusing technologies for steelmaking slag. It covers the origin, properties and types of steel slag; the steel making slag processing technology; the cooling steel making slag; the crushing, magnetic separation and classification; and the aging treatment.

Further, the course will also discuss the road base course material, ground improvement materials and fertilizer soil improvement; the steel slag hydrated matrix, seeweed beds and reusing dredged soils; the tsunami deposits processing and the slag used as metallurgy raw materials returning to manufacturing; and the slag baking cooked materials in cement raw mixture including the slag powder and steel slag marble.

Course Objectives

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

- Apply systematic techniques on processing and reusing technologies for steelmaking slag
- Discuss the origin, properties and types of steel slag as well as describe the steel making slag processing technology
- Recognize cooling steelmaking slag and illustrate crushing and magnetic separation
- Carryout crushing and classification including aging treatment
- Determine road base course material, ground improvement materials and fertilizer soil improvement
- Describe steel slag hydrated matrix, seeweed beds and reusing dredged soils
- Recognize tsunami deposits processing and the slag used as metallurgy raw materials returning to manufacturing
- Identify the slag baking cooked materials in cement raw mixture including the slag powder and steel slag marble

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 a deeper appreciation and wide understanding of processing and reusing technologies for steelmaking slag for engineers, inspection engineers, facility integrity engineers, fabrication engineers and mechanical engineers.

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 Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

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 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. Peter Wyk, MSc, BSc, is a **Senior Engineer** with over **35 years** of extensive experience. His Expertise extends over the areas of **Modern Heating**, **Ventilation**, **Air-Conditioning** (**HVAC**) **& Refrigeration Systems**, **Air Conditioning** System, HVAC Direct Digital Control (**DDC**), **Electric Arc Furnace** (**EAF**) **Operations**, **Air Cooler Design**; **Chillers**; **Mass** & **Heat Transfer**, **Electromechanical**, **Rotating & Static Equipment**, **HVAC System**, **HVAC Maintenance**, **Electric Arc Furnace** (**EAF**) **Operations**, **Vacuum Arc Degasser**, **RH Degasser**, **Arc Furnace Steelmaking**, **Ladle Furnace**, **Continuous Casting Operation**, **Hot Rolling** Process, **Hot Strip Mill**, **Mill** Operations, **Roll Mill**, **Steel Making** Process, **Steel** Manufacturing, **Electric Arc Furnace** (**EAF**), **Steel Forging**, **Steel** Manufacturing & Process Troubleshooting, **Slit Rolling**, **Carbon Steel Pipe** Wall Thickness & Grade Selection, **Ferro-Alloys**, **Steel Metallurgy**, **Steel** Structure Welding, **Steelmaking** Slag, **Steel** Making Application, **Electric Steelmaking**, **Steel Manufacturing & Commissioning**, **Consteel Scrap Feeding System**, **Steel Manufacturing for Off-shore Applications**, **Iron & Steel Making Technology**, **Steel Forging**, **Heat Treatment** & **Prevention Techniques**, **Corrosion** Fabrication & Inspection and **Post Weld Heat Treatment**, **Welding** Inspection, **Welding** & **Machine** Techniques, **TIG** & **Arc Welding**, **Shielded Metal Arc Welding**, **Gas Tungsten** & **Gas Metal Arc Welding**, **Welding** Procedure Specifications & Qualifications, **Aluminium Welding**, **Hot Work-Safety**, **SMAW**, **GTAW**, **Welding** Techniques, **Pipeline Welding** Practices, **Welding** Engineering, **Welding** Fatigue & Fracture Mechanics, **Welding Inspection Technology**, **Welding Safety**, **Welding** Defects Analysis, **Welding Technology**, **Welding Problems**, **Welding & Non Destructive** Testing and **Metallurgy Techniques**, **Metallurgy**, **Pyro-Metallurgy**, **VAD Process**, **Fuels & Combustion**, **GE Gas Turbine (MS6001 B) Cycle & Major Components**, **Oil Systems of GE Gas Turbine Units**, **Fuel Gas Conditioning and Control**, **Fuel Systems of GE Gas Turbine Units**, **Cooling Water System in Power Plant** and **Compressed Air System in Power Plant**. Further, he is also well-versed in **Heat Transfer**, **Desulphurisation** & **Nitrogen Pick-up**, **Rod Production**, **Strength of Material**, **Oxy-fuel Burners** and **Carbon Injectors**. Currently, he is the **Director** of **Wire-n-Plier Technologies** that provides consultancy services for arc furnace, steel making, steel production and metallurgy for multiple manufacturing firms.

During Mr. Wyk's long career life, he has gained his technical and practical expertise through various challenging and key positions such as the **Senior Project Manager**, **General Manager Operations**, **Meltshop Manager**, **Superintendent Steelmaking**, **Trainee Manager**, **Metallurgical Engineer**, **Trainee Engineer** and **Lecturer** for several international companies and universities such as the **Gulf Speciality Steel Industries**, **Vaal University of Technology**, **Cape Gate Davsteel Division – Meltshop** and **ISCOR** just to name a few.

Mr. Wyk has a **Master's** degree in **Engineering Management** from the **University of Pretoria** and a **Bachelor's** degree in **Metallurgy Engineering** from the **University of Potchefstroom**. He has also presented numerous papers and international conferences including the **7th European Electric Steelmaking Conference** in Venice, Italy. Further, he is a **Certified Instructor/Trainer** and has delivered various trainings, workshops, seminars, courses and conferences internationally.

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.

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	***Introduction*** *Origin • Properties • Types of Steel Slag*
0930 – 0945	*Break*
0945 – 1030	***Steel Making Slag Processing Technology***
1030 – 1230	***Steel Making Slag Processing Technology (cont'd)***
1230 – 1245	*Break*
1245 – 1420	***Steel Making Slag Processing Technology (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Cooling Steel Making Slag***
0930 – 0945	*Break*
0945 – 1100	***Crushing & Magnetic Separation***
1100 – 1230	***Crushing & Classification***
1230 – 1245	*Break*
1245 – 1420	***Aging Treatment***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Road Base Course Material***
0930 – 0945	*Break*
0945 – 1100	***Ground Improvement Materials***
1100 – 1230	***Fertilizer Soil Improvement***
1230 – 1245	*Break*
1245 – 1420	***Steel Slag Hydrated Matrix***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

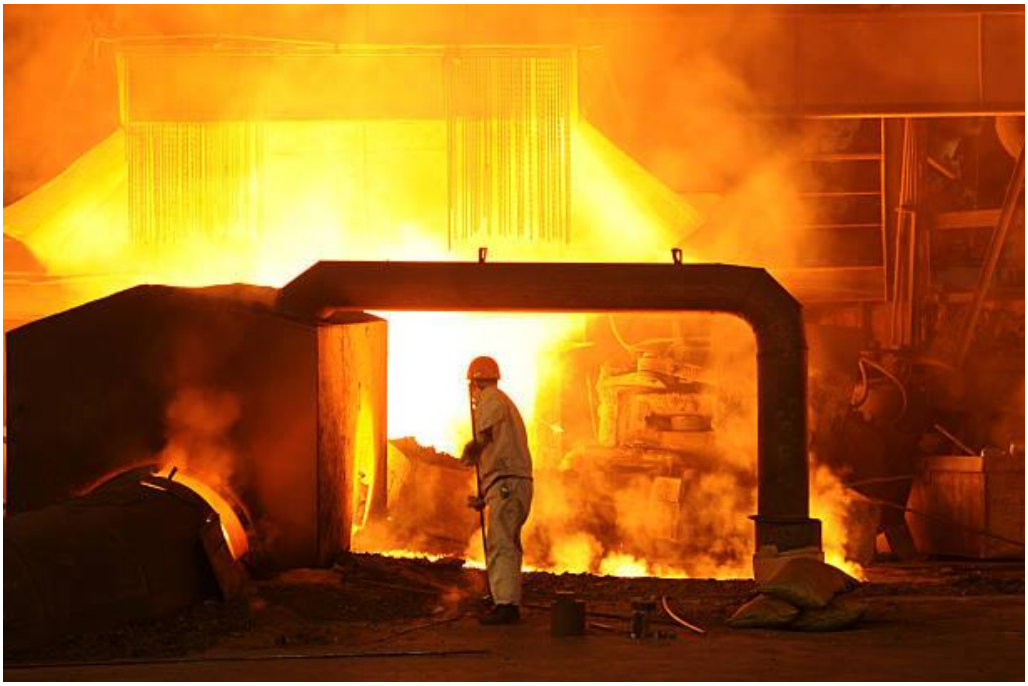
0730 – 0930	***Seeweed Beds***
0930 – 0945	*Break*
0945 – 1100	***Reusing Dredged Soils***
1100 – 1230	***Tsunami Deposits Processing***
1230 – 1245	*Break*
1245 – 1420	***Slag Used as Metallurgy Raw Materials Returning to Manufacturing***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Slag Baking Cooked Materials in Cement Raw Mixture***
0930 – 0945	*Break*
0945 – 1230	***Slag Powder***
1230 – 1245	*Break*
1245 – 1345	***Steel Slag Marble***
1345 – 1400	***Course Conclusion***
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

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