# COURSE OVERVIEW TE0152(VW1)
# Water Treatment in Steel Making

**Course Title**
Water Treatment in Steel Making


**Course Date/Venue**
Session 1: May 11-15, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: August 24-28, 2025/Crowne Meeting Room, Crowne Plaza Al Khobar, KSA


**Course Reference**
TE0152(VW1)

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

**Course Objectives**

***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.***

This course is designed to provide participants with a detailed and up-to-date overview of water treatment in steel making. It covers the detailed information of steel making process covering DRI, RM and steel mill; why and where we need water in steel making process; the various problems resulted from bad water quality; and the sequence of problems that are related to low water quality.

During this interactive course, participants will learn the main norms or standards of water quality related to each process; the water treatment solutions for the mentioned processes; and the DRI, RM, steel mill and utilities areas.

## Course Objectives

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

- Apply and gain an in-depth knowledge on water treatment in steel making
- Discuss detailed information of steel making process covering DRI, RM and steel mill
- Explain why and where we need water in steel making process
- Determine various problems resulted from bad water quality and identify the sequence of problems that are related to low water quality
- Describe the main norms or standards of water quality related to each process
- Carryout water treatment solutions for the mentioned processes including DRI, RM, steel mill and utilities areas

## 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 water treatment in steel making for chemical engineers.

## Course Fee

**US$ 10,000** per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), 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.

## 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 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. Kyle Bester** is a **Senior Maintenance & Water Engineer** with extensive years of practical experience within the **Oil & Gas**, **Power & Water Utilities** and other **Energy** sectors. His expertise includes **Condition Monitoring** System, **Maintenance Planning & Scheduling**, **Maintenance Planning Process**, **Maintenance Shutdown & Turnaround**, **Maintenance Audit** Best Practices, **Maintenance & Reliability** Management, **Reliability** Engineering, **Maintenance & Reliability** Best Practices, Reliability, Availability & Maintainability (**RAM**), **Root Cause** Analysis, **Reliability-Centered Maintenance** (**RCM**), **Reliability Engineering Analysis** (**RE**), **Root Cause Analysis** (**RCA**), **Asset Integrity Management** (**AIM**), **Reactive & Proactive** Maintenance, **Mechanical & Rotating Equipment** Troubleshooting & Maintenance, **Maintenance Management & Cost Control**, **Preventive & Predictive** Maintenance, **Pumps & Troubleshooting**, **Compressors**, **Gas & Steam Turbines**, **Valves**, **Bearings & Lubrication** and **Boiler** Inspection & Maintenance. Further, he is also well-versed in **Water Reservoir**, **Water Tanks**, **Water Pumping** Station, **Water Distribution** System, **Water Network** System, **Water Pipes & Fittings**, **Water Hydraulic** Modelling, **Water Storage Reservoir**, **Reservoirs & Pumping** Stations Design & Operation, **Pumping** Systems, Interconnecting **Pipelines**, **Water Network Hydraulic** Simulation Modelling, **Water Supply** Design, **Water Balance Modelling**, **Water Distribution Network**, **Water Network** System Analysis, **Water Forecasts** Demand, **Water Pipelines** Materials & Fittings, **Water Network** System Design, Pump Houses & Booster Pumping Stations, **Potable Water Transmission**, **Water Distribution Network**, Districts Meters Areas (DMAs), **Water Supply & Desalination Plants** Rehabilitation, **Water Reservoirs & Pumping Stations**, **Water Network System** Extension, Water Network System Replacement & Upgrade, **Water Networks** Optimization, **Water Supply & Distribution** Systems Efficiency & Effectiveness, **Pipe** Materials & Fittings, **Service Reservoir** Design & Operation, **Pipes & Fittings**, **Water Network** System Design & Operation, **Supply Water Network** Rehabilitation, **Water Loss** Reduction, **Main Water** System Construction, **Main Water Line** Construction, Transmission & Distribution **Pipelines**, **Water Distribution** Design & Modelling, **Water Supply** System, Oilfield **Water Treatment**, Best Practice in **Sewage** & Industrial **Wastewater Treatment** & Environmental Protection, **Water Distribution** Design & Modelling, **Desilting**, Treating & Handling Oily **Water**, **Water Chemistry** for **Power Plant**, **Water** Sector Orientation, Environmental Impact Assessment (**EIA**). He is currently the **Part Owner & Manager** of Extreme Water SA wherein he manages, re-designed and commissioned a water and wastewater treatment plants.

During his career life, Mr. Bester has gained his practical and field experience through his various significant positions and dedication as the **Project Manager**, **Asset Manager**, **Water Engineer**, **Maintenance Engineer, Mechanical Engineer, Supervisor**, **Team Leader**, **Analyst**, **Process Technician**, **Landscape Designer** and **Senior Instructor/Trainer** for various international companies, infrastructures, water and wastewater treatment plants from New Zealand, UK, Samoa, Zimbabwe and South Africa, just to name a few.

Mr. Bester holds a **Diploma** in **Wastewater Treatment** and a **National Certificate** in **Wastewater & Water Treatment**. Further, he is a **Certified Instructor/Trainer**, an **Approved Chemical Handler** and has delivered numerous courses, trainings, conferences, seminars and workshops 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 be always met:

***Day 1***

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|---|---|
| *0730 – 0800* | *Registration & Coffee* |
| *0800 – 0815* | *Welcome & Introduction* |
| *0815 – 0830* | ***PRE-TEST*** |
| *0830 – 0930* | ***Steel Making Process***<br>*DRI* |
| *0930 – 0945* | *Break* |
| *0945 – 1100* | ***Steel Making Process (cont'd)***<br>*RM* |
| *1100 – 1230* | ***Steel Making Process (cont'd)***<br>*Steel Mill* |
| *1230 – 1245* | *Break* |
| *1245 – 1330* | ***Steel Making Process (cont'd)***<br>*Steel Mill (cont'd)* |
| *1330 – 1420* | ***Video*** |
| *1420 – 1430* | ***Recap*** |
| *1430* | *Lunch & End of Day One* |

***Day 2***

| | |
|---|---|
| *0730 – 0900* | ***Why & Where We Need Water Steel Making Process?*** |
| *0900 – 0915* | *Break* |
| *0915 – 1045* | ***Why & Where We Need Water Steel Making Process? (cont'd)*** |
| *1045 – 1230* | ***Why & Where We Need Water Steel Making Process? (cont'd)*** |
| *1230 – 1245* | *Break* |
| *1245 – 1420* | ***Why & Where We Need Water Steel Making Process? (cont'd)*** |
| *1420 - 1430* | ***Recap*** |
| *1430* | *Lunch & End of Day Two* |

***Day 3***

| | |
|---|---|
| *0730 – 0900* | ***Problem Resulted from Bad Water Quality*** |
| *0900 – 0915* | *Break* |
| *0915 – 1045* | ***Problem Resulted from Bad Water Quality (cont'd)*** |
| *1045 – 1230* | ***Sequence of Problems that are Related to Low Water Quality*** |
| *1230 – 1245* | *Break* |
| *1245 – 1420* | ***Sequence of Problems that are Related to Low Water Quality (cont'd)*** |
| *1420 - 1430* | ***Recap*** |
| *1430* | *Lunch & End of Day Three* |

***Day 4***

| | |
|---|---|
| *0730 – 0900* | ***Main Norms or Standards of Water Quality Related to Each Process*** |
| *0900 – 0915* | *Break* |
| *0915 – 1045* | ***Main Norms or Standards of Water Quality Related to Each Process (cont'd)*** |
| *1045 – 1230* | ***Main Norms or Standards of Water Quality Related to Each Process (cont'd)*** |

| | |
|---|---|
| *1230 – 1245* | *Break* |
| *1245 – 1420* | ***Main Norms or Standards of Water Quality Related to Each Process (cont'd)*** |
| *1420 - 1430* | ***Recap*** |
| *1430* | *Lunch & End of Day Four* |

***Day 5***

| | |
|---|---|
| *0730 – 0900* | ***Water Treatment Solutions for the Mentioned Processes***<br>*DRI* |
| *0900 – 0915* | *Break* |
| *0915 – 1045* | ***Water Treatment Solutions for the Mentioned Processes (cont'd)***<br>*RM* |
| *1045 – 1230* | ***Water Treatment Solutions for the Mentioned Processes (cont'd)***<br>*Steel Making* |
| *1230 – 1245* | *Break* |
| *1245 – 1345* | ***Water Treatment Solutions for the Mentioned Processes (cont'd)***<br>*Utilities Areas* |
| *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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