



Training Course:
WATER INDUSTRY FUNDAMENTALS

12 - 16 August 2024
Kigali (Rwanda)

Training Course: WATER INDUSTRY FUNDAMENTALS

Training Course code: EW234792 From: 12 - 16 August 2024 Venue: Kigali (Rwanda) - Training Course Fees: 7140 € Euro

Introduction

Water use globally extends into many different applications, ranging from food and agricultural production to industrial and electricity production. Whilst on one hand the value of water in this array of applications tends to be evaluated based on economics alone, its real value is a different concept. Water is irreplaceable, its applications are limitless, and life cannot exist without it. In addition, the failure of overall coordination between the different stakeholders is the main reason behind water waste and misuse.

It is therefore of critical importance that all professionals in the water industry are aware of the basic and most up-to-date principles and rules that apply to water use, including HSE Health, Safety, and Environment and legal considerations.

Course Objectives

By the end of this Water Industry Fundamentals training course, the participants will be able to:

- Understand the diversity of water usage applications worldwide
- Develop the skills to determine the suitability of water for different applications
- Analyse the risks and restrictions that apply to water use and make appropriate decisions
- Understand the basic water treatment techniques and where to apply them
- Develop a good understanding of the concepts of water chemistry and microbiology
- Understand the legal and HSE requirements that relate to water use and reuse

Training Methodologies

This training course will utilize a variety of proven adult learning techniques to ensure maximum understanding, comprehension, and retention of the information presented. This includes trainer-guided discussions between participants involving their personal experiences. In addition, case studies and group exercises will further assist in comprehending the core issues in the water industry.

Target Audience

This training course is suitable for a wide range of professionals in the water industry, but will greatly benefit:

- Project managers
- Professionals involved in the regulatory monitoring of water quality
- Engineers involved in the monitoring and maintenance of water systems in the Process Industries
- Professionals involved in the drafting of guidelines on water quality
- Process engineers in Sewage Treatment Plants STPs
- Professionals responsible for water systems in the Healthcare sector and the Hospitality industry

Course Outlines

Day 1

WATER INDUSTRY DEFINITION

- Water-use figures and latest global reports
- Global water reserves and future forecasts
- Trends in water consumption
- Introduction to the concept of water balance
- Basic processes that use water
- The circular economy concepts in the water industry

Day 2

INTRODUCTION TO WATER PROPERTIES AND COMPOSITION

- Basic water chemistry parameters
- Basic water microbiology definitions
- Physical characteristics of water
- Interpreting water analysis results
- How water interacts with substances and materials within the distribution network
- The scale depositing and corrosive tendencies of water

Day 3

DRINKING WATER INDUSTRY

- Global reserves and demand forecasts
- Review of International Guidelines and Leading Documents
- Major contaminants in drinking water supplies
- Treatment techniques for drinking water
- Disinfection techniques for drinking water
- Quality control and monitoring regimes

Day 4

DOMESTIC AND INDUSTRIAL WASTEWATER INDUSTRY

- Basic definitions relating to Domestic and Industrial wastewater
- Domestic and industrial wastewater treatment techniques
- Chemical composition of wastewater
- Microbiological characteristics of wastewater
- Treated water re-use for irrigation
- Other uses of treated wastewater - aquifer enrichment

Day 5

HSE AND LEGAL CONSIDERATIONS IN THE WATER INDUSTRY

- Introduction to biofouling and water-related diseases
- Special considerations during and in the aftermath of the COVID-19 Pandemic
- Introduction to Evaporative cooling systems and Legionnaires' disease
- The concepts of Water Pollution and Water Contamination



- Environmental regulations governing treated water disposal
- Public liability of organizations involved in water applications

Registration form on the Training Course: WATER INDUSTRY FUNDAMENTALS

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