MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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HEAT EXCHANGERS: TYPES, APPLICATIONS, DESIGN, OPERATION & MAINTENANCE

"Optimize Thermal Efficiency Through Effective Design, Operation, and Maintenance of Heat Exchangers."

Schedule

Venue (In-house)	Fees
At Your Organization Premises	Ask For The Quotation

Introduction

Heat exchangers are critical components in industrial processes where heat transfer between fluids is required. From power generation to chemical, petrochemical, and HVAC industries, efficient operation and maintenance of heat exchangers directly impact energy performance, system reliability, and operational costs.

This course provides a comprehensive understanding of different types of heat exchangers, their design principles, applications, and operating characteristics. It also covers fouling, corrosion, performance monitoring, and maintenance strategies to ensure long-term efficiency. Participants will gain practical insights into troubleshooting and optimizing heat exchanger systems for improved productivity and safety.

Objectives

By the end of this course, participants will be able to:

- Understand the principles of heat transfer and heat exchanger operation
- Identify different types of heat exchangers and their industrial applications
- Learn the fundamentals of heat exchanger design and sizing
- Analyze performance and efficiency parameters
- Recognize common operational problems such as fouling and corrosion
- Apply effective maintenance and cleaning techniques
- Troubleshoot performance and mechanical issues
- Enhance system reliability and thermal efficiency through best practices

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Why Attend

Efficient management of heat exchangers reduces energy consumption, minimizes downtime, and extends equipment life. This course equips participants with the knowledge and skills to design, operate, and maintain heat exchangers effectively. It is ideal for professionals seeking to enhance system reliability and optimize process performance while reducing maintenance costs.

Target Audience

This course is suitable for:

- Mechanical, Process, and Chemical Engineers
- Maintenance and Reliability Engineers
- Project and Design Engineers
- Plant Operators and Technicians
- Energy Managers and Technical Supervisors
- Anyone involved in heat exchanger operation, design, or maintenance

Individual Benefits

- Gain a solid understanding of heat exchanger fundamentals and applications
- Learn practical design and performance analysis methods
- Improve ability to identify and correct operational inefficiencies
- Develop preventive maintenance and troubleshooting skills
- Strengthen technical competence and career advancement in thermal systems

Organizational Benefits

- Enhance plant performance and energy efficiency
- Reduce downtime through proactive maintenance practices
- Extend the operational life of equipment
- Minimize operational costs through optimized heat exchanger management
- Build skilled personnel capable of improving system reliability

Instructional Methodology

The course combines theory with real-world practice through:

- Instructor-led technical presentations
- Case studies and design examples
- Practical problem-solving and group discussions
- Performance analysis and troubleshooting workshops
- Maintenance strategy planning sessions

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Course Outline

Module 1: Fundamentals of Heat Transfer and Heat Exchanger Operation

Module 2: Types and Classifications of Heat Exchangers

Module 3: Applications in Power, Oil & Gas, HVAC, and Process Industries

Module 4: Design Concepts and Thermal Calculations

Module 5: Flow Arrangements and Pressure Drop Considerations

Module 6: Fouling, Corrosion, and Material Selection

Module 7: Performance Evaluation and Efficiency Improvement

Module 8: Maintenance, Cleaning, and Inspection Techniques

Module 9: Troubleshooting and Failure Analysis

Module 10: Case Studies and Best Practices in Heat Exchanger Management

Certification

Upon successful completion, participants will receive a Certificate in Heat Exchangers: Types, Applications, Design, Operation & Maintenance, recognizing their expertise in managing and optimizing heat exchanger systems for enhanced performance and reliability.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**

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