

# TRAINING TITLE PUMP ENERGY EFFICIENCY

Training Duration

5 day

#### Training Venue and Dates

Ref. No. ME028Pump Energy Efficiency	5 28 July-01 Aug. 2025 \$5,500 DUBAI, UA
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In any of the 4 or 5-star hotels. The exact venue will be informed later.

**Training Fees** 

• \$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

## Training Certificate

**Define** Management Consultants Certificate of course completion will be issued to all attendees.

## TRAINING DESCRIPTION

The "Pump Energy Efficiency" training program is designed to provide participants with a comprehensive understanding of optimizing pumping systems' energy usage. This course covers the principles of pump efficiency, system performance, maintenance strategies, and energy-saving techniques. Participants will learn to identify inefficiencies and implement cost-effective solutions to reduce energy consumption in pump systems across various industries.

#### TRAINING OBJECTIVES

#### By the end of the course, participants will be able to understand

- Assess and analyze the energy performance of pump systems.
- Apply best practices for improving pump efficiency and reducing energy consumption.
- Understand the impact of system design, operational practices, and maintenance on pump efficiency.
- Identify energy-saving opportunities and implement strategies for sustainable operation.

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#### WHO SHOULD ATTEND?

- Engineers and Technicians
- Energy Managers and Maintenance Managers
- Operations Managers
- Consultants and Vendors

#### TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

#### COURSE PROGRAM:

#### Day 1: Introduction to Pump Energy Efficiency

- Overview of pumping systems and their applications
- Understanding energy efficiency in pumps
- Key factors affecting pump performance
- The role of pumps in industrial energy consumption

# Day 2: Principles of Pumping Systems and Energy Consumption

- Basic principles of fluid mechanics and pump operation
- Pump curves and system curves
- Calculating pump efficiency
- Energy losses and their impact on system performance

#### Day 3: Energy Auditing and Performance Analysis

• Conducting energy audits for pump systems

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- Tools and techniques for measuring pump efficiency
- Analyzing energy consumption patterns
- Identifying inefficiencies in pump systems

#### Day 4: Optimizing Pump System Performance

- Best practices for selecting the right pump
- System design and pump matching
- Control strategies to reduce energy consumption
- Variable frequency drives (VFDs) and other energy-saving technologies

# Day 5: Maintenance and Long-Term Energy Management

- Preventive and predictive maintenance to maintain efficiency
- Troubleshooting common issues in pumping systems
- Developing energy-saving action plans

NOTE:

<u>Pre-& Post Tests will be conducted.</u> <u>Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will</u> <u>be carried out.</u>

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