AMERICAN GLOBAL INSTITUTE FOR PRIVATE TRAINING

Tel.: 00965 22204992 , Fax: 00965 22204993 , Mob.: 00965 97273712
Email: admin@agi-kw.com, agi-kw@hotmail.com
W/Site: www.agi-kw.com , PO. Box : 3111 - Hawalli Code No. 32032 – Kuwait

EXTERNAL TRAINING COURSE FROM 2020 TRAINING PLAN

A Contracts Management Training Course:

Mechanical Equipment: Compressors, Pumps, Seals, Motors and Variable - Speed Drives

From 24/02/2020 To 28/02/2020

Turkey, Istanbul, CVK Taksim Hotel

850 KD (For Participant Note Less Than 7 Participants)
950 KD (For Participant – (3-7) – Participants)
1200 KD (For Participant Less Than 3 Participants)

Description

This Mechanical Equipment training course will provide a comprehensive understanding of equipment operating characteristics. It will introduce delegates to essential types of mechanical equipment, including positive displacement and dynamic pumps and compressors, motors and drives and their associated systems and components. The applications of these equipments will be discussed along with their suitability for different operational duties and selection criteria. In addition, the seminar will focus on associated equipment including packing, mechanical sealing systems, bearings and valves. This training course will focus on maximising the efficiency, reliability, and longevity of this equipment by providing a thorough understanding of the characteristics, common problems, condition monitoring and maintenance criteria related to machinery and equipment operation. This training course will feature:

- Pumps and Pumping Systems
- Compressors and Compression Systems
- Motors and Variable Speed Drives
- Discussion of associated equipment such as mechanical seal design, bearings and valves
- Condition monitoring and Predictive Maintenance techniques

Objectives

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

- Identify the different types of pumps & compressors & learn about selection, operation and maintenance strategies
- Operate pumps and compressors as close as possible to the design efficiency and monitor their availability and reliability
- Identify and learn about associated components such as mechanical seals & bearings and identify their failure mechanisms
- Condition, monitor and troubleshoot pump and compressor problems
- Specify, operate and maintain fluid movers (Motors) and drivers (Variable Speed Drives)

The Course Content

Day One: Pumps and Pumping Systems

Pump categories and selection - Dynamic and positive displacement
Pump Theory of Operation - Governing fluid laws and performance curves
Dynamic Pumps - Centrifugal, axial, mixed flow
General Performance Characteristics - Cavitations, net positive suction head
Positive Displacement Pumps - Reciprocating, rotary
Engineering of System Requirements - Fluid type, system head curves

Day Two: Compressors and Compressor Systems

Positive Displacement Compressors - Reciprocating and rotary
Dynamic Compressors - Centrifugal, axial, mixed flow
Compressor Operation - Gas laws, operation curves
Compressor Performance Measurement and sizing
Compressor Equipment
Surging and Choking

Day Three: Motors and Variable Speed Drives

Characteristics and Operation of AC Induction Motors
Starting and Speed Control of AC induction motors
Speed control methods of AC Motors
Construction, Enclosures and cooling methods of AC Motors
Basic principles of AC Variable-Speed Drives (VSD's)
Electromagnetic Interferences, Cable Details and Filtering

Day Four: Maintenance and Troubleshooting

Types of maintenance
Factors affecting pump, compressor and motor maintenance
Vibration Analysis and Condition Monitoring
Electrical Signature Condition Monitoring
Thermal Imaging condition monitoring
Oil Analysis

Day Five: Associated Mechanical Equipment

Mechanical Seals
Bearings
Faults associated with bearings and mechanical seals
Lubrication
Control Valves
Examples

Tel. 00965 22204992, 97273712
Fax 00965 22204993
Email admin@agi-kw.com, agi-kw@hotmail.com
Website www.agi-kw.com