AZ TECH

An ISO 9001:2015 & ISO 29990:2010
Certified Company

Mechanical Equipment:

Compressors, Pumps, Seals, Motors, and Variable - Speed Drives

Operation, Troubleshooting and Maintenance

09 - 13 Dec 2018, Muscat
14 - 18 Jul 2019, Dubai
08 - 12 Dec 2019, Dubai

ACS REGISTRARS Quality Assurance ISO 9001
ACS REGISTRARS ISO 29990
iosh Accredited Course Provider
NACE INTERNATIONAL IRON CORPORATE MEMBER
IAM Institute of Asset Management CORPORATE MEMBER
IAM endorsed TRAINER
THE GLOBAL COMPACT United Nations Global Compact

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Why Choose this Training Course?

This 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.

The 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 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, & valves
- Condition monitoring and Predictive Maintenance techniques

How will this Training Course be Presented?

This course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. This includes workshop principles with formal lectures, Videos and animations, question & answer sessions, case studies and interactive worked examples. Relevant case studies will be provided to illustrate the application of each tool in an operations environment. There will be ample opportunities for discussion and sharing.mollit anim id est laborum.

What are the Goals?

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

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

Who is this Training Course for?

This course is suitable to those who wish to update themselves on mechanical equipment including pump and compressor technology, judge the suitability of different types of pumps and compressors, drive equipment and associated components for their needs, and learn how to operate and maintain them for the benefit of their organisations.

This course is suitable to a wide range of Technical professionals but will greatly benefit:

- Professionals in Maintenance, Engineering and Production
- Those with little or no prior formal background who function as Managers, Planners, Inspectors, Designers, Researchers, Investors or Procurers
- Those who are or will become involve at any stage in project applications and applicable maintenance technologies

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

The Certificate

AZTech Certificate of Completion for delegates who attend and complete the course

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This fee is inclusive of Documentation, Lunch and Refreshments

Date	Venue	Fees(USD)	Book your seat
09 - 13 Dec 2018	Muscat - Oman	$4,950	**Register Now**
14 - 18 Jul 2019	Dubai - UAE	$4,950	**Register Now**
08 - 12 Dec 2019	Dubai - UAE	$4,950	**Register Now**

VAT Announcement: The Government of UAE have introduced Value Added Tax (VAT) on goods and services from 01-January-2018. In compliance with the legislation issued by the UAE Government, we will be applying a 5% VAT on the fees for all our programs and services offered from January 2018 as applicable and stipulated in the FTA circulars.

Complete & send by fax/mail to address given below. Please use BLOCK CAPITALS.

REGISTRATION DETAILS

Family Name:_____ First Name:_____

Position:_____ Company:_____

Mailing Address:_____

Telephone:_____Mobile:_____Fax:_____Email:_____

AUTHORISATION

Authorised by:_____Position:_____

Telephone:_____Fax:_____Email:_____

Postal Address:_____

MODE OF PAYMENT

☐ **Please invoice my company** ☐ **Please invoice me** ☐ **Please find enclosed a cheque payable to AZTECH**

HOTEL ACCOMMODATION

Hotel accommodation is not included in the Registration Fee. A reduced corporate rate and a limited number of rooms are available for attendees wishing to stay at the hotel venue. Please make your request for accommodation at least **3 weeks prior** to the commencement of the course.

CANCELLATIONS & SUBSTITUTIONS

You must notify the Registrar of cancellations at least 2 weeks before a scheduled seminar in order to be eligible for a credit. If you cannot attend, you may send a replacement from your organisation at no charge. There is a $250 handling charge for all cancellations or rescheduling. We reserve the right to cancel a seminar due to low enrollment. All registrants will be notified in advance and a full refund will be provided upon request.

DOWNLOAD TRAINING PLAN 2018

Scan this code with your smart phone to download Training Plan 2018. Our training portfolio will provide you a number seminars and courses to choose from depending on your organisational goals and personal development objectives.

EVENT DISCLAIMER

We reserve the right to cancel or postpone a seminar or related event, change venue, substitution of the Instructor at our sole discretion. If this occurs, our responsibility is limited to a refund of any registration fee(s) already paid. We are not responsible for airline tickets, hotels costs, other tickets or payments, or any similar fee penalties or related or unrelated losses, costs and/or expenses registrant may incur or have incurred as a result of any trip cancellations or changes.

4 WAYS TO REGISTER

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Visit our website: ..... **www.aztechtraining.com**

CERTIFICATION

AZTech Certificate of Completion for delegates who attend and complete the course