BAYUBALI LEARNING SOLUTIONS

CENTRIFUGAL COMPRESSOR - PRINCIPLES, OPERATION & MAINTENANCE COURSE

Training Dates:	As per schedule	**Training Venue:**	Kuala Lumpur, Malaysia.
Basic Fee:	RM3,450.00 + SST per participant (this includes course materials, meals, refreshment and attendance certificate)		

DURATION

21 hours (Three days)

TARGET GROUP

The courses are especially developed for the end users of Centrifugal Compressor (Managers, Engineers, Supervisors, Operators, Technician) and everyone else who is interested in the world of centrifugal compressors.

TARGETED INDUSTRY/INDUSTRIES

Oil and gas industries, petrochemical plant, pump oil plant, power plant, food industries and others related industries.

CERTIFICATION

Not Applicable

COURSE OVERVIEW

Centrifugal compressors play a very vital role in many Oil & Gas, Petrochemical and Industrial plants. Compressor operation is affected by the environment and operating parameter where it operates. Deep understanding of the principles of operation, its construction and support system will enable the end user to operate and maintain the compressor in the most safe and efficient manner which will provide high reliability and availability to the plant operation.

COURSE OBJECTIVE

This training program will assist participants whom handling and maintaining centrifugal compressor is a major part of their job to understand the knowledge related to the principles, operation and maintenance of centrifugal compressor and its support systems.

COURSE OUTCOMES

At the end of this course, participants will understand:

- The basic thermodynamic and working principles of the centrifugal compressor.
- Centrifugal compressors construction details (impeller, diaphragm, shaft, inlet guide vane, bearings, dry gas seals, etc) and its related design codes (API-617)
- Centrifugal compressor lubrication system as per API-614.
- Centrifugal Compressor Dry Gas Seal as per API-692.
- How to read and interpret the compressor curves, understand the effect operational parameter to compressor operation, surge phenomenon and evaluating compressor performance & health.
- How compressor anti-surge control, flow control and load sharing control works,
- How to apply the best practices and guidelines for start-up, operation, maintenance, overhaul and troubleshooting

TRAINING METHODOLOGY

Training will be a lively blend of presentations and discussions drawn from many years of operation and maintenance experience. Case studies and questions will be used throughout to keep the discussions on a very practical level, with attendees being encouraged to use examples from where they are familiar with, so that they may apply the techniques to their own work environment.

COURSE CONTENTS

MODULE 1

- Compressor overview
- Compressor working principles and basic thermodynamic.
- Compressor curve.

MODULE 2

- Compressor construction / hardware
- Lubrication System

MODULE 3

- Clearance Seal
- Wet Seal and its system
- Dry Gas Seal and its system

MODULE 4

- Compressor surge and stonewall
- Anti-Surge Control System

MODULE 5

- Flow and Load Balancing control System
- Compressor Start-up
- Compressor health monitoring

MODULE 6

- Compressor Maintenance
- Overhaul and inspection

ABOUT THE INSTRUCTOR

En. Zulkefli Bin Sarji, graduated with Bachelor of Engineering (Mechanical) from the Universiti Sains Malaysia. He has 28 years of experience in Oil & Gas Industries. He has involved in various types and aspect of Rotating Machinery (Maintenance, Design, Audit, Failure Investigation, Training and Coaching). He is a member of Board of Engineers Malaysia. He has attended Train-The-Trainer program for Gas Turbine and Compressor by Rolls-Royce and is a Certified & Accredited HRDC Trainer.

Since the past 14 years in teaching, he had delivered for several courses such as;

- Design Operation Maintenance of Gas Turbine
- Design Operation Maintenance of Compressor
- Practical Centrifugal Pumps Design Operation and Maintenance
- Centrifugal Pump Bearing and Sealing System
- Design Operation Maintenance of Driven Equipment
- Centrifugal Pump Selection
- Design Operation Maintenance of Pump
- Design Operation Maintenance of Steam Turbine & Turboexpander