

An LDI Training Course

PUMPS and DRIVERS

Design, Selection, Installation, Operation and Trouble-Shooting

by
Rachmat Sudjana, ST

Introduction

Pumps and Drivers are the second-most common machines in use today. They are exceeded in numbers only by the electric motor.

Knowledge of Pumps and Pump Operation is often overlooked in today's colleges and universities. This course is designed to educate you with the appropriate knowledge of Pumping principles focusing mainly on the Centrifugal Pump.

A thorough comprehension of underlying Pump principles is often required for you to effectively carry out your day to day business. If you design, specify, repair, maintain, operate or work with Pumps in any way, this course will provide you with the information required to perform these tasks.

The Aims

Upon completion of this course you will be able to identify Pump and Drivers classifications, describe the purpose of Pump parts, define various Pump terms, explain Pump Operation, describe the components of a Pump curve.

Develop a “feel” for the important parameters in designing, selecting, specifying, installing, operating and maintaining pumps and drivers.

How to select the appropriate driver, such as, internal combustion engine, turbine or electrical motor

Couse Contents

- **Pumps Principles**
 - Pump Definition
 - Pump Classifications
 - ANSI Pump Standard
 - Centrifugal Pumps
 - Pumping System and Design
 - Pump Selection

- **Pump Parts**
 - Overhung Impeller Centrifugal Pump Configuration
 - Overhung Impeller Centrifugal Pump Wet-end; Parts & Function
 - Overhung Impeller Centrifugal Pump Power-end; Parts & Function
 - Overhung Impeller Centrifugal Pump Driver; Parts & Function
 - Overhung Impeller Centrifugal Pump Support Structure; Parts & Function
 - Split-case Centrifugal Pump Part Differences

- **Pump Terms**
 - Pressure Terms
 - Fluid Terms
 - Pressure / Head Conversions
 - Temperature Effects

- **Pump Operation**
 - Fluid Flow
 - Fluid Energy Conversion

- **Pump Curves**
 - Pump Performance Curve Definition
 - Pump Performance Curve Elements
 - Element Effects; Various Operating Conditions

- **Driver Selection**
 - Size availability
 - Purchase price Vs total life cycle cost
 - Installation costs
 - Fuel Considerations
 - Power requirements
 - Environmental considerations
 - Final Selection

Who Should Attend

Engineering & Construction engineers, Mechanical Engineers, Process Engineer, Operation Engineers, Construction, Maintenance and operations personnel who are or will be responsible for the selection, sizing, specification, installation, testing, operation

and maintenance of pumps, compressors and drivers used in surface production facilities, and other personnel who will be involved in the daily operations of oil and gas fields activities

Your Course Leader

Rachmat Sudjana, ST

Education: University of Indonesia, Industrial Engineering AKAMIGAS, Mechanical Engineering

Qualification: Instructor for Oil and Gas Industries and Pulp & Paper Mills

Other Qualifications: Lecturer and Mentor for Graduate Engineering Trainee –
Engineering Manager - Senior Staff Pipeline/Facility Engineer –
Pipeline Material Selection Specialist

He was a retired Oil & Gas Industry practitioner, who is willing to share his knowledge and experience to the next engineer's generation who need them.

He has a lot of experiences in the Oil & Gas Industries domestic and abroad in the World Class Oil Companies, such as working in the oil field in the north edge of Sahara Desert, Africa next the south shore line of the Mediterranean Sea. As soon as he retired, he had a particular assignment as a Company Engineer in Foster Wheeler, Reading, next to London, UK.

He completed the assignment and get a lot more experience after the completion of the project. Along with his engineering tasks, he was also mentored the engineer's new hired in the company to facilitate them for their future to hold more responsibility. He is willing to improve the knowledge by sharing them to others. He also presented some of technical papers in the national and international forums.

TRAINING CONFIRMATION

For this training we can be carried out with **minimum participant 5 persons.**

For course registration and more information please email to

PT. Loka Datamas Indah
LDI Training

Telephone: +62 21 6326911/0811812857

E-mail : Lditrain@indo.net.id

Web site : www.Lditraining.com