



Pump Course

26-29th April, 2021

Objectives:

To provide plant personnel with technical training on pumps including:

- Pump theory
- Correct pump design
- Troubleshooting pump, seal and bearing failure
- Correct pump maintenance
- Correct pump operation

Target Audience

- Maintenance, Process and Production Engineers
- Reliability Engineers and Design Engineers
- Pump Operators and Mechanical Maintenance Technicians
- Instrumentation and Process Control Technicians
- Anyone associated with industrial pumps.

Outcomes:

Participants will leave the training with specific knowledge to eliminate mysterious pump failures, improve the running time and service life on a population of industrial pumps. All participants will also receive Larry's book, "Everything You Need to Know About Pumps".

Larry, The Pump Guy

Details

Location: Online

Pricing: USD 1800 per person

Registration Deadline:
26th March, 2021

Contact:
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Agenda

1. Basic Pump Principles

- How Pumps Work
- Head vs. Pressure
- Pressure Measurement
- Absolute Pressure
- Gauge Pressure
- Vacuum

2. NPSH

- NPSH required
- NPSH available

3. Cavitation

- Vapor Pressure
- Types of Cavitation
- Effects & Prevention

4. Affinity Laws

- The Laws
- Speed & Diameter
- Practical Application

5. Work & Efficiency

- Flow & Head
- Efficiency
- Horsepower, Kilowatts

6. Pump Classification

- PD types & Centrifugal types
- Impellers & ANSI / API
- Specific Speed
- Suction Specific Speed

7. Pump Curves

- H-Q & Eff. & BHP
- NPSHr & Family Curves

8. System Curves

- TDH
- Elevation, Pressure & Resistance
- Pipes, Valves, and Fittings
- Variable Speed Pumping Pumps in Series & Parallel

9. Shaft Deflection

- Interpreting the Evidence
- Maintenance, Operation & Design

10. Pump- Motor Alignment

- Types of Misalignment
- Alignment Techniques

11. Bearings

- Types & Services
- Lubrication
- Maintenance & Seals

12. Pump Packing

- Components
- Packing Procedures
- Failure & Leakage

13. Mechanical Seals

- Components
- Single & Double
- Support Systems

14. Seal Failure Analysis

- Causes & Prevention
- Environmental Controls

15. Pump Piping

- Draining Tanks
- Suction pipe arrangement
- Discharge pipe arrangement