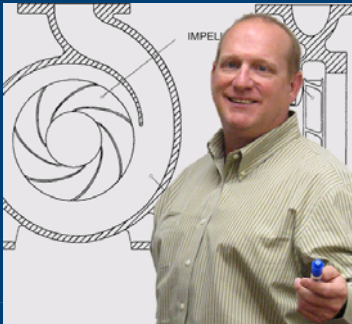


Plant Performance Learning Services



Workshop Objectives:

- Learn how to properly design a pump system that is efficient and reliable while reducing the total life cycle cost.
- Learn to make decisions early in the design process to increase reliability and reduce life cycle cost.
- Learn how to upgrade existing systems to enable greater performance.

What's Included:

- Expert facilitators with 30+ years' experience in pump operation
- State-of-the-art training materials, animations and multimedia presentations
- Lunch time roundtable discussion with trainers
- Networking opportunities
- 3 Continuing Education Units

Fundamentals of Reliable Pump System Design Training – Four Days

Who Should Attend?

This four-day workshop is designed for engineers, maintenance technicians, managers or anyone looking to optimize pump system performance.

What you will learn:

Participants will learn to design efficient and reliable pump systems and how to upgrade existing systems to improve performance. They will learn to make the best decisions for their company's needs for pump systems while providing the highest return on investment. Topics include the following:

- Pump Fundamentals and Basic Hydraulics Review
- Life Cycle Costs
- System Approach
- Factors of Pump Reliability
- Pump Operation Safety
- Procedures for Pump Operation
- Normal Operation
- Other Modes of Operation
- Bearing Design and Application
- Bearing Lubrication Types and Methods
- Pump Construction Materials
- Caring for Pump Shaft Seals
- Baseplate Installation Considerations
- Pump Installation Considerations
- Pump Mounting Considerations
- Coupling Selection Considerations
- Pump System – Piping Considerations
- Pump Selection Considerations
- Driver Selection Considerations
- System Control – System Interaction Considerations
- Energy Saving Actions
- Fundamentals of Condition Monitoring and Vibration Analysis
- Troubleshooting
- Root Cause Failure Analysis
- Design Case Study
- Interactive Problem Solving

Prerequisites:

- Pump Fundamentals
- Basic Hydraulics for Centrifugal Pump Systems

For Information:

- Open training classes, visit www.ittps.com/learning.html or call 315-568-7548
(Note: Open classes include breakfast and lunch. Company group discount of 30% is awarded for 3 or more registrants.)
- Private or tailored offerings, call 800-734-7867
- ITT's Plant Performance Services, visit www.ittps.com

