



Total Pump Training

TRAINING OUTLINE

INTRODUCTION

Basic Definitions of Pumps
Pressure & Head
Classification of Pumps

POSITIVE DISPLACEMENT PUMPS

Introduction to Positive Displacement (P.D.) Pumps
Selection Criteria for P.D. Pumps

HYDRAULICS, SELECTION & CURVES

Pump Capacity
Head - Explanation of Elements Of System Head
Performance Curves - How to Read & Understand Them
Horsepower & Efficiency
How to Size Motors
NPSH & Cavitation

ADVANCED HYDRAULIC CONSIDERATIONS

Specific Speed & Suction Specific Speed
Affinity Laws
System Head Curves
Parallel & Series Operation
Performance Optimization
Over-Sizing Pumps
Pumping Viscous Liquids
Piping Layout
Field Testing Pumps

ENERGY CONSERVATION IN PUMP SELECTION

Selecting Pumps To Minimize Energy
Life Cycle Pump Costs

SEALING SYSTEMS

Stuffing Box/Packing Assembly
Mechanical Seals
Sealless Pumps - Magnetic Drive & Canned Motor

OTHER TOPICS

Impellers
Wear Rings
Thrust & Thrust Balance
Pump Configuration Types
ANSI & API Pump Standards
Minimum Flow
Suction Recirculation
Pump Installation & Startup
Maintenance
Trouble Shooting
Root Cause Failure Analysis
Pump Repair