Online Training
RELIABILITY MATTERS

Reciprocating Power Facility Operations Bundle

76 Total Lessons

Module 1 – Basic Electricity (6)

401-01	Electron Theory
401-02	Magnetism and Electromagnetism Explained
402-01	Introduction to Alternating Current (AC)
409-01	AC Induction Motors
409-02	AC Generators
415-01	Transformer Basic Operation and Theory

Module 2 – Introduction to Plant Equipment (5)

215-01	Introduction to Valves and Their Components
219-01	Introduction to Centrifugal Pumps
223-01	Heat Exchanger Theory
231-01	Introduction to Positive Displacement Pumps
243-01	Introduction to Hydraulics

Module 3 – Plant Instrumentation and Control Theory (8)

603-01	Instrumentation and Control Overview
603-06	Temperature Instruments
603-07	Pressure Measuring Devices
603-08	Level Measuring Devices
603-09	Flow Measuring Devices
613-01	Introduction to Automated Control
613-04	Electronic Control Systems
615-02	Basic Principles of Industrial Transmitters

Module 4 – Power Generating Systems and Operations (7)

501-01	Energy Conversion
559-04	Corrosion Causes and Effects
559-05	Corrosion Control in Steam Production
563-02	Water and Steam Terms and Prinicples
563-03	Heat Transfer Principles
563-07	Instrumentation and Controls
563-14	Pump Efficiency and Reliability

Module 5 – Plant Drawings (2)

611-01	P&ID Basics
611-02	Reading a P&ID

Module 6 – Electrical Systems and Equipment (5)

418-03	Protection Relays
418-04	Generator, Transformer, and Motor Protection
418-05	Grounding and Bonding
560-01	Main Transformers
560-03	Fuses and Circuit Breakers

Module 7 – Reciprocating Engine Power Plants (6)

586-01	Introduction to Reciprocating Engine Power Plants
586-03	Fundamentals of Reciprocating Engine Design
586-05	Reciprocating Engine Auxiliary Systems
586-06	Reciprocating Engine Electrical and Control Systems
586-07	Reciprocating Engine Operations
586-09	Generator Control in Reciprocating Engine Power Plants

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Module 8 – Plant Controls (4)

565-01	Distributed Control System Fundamentals
565-02	Distributed Control System Components
565-03	Using Distributed Control System Diagrams
565-04	Power Plant Unit Control

Module 9 – Mechanical Fundamentals (6)

208-05	Piping Auxiliaries
213-01	Lubrication Basics
213-02	Types of Lubricants
213-03	Lubrication Sampling and Analysis
213-04	Lubrication Filtration and Purification
213-05	Lubrication Delivery Methods and Systems

Module 10 – Valve Selection and Maintenance (8)

215-02	Valve Actuators
215-03	Gate Valves
215-04	Globe Valves
215-05	Butterfly Valves
215-06	Ball Valves
215-07	Check Valves
215-12	Safety and Relief Valves
215-13	Solenoid Valves

Module 11 – Mechanical Components (6)

219-03	Centrifugal Pump Fundamentals
219-04	Centrifugal Pump Operation
223-03	Closed Heat Exchangers
225-02	Compressed Air System Components
225-03	Positive Displacement Compressors
271-02	Vibration Causes and Characteristics

Module 12 - Industrial Math and Science (10)

170-01	Introduction to Industrial Math
170-02	Industrial Math: Measurements and Calculations
170-03	Industrial Math: Fractions, Percentages, and Ratios
171-01	Atomic Structure and Chemical Bonding
171-02	Introduction to the Periodic Table of Elements
171-03	Chemical Formulas, Reactions, and Solubility
171-04	Introduction to Hydrocarbon Chemistry
171-05	Chemical Equations
171-10	Introduction to Physics: Force and Motion
171-11	Introduction to Physics: Energy, Work, and Power

Module 13 – Chemistry (3)

171-01	Atomic Structure and Chemical Bonding
171-04	Introduction to Hydrocarbon Chemistry
559-01	Molecular Chemistry of Water

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