

Mechanical Drives & Power Transmission



A DIVISION OF ECPI UNIVERSITY

Proper installation and maintenance of mechanical drives can be enormous in terms of operating efficiency, wear & tear on equipment, and downtime. Learn to install the most common mechanical drives which include: belts, chains, and gears. Learn the roles of proper alignment, lubrication, fastening techniques, and troubleshooting. Learn to spot the symptoms of failure, analyze, and selection of the appropriate corrective action.

*Optional Hands-on lab: Clients may opt to include client-owned equipment that has failed to support discussions on what failed and possible root cause analysis. For example: worn bearings, gear boxes, bull gears, worn shafts, belts, pulleys, chains, and sprockets. Additional time will be required.

WHAT THIS COURSE COVERS

- Learn the roles of proper lubrication, bearings, proper alignment and fastening techniques.
- Troubleshooting, spotting the symptoms of failure and selection of the appropriate corrective action.
- How to install and maintain mechanical drives:
 - Examining all the common mechanical drives including belts, chains, and gears;
 - Learning the roles of lubrication, bearings, alignment, fastening techniques, troubleshooting;
 - Spotting the symptoms of failure and selection of the appropriate corrective action

WHO SHOULD TAKE THIS

- Maintenance Managers
- Facility Engineers
- Process Engineers
- Maintenance Mechanics
- Stationary \ Building Engineers

COURSE OUTCOMES

- Understanding of proper installation tensions, alignment, lubrication, and bearing selection.
- Understanding of routine maintenance.
- Understanding of how to identify failing drives and select appropriate corrective actions.
- Optional – review of client equipment failures
- Optional – review of client equipment installation in their facility and maintenance processes.

COURSE AGENDA

- Mechanical Power Transmission
- Prime Movers
- General Lubrication Considerations
- Gear Drive Systems
- Clutches and Brakes
- Mechanical Variable Speed drives

Lecture

Hands-on

• **ONSITE:** 3-days (24 hours)

• **LIVE ONLINE:** N/A



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MD Course Overview and Agenda v11222024.docx