



PHASE 348 RT48 Power Turbine Maintenance

Who should attend	: Mechanics and maintenance support personnel.
Duration	: 2 days (between Mon-Fri)
Location	: RR Facility / Customer Facility on-shore
Class Size	: 12 Maximum
Course Identification	: Phase 348 (RT48)
Prerequisites:	: None

AIMS:

The course is designed to give the attendees a detailed knowledge of the RT48 Power Turbine.

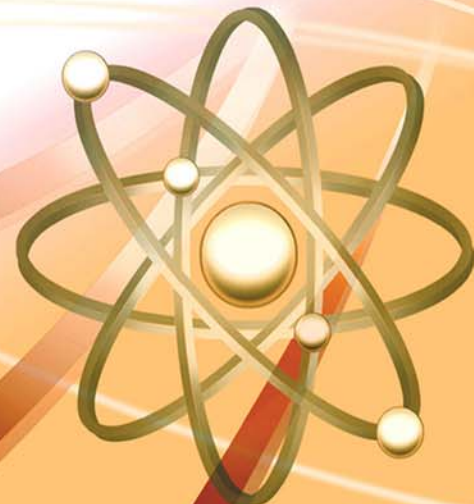
OBJECTIVES:

Upon successful completion of the course, the attendee will be able to:

- List and describe the Power Turbine construction and theory of operation.
- Explain the purpose and location of instrumentation sensors.
- Explain the normal and abnormal conditions based upon observed parameters
- Describe the purpose of proper start up and routine maintenance procedures.
- Identify the required auxiliary support systems including:
 - Mineral oil, normal, coast down, post lube
 - Instrument, bleed, seal and cooling air
 - Instrumentation
- Describe procedures and special tools to remove / install the power turbine rotor.

COURSE CONTENTS:

- Course Induction.
- Power Turbine Major component identification and purpose
 - Rotor / Stator and Support component build up
 - Rear Support, bearing case, rotor assembly, journal bearings, thrust bearings, thrust collar, coupling hub
 - Front Support, mount ring, 2nd blade case, 2nd nozzle case, diaphragm support, 1st nozzle case, inlet diffuser, power turbine support spring
- Instrumentation sensors.
 - Speed pickup, bearing RTD, Shaft vibration, Rim cooling thermocouple
- Operation and Monitoring.
 - Startup, Warm up, Rim Cooling, Disc life, Seal inspection and adjustment, power output, inspection criteria
- Life Cycle Maintenance.
 - Continuous site evaluation during operation, Oil sample, vibration analysis, seal air test and adjustment, coupling and alignment, borescope, Blade tip clearance, Bearing inspection, Rotor removal.





PHASE 356 RT56 Power Turbine Maintenance

Who should attend	: Mechanics and maintenance support personnel.
Duration	: 2 days (between Mon-Fri)
Location	: RR Facility / Customer Facility on-shore
Class Size	: 12 Maximum
Course Identification	: Phase 356 (RT56)
Prerequisites:	: None

AIMS:

The course is designed to give the attendees a detailed knowledge of the RT56 Power Turbine.

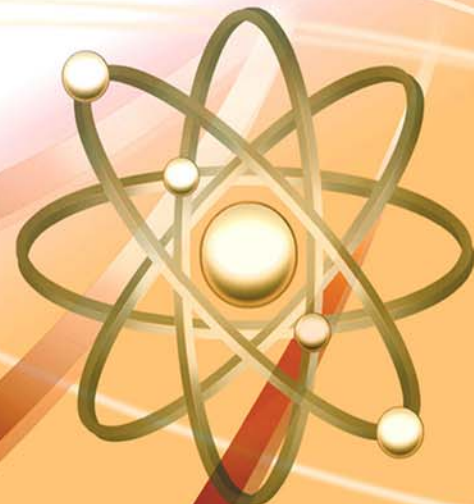
OBJECTIVES:

Upon successful completion of the course, the attendee will be able to:

- List and describe the Power Turbine construction and theory of operation.
- Explain the purpose and location of instrumentation sensors.
- Explain the normal and abnormal conditions based upon observed parameters
- Describe the purpose of proper start up and routine maintenance procedures.
- Identify the required auxiliary support systems including:
 - Mineral oil, normal, coast down, post lube
 - Instrument, bleed, seal and cooling air
 - Instrumentation
- Describe procedures and special tools to remove / install the power turbine rotor.

COURSE CONTENTS:

- Course Induction.
- Power Turbine Major component identification and purpose
 - Rotor / Stator and Support component build up
 - Rear Support, bearing case, rotor assembly, journal bearings, thrust bearings, thrust collar, coupling hub
 - Front Support, mount ring, 2nd blade case, 2nd nozzle case, diaphragm support, 1st nozzle case, inlet diffuser, power turbine support spring
- Instrumentation sensors.
 - Speed pickup, bearing RTD, Shaft vibration, Rim cooling thermocouple
- Operation and Monitoring.
 - Startup, Warm up, Rim Cooling, Disc life, Seal inspection and adjustment, power output, inspection criteria
- Life Cycle Maintenance.
 - Continuous site evaluation during operation, Oil sample, vibration analysis, seal air test and adjustment, coupling and alignment, borescope, Blade tip clearance, Bearing inspection, Rotor removal.





PHASE 361 RT61 Power Turbine Maintenance

Who should attend	: Mechanics and maintenance support personnel.
Duration	: 2 days (between Mon-Fri)
Location	: RR Facility / Customer Facility on-shore
Class Size	: 12 Maximum
Course Identification	: Phase 361 (RT61)
Prerequisites:	: Phase 2R or 12R recommended

AIMS:

The course is designed to give the attendees a detailed knowledge of the RT61 Power Turbine.

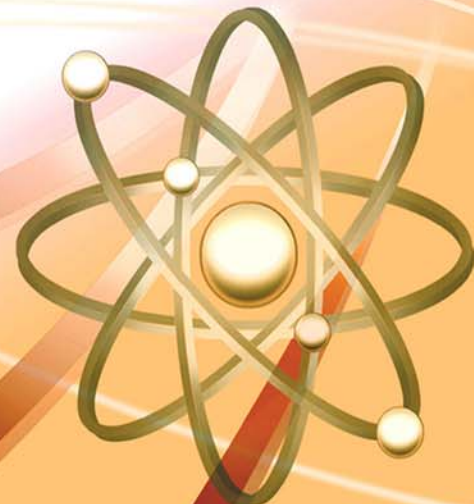
OBJECTIVES:

Upon successful completion of the course, the attendee will be able to:

- List and describe the Power Turbine construction and theory of operation.
- Explain the purpose and location of instrumentation sensors.
- Explain the normal and abnormal conditions based upon observed parameters
- Describe the purpose of proper start up and routine maintenance procedures.
- Identify the required auxiliary support systems including:
 - Mineral oil, normal, coast down, post lube
 - Instrument, bleed, seal and cooling air
 - Instrumentation
- Describe procedures and special tools to remove / install the power turbine rotor.

COURSE CONTENTS:

- Course Induction.
- Power Turbine Major component identification and purpose
 - Rotor / Stator and Support component build up
 - Rear Support, bearing case, rotor assembly, journal bearings, thrust bearings, thrust collar, coupling hub
 - Front Support, mount ring, 2nd blade case, 2nd nozzle case, diaphragm support, 1st nozzle case, inlet diffuser, power turbine support spring
- Instrumentation sensors.
 - Speed pickup, bearing RTD, Shaft vibration, Rim cooling thermocouple
- Operation and Monitoring.
 - Startup, Warm up, Rim Cooling, Disc life, Seal inspection and adjustment, power output, inspection criteria
- Life Cycle Maintenance.
 - Continuous site evaluation during operation, Oil sample, vibration analysis, seal air test and adjustment, coupling and alignment, borescope, Blade tip clearance, Bearing inspection, Rotor removal.



PHASE 362 RT62 Power Turbine Maintenance

Who should attend	: Mechanics and maintenance support personnel.
Duration	: 2 days (between Mon-Fri)
Location	: RR Facility / Customer Facility on-shore
Class Size	: 12 Maximum
Course Identification	: Phase 362 (RT62)
Prerequisites:	: Phase 2R or 12R recommended

AIMS:

The course is designed to give the attendees a detailed knowledge of the RT62 Power Turbine.

OBJECTIVES:

Upon successful completion of the course, the attendee will be able to:

- x List and describe the Power Turbine construction and theory of operation.
- x Explain the purpose and location of instrumentation sensors.
- x Explain the normal and abnormal conditions based upon observed parameters
- x Describe the purpose of proper start up and routine maintenance procedures.
- x Identify the required auxiliary support systems including:
 - x Mineral oil, normal, coast down, post lube
 - x Instrument, bleed, seal and cooling air
 - x Instrumentation
- x Describe procedures and special tools to remove / install the power turbine rotor.

COURSE CONTENTS:

- x Course Induction.
- x Power Turbine Major component identification and purpose
 - x Rotor / Stator and Support component build up
 - x Rear Support, bearing case, rotor assembly, journal bearings, thrust bearings, thrust collar, coupling hub
 - x Front Support, mount ring, 2nd blade case, 2nd nozzle case, diaphragm support, 1st nozzle case, inlet diffuser, power turbine support spring
- x Instrumentation sensors.
 - x Speed pickup, bearing RTD, Shaft vibration, Rim cooling thermocouple
- x Operation and Monitoring.
 - x Startup, Warm up, Rim Cooling, Disc life, Seal inspection and adjustment, power output, inspection criteria
- x Life Cycle Maintenance.
 - x Continuous site evaluation during operation, Oil sample, vibration analysis, seal air test and adjustment, coupling and alignment, borescope, Blade tip clearance, Bearing inspection, Rotor removal.