Integrated Lubrication Services

Turbine Commissioning Program

Service Data Sheet

Description

New equipment installations can introduce unwanted contamination into the lubricant circulation system and related piping. Left unchecked, particulate matter generated from manufacturing or introduced during installation can initiate high levels of wear once the turbine is put into operation.

The Turbine Commissioning Program, on a turnkey basis, handles the tasks of selecting the right turbine oil for your application, and preparing the turbine lubrication system and turbine oil for start-up, allowing you to focus on the many other complex tasks associated with the plant start-up.

Application

Mobil Industrial Lubricants field engineerss work with plant personnel to:

- Recommend the right lubricant for the turbine as well as other applications in the plant
- Establish turbine oil cleanliness specifications consistent with Original Equipment Manufacturer (OEM) requirements
- Identify initial fill steps that will help ensure optimal performance of new equipment once operational
- Coordinate flush oil and new lubricant delivery with the local Mobil plant or Distributor
- Coordinate arrangements with the Integrated Lubrication Service (ILS) provider who will arrive on-site to:
  - Complete high velocity flushing of the turbine lubricating system
  - Arrange for purification of the flush oil for possible use in other applications at the plant or disposal consistent with regulatory requirements
  - Filter the turbine oil, fill the system and verify that oil and system cleanliness is within acceptable levels prior to the unit becoming operational (see Process Details, reverse side)
  - Complete appropriate analysis of the turbine oil to document baseline properties such as viscosity, wear metals, water (Karl Fischer), particle count, total acid number, rust and RPVOT (rotary pressure vessel oxidation test)
  - Gather other relevant data for inclusion in the report

Potential Benefits

Potential benefits could include the following:

- At plant start-up:
  - Shorter start-up time with help from experienced turnkey initial fill service provider
  - Plant personnel freed to focus on other key start-up related tasks
- In the long run:
  - Revenue improvement through reduction of unscheduled downtime as a result of a clean initial fill
  - Reduction in parts replacement and lubricant expenses
  - Lower maintenance labor costs
  - Improved equipment reliability and more effective maintenance control
  - Reduced used lubricant disposal costs

Deliverables

- Prepare an Engineering Service Report that:
  - Details the lubricant treatment steps completed
  - Documents the lubricant cleanliness level prior to and after treatment
  - Documents baseline properties of the turbine oil
  - Recommends steps to maintain lubricant system cleanliness (see list of post-commissioning services below)
  - Provides an estimated value of the service to the customer
- Distribute and present the completed report to plant management and key personnel

Common Opportunity Areas

- New plant start-ups
- Scheduled maintenance outages
- ISO Cleanliness levels greater than OEM specifications
- Coordination issues with multiple vendors
- Utilize other related services
  - Online Signum Oil Analysis for turbine oils
  - Emergency Water Removal
  - Lubricant Sampling Service
  - Contamination Control
  - Reclamation Equipment Rental
  - Leakage Reclamation
  - Oil System Preventive Maintenance
  - Bearing and Return Line Flushing
  - Mobil Planned Engineering Services (PES)

Safety, Health and Environment

Mobil engineers and ILS providers:

- Are attuned to the hazards of handling, storage, and use of petroleum products
- Coordinate efforts through designated plant personnel
- Strictly observe the site's safety and environmental rules and ExxonMobil safety practices
- Verify equipment electrical and mechanical lockout, proper tagging and potential explosion hazards prior to working on equipment
- Provide recommendations to reduce the hazards associated with spill, leakage and fire

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