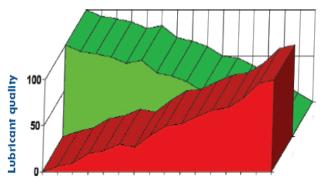
# LUBRICATION - ADVANCE

30% of consumed energy losses due to friction could be reduced immediately by at least 25% through effective lubrication and thereby bring electrical energy savings of approximately 7.5%.

#### **COURSE OBJECTIVE**

As a preceding course from the Lubrication Basic, this course stretches more details on management such as storage and handling, sampling and analysis and contamination control. With an effective lubrication management program, many of these benefits highlight below will be achieved.



Maintenance costs

#### **BENEFITS**

- Reduce overall costs of lubrication and maintenance significantly
- Establish a safer working surrounding
- Reduce overall environmental impact

#### WHO SHOULD ATTEND

- Maintenance Manager
- Maintenance planner / engineer
- Reliability Manager / engineer

#### **PRE-REQUISITE**

No pre-requisite is required. Participants with basic knowledge of lubrication or attended our course EL03 is an advantage.

#### **COURSE MATERIALS**

Comprehensive notes and a collection of case studies

### **COURSE DURATION**

2 DAYS

# **CANCELLATION POLICY**

If notice of withdrawal is given in writing - 14 calendar days before the course date, 80% of the course fee will be refunded. A 50% refund will be made for cancellation received in writing – 7 calendar days before the course date. After which, NO REFUND will be entertained.

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# **COURSE TOPICS**

### Lesson 1

# **Lubrication Knowledge**

- Tribology
- What causes friction?
- What is wear?
- Types of wear
- Functions of lubricant
- Hydrodynamic Lubrication
- Elasto-Hydrodynamics Lubrication
- Boundary & mixed Lubrication
- Kappa value (κ)

# Lesson 2 Lubricant Components

- Base Oil
- Additives
- Thickener

# Lesson 3

# **Grease Selection**

- Grease Applications
- Grease Selection 4 Steps
- Grease Life Replenishment
- Grease Filling Quantity
- Greasing Apparatus & Systems
- Grease Analysis



# Lesson 4

### **Oil selection**

- Oil Applications
- Oil Selection 3 Steps
- Oil Life Replenishment
- Oil Re-filling Quantity
- Oil Apparatus & Systems
- Oil Analysis



# Lesson 5 Storage & Handling

- Objectives
- Storage Areas
- Lubricant Handling
- Lubricant Identification

# Lesson 6 Contamination Control

- Contamination definition
- Source of contamination
- Types of contaminants

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3 <sup>RD</sup> Delegate Name:		
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