



FUNDAMENTALS OF LUBRICATION

BUILDING COMPETENCE, INSPIRING CONFIDENCE

Overview

This one-day training program provides an in-depth understanding of lubrication principles and practices essential for fertilizer and petrochemical plants. It focuses on the fundamentals of tribology, the role of lubrication in minimizing friction and wear, and the critical components of an effective maintenance program.

Participants will gain insights into lubricant types, lubrication systems for turbomachinery, and the importance of proper handling, monitoring, and analysis to ensure long-term equipment reliability. The course blends theoretical knowledge with real-world industrial applications to strengthen participants' technical competence in lubrication management.

Why Us:

We deliver industry-focused training that empowers professionals and organizations to achieve operational excellence. Each program is customized to client needs, ensuring practical relevance and measurable results.

Our expert trainers bring real-world insights, industrial case studies, sharing their experiences and best practices to every session. We create engaging, actionable learning experiences that bridge the gap between theory and practice.

Who Should Attend:

- Maintenance & Operations Engineers
- Lead Supervisors / Foremen
- Personnel managing turbomachinery reliability in fertilizer/petrochemical plants



Course Objectives

- Understand tribological principles and their industrial relevance
- Identify and apply proper lubrication techniques
- Monitor and analyze lubricant performance effectively
- Implement safe handling and storage procedures

Why Lubrication Matters?

- Reduces friction and wear between moving components
- Minimizes downtime and maintenance costs
- Enhances machine efficiency and lifespan
- Critical for turbo-machinery reliability in continuous operations

Course Outline

Topic 1

Tribology and Friction

Understanding the science of lubrication and how it minimizes friction.

Topic 2

Basic Lubrication Terminology

Key terms and concepts related to lubricants.

Topic 3

Generations of Lubricants

Evolution and classification of lubricants.

Topic 4

Types of Lubrication

Different methods and applications, such as manual, centralized, automatic, and oil mist systems.

Course Outline

Topic 5

Lube Oil System of Turbo Machines

Specifics of lubrication systems used in turbomachinery.

Topic 6

Important Lubricants

Identification and selection of key lubricants for industrial applications.

Topic 7

Lubrication Monitoring and Analysis

Techniques for monitoring lubricant health and performance, including identifying contaminants like sludge and varnish.

Topic 8

Health, Safety, and Handling

Proper procedures for the safe handling of lubricants.

Trainers



Mr. Sajjad Hussain
Senior Trainer / Consultant

Mr. Sajjad Hussain is a seasoned mechanical engineer with over 34 years of experience in maintenance, reliability, and plant management within the fertilizer industry. A UET Lahore graduate, he built his career at Fauji Fertilizer Company, rising to Senior Manager Maintenance for twin-train Ammonia and Urea plants. Renowned for his expertise in high-pressure equipment—including turbines, compressors, and pumps, he has led major overhauls, plant commissioning projects, and international technical engagements across the USA, Italy, Saudi Arabia, and more. A committed mentor and trainer, he has developed and delivered specialized courses on machinery maintenance and continues to shape future professionals through hands-on knowledge and leadership.



Mr. Khadim Hussain
Senior Trainer / Consultant

Mr. Khadim Hussain is a turbo-machinery specialist with over 36 years of hands-on experience in the maintenance, overhauling, and reliability enhancement of critical rotating equipment. A Mechanical Engineering graduate from UET Lahore, he has deep expertise in steam turbines, gas compressors, pumps, gearboxes, and SOLAR gas turbines. He has led major machinery revamps and troubleshooting initiatives across Pakistan and abroad, including projects in Saudi Arabia, Bahrain, and Switzerland. Known for resolving complex reliability challenges and spearheading equipment upgrades, he has also contributed to warranty issue resolution with global OEMs. As a consultant and trainer, Khadim blends technical depth with practical insight, making him a trusted expert in the fertilizer and process industries.

Logistics

Duration

1 day

Location

At Client's Site / Lahore

Training Instructors

Mr. Sajjad Hussain | Mr, Khadim Hussain

Get in Touch

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