



***COURSE TITLE***

# **FUNDAMENTALS OF CRANE SAFETY**



**BUILDING COMPETENCE, INSPIRING CONFIDENCE**

# Course Objectives

By the end of this course, participants will be able to:

- Understand crane hazards and risk factors
- Apply safe lifting practices and procedures
- Interpret load charts correctly
- Identify unsafe crane conditions
- Comply with relevant safety standards and site requirements

# Target Audience

- Maintenance, Inspection Personnel & Safety Officers
- Engineers involved in lifting operations



# Course Outline

## Introduction to Crane Safety

- Importance of crane safety in lifting operations
- Statistics and lessons learned from crane accidents
- Legal responsibilities of operators, supervisors, and employers
- Overview of applicable standards (OSHA / ISO / BS / local regulations)

## Types of Cranes & Components

- Common crane types:
  - Mobile cranes
  - Tower cranes
  - Overhead / gantry cranes
  - Crawler cranes
- Major crane components and their functions
- Crane stability basics

# Course Outline

## Crane Hazards & Risk Assessment

- Common crane hazards:
  - Overloading
  - Poor ground conditions
  - Electrical hazards (power lines)
  - Weather effects
  - Human factors
- Job Safety Analysis (JSA) for lifting operations
- Lift planning basics

## Load Handling & Rigging Safety

- Load characteristics and center of gravity
- Sling types and selection
- Safe working load (SWL) and factors affecting capacity
- Rigging inspection and rejection criteria
- Hand signals and communication protocols

# Course Outline

## Crane Load Charts & Safe Operations

- Understanding crane load charts
- Radius, boom length, and capacity relationship
- Effects of dynamic loading
- Operating limitations and safety devices
- Working near obstacles and confined spaces

## Inspection, Maintenance & Operator Responsibilities

- Pre-use and periodic inspections
- Common defects and warning signs
- Maintenance roles and documentation
- Operator fitness and competency requirements

## Emergency Situations & Incident Prevention

- Crane failure scenarios
- Emergency response procedures
- Actions during adverse weather
- Near-miss reporting and learning culture

# Instructor



**Mr. Maqbool Ahmed Soomro**

Maqbool Ahmed Soomro is a highly experienced maintenance and lifting professional with over 46 years of hands-on experience in fertilizer plants, gas compression facilities, and heavy industrial environments. He specializes in crane operations, heavy lifting, rigging engineering, and maintenance of mobile and stationary equipment.

He has extensive expertise in the inspection, operation, and maintenance of mobile and overhead cranes, earthmoving machinery, and heavy-duty vehicles, with proven capability in rigging and safely executing lifts up to 300 tons during plant erections, turnarounds, and shutdowns.

Mr. Ahmed has played a key role in the erection and heavy lifting of three major Urea plants—Pak-Saudi Fertilizer, Pak-China Fertilizer, and FFC-II—and has contributed to numerous large-scale shutdowns and turnaround projects.

An accomplished corporate trainer, he has delivered professional courses on Rigging Techniques, Crane Operations, Crane Safety, and Tool Safety to leading organizations in Pakistan and the Middle East, including FFC, OMV Pakistan, SNGPL, GPIC Bahrain, Al-Khor Fertilizer, and Unilever (Fatima Fertilizer).

He is an IMS Trained Auditor, certified in Mobile & Overhead Crane Inspection by Haward Technology Middle East (Dubai), and holds a Diploma in Zeigler Firefighting Systems. He has spent most of his career in senior engineering and maintenance roles with Fauji Fertilizer Company and Fatima Fertilizer Limited.

# Logistics

## Duration

**1 day**

## Location

**Client site or Lahore**

## Training Instructors

**Mr. Maqbool Ahmed Soomro**

Get in Touch

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