



CRANE AND MACHINERY SAFETY INSPECTION TRAINING



MTBM Group Sdn. Bhd. (1600656-M)

Level 8, MCT Tower, Sky Park, One City, Jalan USJ 25/1, 47650 Subang Jaya, Selangor

Course Title: Crane and Machinery Safety Inspection Training

Course Validity: 2 Days

Validity: 3 Years

HRD Corp Scheme: Claimable

INTRODUCTION:

This programme provides a practical, inspection-focused approach for personnel responsible for crane and machinery safety in workplaces. It covers statutory requirements under DOSH Malaysia, international best practices (ISO/OSHA/ASME standards), and industry inspection techniques for mobile cranes, overhead cranes, hoists, forklifts, lifting gears and critical machinery. Participants will learn how to conduct daily, weekly and monthly inspections, identify defects, evaluate risk levels, and ensure compliance with legal and operational requirements.

OBJECTIVE(S):

- Understand legal requirements under OSHA 1994, FMA regulations, Use & Standards of Exposure of Chemicals to Health (related machinery), and MS/ASME lifting standards.
- Identify key hazards in cranes and heavy machinery operation.
- Perform systematic equipment inspections using checklists and defect criteria.
- Evaluate risk based on findings and determine appropriate corrective actions.
- Strengthen preventive maintenance, safe operation, and compliance readiness.
- Enhance organisational safety performance and reduce machinery-related incidents

TARGET GROUP(S):

- Crane operators & riggers
- Maintenance & engineering personnel
- Workplace Safety & Health Committee members
- Supervisors & line leaders
- OSH Practitioners / SHO / SSS
- Lifting equipment coordinators
- Anyone involved in lifting or machinery operation

ENTRY REQUIREMENT(S):

- Able to read, write and communicate in Malay/English.
- Basic understanding of machinery operation (preferred but not mandatory).

TOPIC(S):

1. Introduction to Crane & Machinery Safety
2. Legal Requirements (DOSH, OSHA 1994, FMA, UBBL, MS & ASME Standards)
3. Types of Cranes & Machinery – Structure, Components & Functions
4. Common Hazards in Lifting & Machinery Operations
5. Inspection Planning & Requirements
6. Daily, Weekly & Monthly Inspection Procedures
7. Critical Component Inspection
8. Load Chart Reading, SWL, WLL & Stability Assessment
9. Documentation, Checklists & Reporting
10. Risk Rating, Defect Identification & Corrective Actions
11. Lockout/Tagout (LOTO) for Machinery Safety
12. Case Studies & Accident Analysis in Malaysia
13. Practical Hands-On Inspection (Simulated or Real Machinery)

LIST OF REFERENCE BOOK(S):

- Factories and Machinery Act 1967 (FMA) and Regulations
- OSHA 1994 & OSHA (Amendment) Act 2022
- DOSH Guidelines for Safe Operation of Cranes
- ASME B30 Standards (Crane and Rigging)
- MS 1796 Lifting Appliances Standard
- ISO 45001 (related to machinery safety control)

LIST OF TEACHING AID(S):

- LCD projector
- Machinery inspection tools (sample)
- Crane components visual aids
- Checklists & inspection forms
- Case study videos
- Flip chart & whiteboard

METHODOLOGY(S):

- Lecture
- Group discussion
- Case study analysis
- Practical inspection exercises
- Demonstration

TRAINING SCHEDULE

Day 1

Time	Activity / Topic
8:30 am – 9:00 am	Registration & Introduction
9:00 am – 10:15 am	Topic 1: Introduction to Crane & Machinery Safety
10:15 am – 10:30 am	Morning Tea Break
10:30 am – 12:30 pm	Topic 2: Legal Requirements & Standards
12:30 pm – 1:30 pm	Lunch Break
1:30 pm – 3:30 pm	Topic 3: Types of Cranes & Machinery + Components
3:30 pm – 3:45 pm	Afternoon Tea Break
3:45 pm – 5:00 pm	Topic 4: Hazards & Inspection Planning

Day 2

Time	Activity / Topic
8:30 am – 9:00 am	Recap of Day 1
9:00 am – 10:15 am	Topic 5: Inspection Procedures (Daily/Weekly/Monthly)
10:15 am – 10:30 am	Morning Tea Break
10:30 am – 12:30 pm	Topic 6: Critical Component Inspection
12:30 pm – 1:30 pm	Lunch Break
1:30 pm – 3:30 pm	Topic 7: LOTO, Reporting, Risk Rating & Defects
3:30 pm – 3:45 pm	Afternoon Tea Break
3:45 pm – 5:00 pm	Practical Inspection Simulation & Assessment