

Overhead Travelling Crane Certification

This program was designed to certify maintenance personnel as Competent Operators pursuant to Occupation Health & Safety Regulations.

Successful students will receive a solid understanding of the standards of the company, industry, government and the associated equipment manufacturers. This program requires demonstration of hands-on hoisting and rigging skills combined with safe work practices and procedures.

CRANE SAFETY REGULATIONS

Objective: Explain intent of legislation; State applicable regulations; State company safety procedures for Cranes & Lifting Equipment

SUBTOPICS:

- GENERAL DUTIES; Duties of company, Duties of workers, Duties of subcontractors
- HOISTS, CRANES AND LIFTING DEVICES
- COMPANY SAFETY STANDARDS; While crane is unattended, During operation
- RIGGING

CRANE TYPES

Objective: Describe crane types in use at company; Explain mechanical operation; Describe control methods; Explain operating parameters of each crane

SUBTOPICS:

- TYPES OF CRANES; Terminology, Wall Mounted Jib, Monorail, Single bridge, Double bridge
- TYPES OF CONTROL; Electric, Air
- BUILDING 1; Design of crane, Capability of crane, Typical loads, Implications of movement
- BUILDING 2; Design of crane, Capability of crane, Typical loads, Implications of movement
- BUILDING 3; Design of crane, Capability of crane, Typical loads, Implications of movement

LOAD ESTIMATION

Objective: Determine load weights; Identify gross capacities; Make deductions from gross capacities to determine net capacities; Determine capacities for their crane; Assess all factors which can reduce crane capacities; Make correct deductions from rated capacities

SUBTOPICS:

- LOAD ESTIMATION; Load gauges, Calculation of load, Weight of attachments, Use of load charts to determine capability, Abnormal loading
- PRACTICAL WORKSHOP

TRAVEL EVALUATION

Objective: Pre plan a lift with co-workers; Determine all unusual aspects of a given travel route; Identify potentially dangerous situations

SUBTOPICS:

- ROUTE PLANNING
- LOAD CONTROL
- EMERGENCY RESPONSE

CRANE INSPECTION

Objective: Visually inspect a crane to ensure its ability to perform safely; Inspect a cable and determine its ability to remain in service; Inspect rigging and determine its ability to remain in service; Recognize if a crane is performing correctly

SUBTOPICS:

- PRE START CHECKS; Limits, Travel, Emergency stop, Hook, Safety catch, Cable condition, Running properly on drum, Rigging
- CONTINUAL CHECKS; Spooling & drum rotation, Load movement, Safety considerations

SIGNALS

Objective: Use standard hand signals to direct a crane operator during the hoisting and moving of a load; Use a crane to hoist and move a load in response to standard hand signals

SUBTOPICS:

- DESIGNATED SIGNALER; When required, Position, Visibility, Number
- METHODS OF SIGNALING; Hand, Radio
- STANDARD HAND SIGNALS

CRANE OPERATION

Objective: Demonstrate full knowledge of safe operating practices; Operate a crane properly so it will perform to manufacturer's specifications; Correctly answer questions pertaining to safe lifting practices and the do's and don't's of hoisting; Identify and use controls

SUBTOPICS:

- LIFTING
- TRAVELLING
- POST OPERATING CHECK
- PERFORM OPERATING ADJUSTMENTS

CRANE MAINTENANCE

Objective: Describe maintenance prescribed by the manufacturers

SUBTOPICS:

- MAINTENANCE SCHEDULE
- INSPECTION AND REPAIR PROCEDURES
- SAFETY DURING MAINTENANCE
- WIRE ROPE INSPECTION AND MAINTENANCE

LOG BOOKS

Objective: Make required entries into the crane log books

SUBTOPICS:

- RECORDING; Inspections, Maintenance, Calibrations, Work activities, Hours of service
- SIGNATURES; When required, Persons

CHAIN FALLS

Objective: Inspect chain falls prior to use; Hoist loads using a chain fall

SUBTOPICS:

- INSPECTION
- OPERATION

COME-ALONGS

Objective: Inspect come-alongs prior to use; Hoist loads using a come-along

SUBTOPICS:

- INSPECTION
- OPERATION

RIGGING

Objective: List safe practices for riggers working with cranes; Lubricate and store a cable correctly using manufacturer's specifications; Determine correct sling size for a lift using sling angles of multi leg hook ups; Demonstrate knowledge of shackles and correct usage

SUBTOPICS:

- INSPECTION; Cable, Hook, Safety catch, Shackles, End fittings, Connections, Rigging equipment, Load
- REEVING; Sheaves, Spools, Drums, Wire rope
- RIGGING SLINGS; Configurations, Angles, Safe working loads
- SAFETY FACTORS FOR LOADS AND WORKERS