



Centre For Industrial Solutions and Advanced Training

Two Day`s Training Program on Rigging, Lifting and Material Handling, Crane Safety, Applicable Regulations and International Standards

26-27 April 2019 @Nagpur , Maharashtra



Two Day Training Program on

Rigging, Lifting and Material Handling, Crane Safety, Applicable Regulations and International Standards

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Objective:

The training covers not only ropes and knots but hoisting equipment from cranes to chain falls and rigging hardware from rope clips to spreader beams. Equally important is the attention paid at every point to correct procedures for inspection, maintenance, and operation. Knowledge of the equipment and materials with which we work is one of the most important factors in occupational health and safety. Each item has been designed and developed to serve a specific purpose. Recognizing its capabilities and limitations not only improves efficiency but minimizes hazards and helps prevent accidents. Identification of basic hazards in rigging and hoisting, explains the safeguards necessary to control or eliminate these hazards, and spells out other essential safety requirements. This Training Programme is to provide the delegate with knowledge of the Manual handling of loads, rigging principles, general hazards and risks of rigging and lifting operations, an awareness of relevant legislation and regulation, and an opportunity to practice basic rigging operations following a lifting plan.

Who Should Attend: Project Managers • Facility Managers • Contractor's • Construction Engineers/Supervisors/Foremen • Plant & Maintenance Engineers • Structural Engineers • Safety Engineers & Supervisors • Compliance personnel • Technologists & Technicians • Consulting Engineers • Designers

COURSE TOPICS INCLUDE:

- Legislated Safety Requirements for Rigging – Review of all applicable jurisdictional General Safety Regulations, manufacturer's recommendations including pertinent International Standards and ASME B-30 series.
- Introduction to Rigging – Overview of common rigging components addressed in the course.
- Rigging Hardware – Identification of the different types of rigging hardware, slings & hitch types.
- Rigging Inspection – How to perform visual inspections of different types of hardware and slings.
- Lift Plan – How to develop and perform a proper lift plan.
- Rigging – Identify common rigging applications and calculations, for hitch capacities to determine the safe working load and define load weights.



- Rigging Safety Video – Rigging inspection and application
- Internationally Used Hand Signals – Address jurisdictional requirements for crane hand signals.
- Safety Rules – Review operational safety rules.
- Evaluation – Evaluation of participant’s competency for rigging, material handling, Controlling the load and code of signals.

Delivery Methodology (Strategy):

- Introduction and Objective Setting
- Knowledge Presentations,
- Animation and videos
- Assignments & Exercise,
- Feedback and Assessment
- Discussion and Interaction

Course Contents:

Rigging basics; Rigging techniques overview; Applications & procedures; Safety considerations while rigging; Maintenance of rigging equipments tools and tackles.

Course Outline:

- Rigging as a part of the slinging operation which forms the link between the crane and the load.
- Rigging procedures and skills
- Main hazards of rigging
- State Rigging Operation Personal Safety Practices
- PROTECTIVE CLOTHES AND EQUIPMENT
- Safety Rules in Slinging Operations
- Capacity/Safe Working Load (SWL) and all other rigging calculations
- Equipment Inspection
- Signals and Instructions
- Center of Gravity
- Slings
- Sling Angles
- Slinging Techniques
- Rigger’s Capacity Card
- Inspections
- Lubrication and servicing
- Shackles
- Eyebolts
- Hooks
- Identify Basic Hitches
- EXERCISE & Rigging Problems
- Crane operation & Safe slinging
- Crane Types
- MAIN CAUSES OF MOBILE CRANE ACCIDENTS
- Planning Before Start-Up
- Crane Inspections
- Components of the Boom Assembly
- Drum Lagging and Flanges



Delivery Schedule:

Day I

9:20 Welcome, Introduction, Seminar Preview, Learning Outcomes and the Assessment Method

9:30 Hrs

- Introduction
- Responsibilities
- Training

10:00 Hrs

- Understand the basic physics as they relate to mass, gravity, and center of gravity.
- Understand moment of force considerations as they relate to the movement of stationary objects.
- The concept of elasticity of solids.
- What determines the efficiency of mechanical advantages?
- The three classes of levers.
- Efficiency of inclined planes.
- Two types of pulley configurations.
- Calculate the weights of common materials.
- Use of anchor systems, anchor failure considerations, and proper anchor spacing.
- Proper use of swivel hoist, steel angle brackets, and concrete screws.

14:00 Hrs

Understanding Terms and Terminology

- | | |
|---------------------|--|
| ▶ SWL | ▶ Lifting accessories |
| ▶ WLL | ▶ Factors of safety |
| ▶ Lifting equipment | ▶ Centre of gravity or balance of the load |
| ▶ Lifting | ▶ Load security |

Day II

09:30

- Manual Lifting and Handling
- Understanding our Spine and damages
- Ergonomics
- Discussion

10:30 Hrs

- Discussion on Rigging and Lifting Hazards.
- Elements that effect hoisting / lifting operation
- Powerlines – Safe operating Distances
- Factors that reduce the capacity
- Use of Tag Lines

11:30 Hrs

- Center of Gravity – Detailed discussion, understanding
- Center of Gravity – Field calculation
- Exercise – Calculate Center of Gravity
- Classifying Lifts
- Preparation of Lift Plan

14:00 Hrs

- Detailed Discussion on Mobile and Stationary Lifting Equipment's
- Presentations & Videos
- Questions

16:00 Hrs

Discuss in Detail the Safety aspects and safe operating limits of

- Fork Lifts
- Cranes – Overhead Travel Cranes
- Gantry Cranes
- Mobile Cranes
- Tower Cranes



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appliances

14:30 Hrs

- Slings, Chains, Blocks, Hooks etc. - Understanding & Inspection
- Understand the proper use of wire ropes, wire rope fittings, end terminations, and tighteners.
- The use of slings and sling arrangements.
- The use of chains for rigging and lifting.
- Determine the effects of critical angles as they relate to lifting and moving objects.
- Identify and describe the advantages and disadvantages of the different types of cranes.
- Considerations for crane use, and demonstrate basic crane signals for rescue operation

Conclusion

Discussion of latest Lifting & Hoisting
Effective use of high pressure air bags.

Questions and Answers and Feedback to Participants on Achievement of Learning Outcomes

17:30 Concluding Remarks and Final Adjournment

Registration:

Dates of the program: 26-27 April 2019 @Nagpur, Maharashtra

Nonresidential Participation fees: INR 16000/- per delegate (Excluding GST@18%, includes training material hard copies, Tea, Lunch & snack, excluding lodging and Boarding)

Payment: ECS/NEFT/DD in favor of “Centre for Industrial Solutions and Advanced Training” Payable at Nagpur, Maharashtra, India. Account No: 0509102000003353 Bank: IDBI, Wardha- 442001, MS, India; IFSC Code: IBKL0000509; Swift Code IBKLINBBNGP; MICR Code 442259001, GSTN: 27ABBPW5589J1ZV.

Venue: To be informed as per location once received confirmation of participation.

For Registration,

1. We do prefer On Line Registration through our web www.cisat.co.in.
2. In other case do send confirmation via email to Vikas 00-91-7709012815; vikas@cisat.co.in; cisat.nagpur@gmail.com; or you can do call Vikas +91-7709012815 or 8669546332

Web: www.cisat.co.in; Email: vikas@cisat.co.in; Contact: +91- 7709012815 (Branches: Thane/Pune/Nagpur/Bhilai/Wardha)

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TERMS & CONDITIONS FOR Workshop:

1. All training courses will require a minimum of 6 participants.
2. In the event of cancellation of a course, we will endeavor to inform all candidates a week before the course is due to take place. In such case all course fees paid will be reimbursed in full or the payment will be transferred in full to another course.
3. CISAT shall not accept liability for any consequential loss and shall have no liability to reimburse any other costs that may have been incurred, including transport costs, accommodation etc.
4. Special arrangements can be made for group bookings.
5. Certificate of participation will be issued when payment has been received in full.

Contact for any In-house Training Program at your plant or location.

- HR Solutions and complete professional Training (HR/Soft Skill/Technical-Electrical/Mechanical/Automation /Process/Certification/Out Bound/Safety/Manufacturing excellence- TPM, TQM, 5S, Six Sigma etc)
- Course Content and presentations development – Customized to your company requirement.
- E-learning Development, Virtual Learning
- Online LMS or HR Automation system- Automated
- Employee Certification, skill or competency mapping and testing, Mentoring etc. From workers to Management level employees