KONECRANES

Overhead Crane,
Safety & Maintenance
Training







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Dates and Prices are subject to change. Visit www.cranetrainingu.com for updates.

Training Requirements and Recommendations

OPERATOR TRAINING

ASME B30.2 - 2022 clearly states that Operator Training is required. To sum up OSHA 1910.179 and ASME B30.2-2022 requirements cranes shall be operated only by personnel who:

- Have been trained and evaluated by a competent instructor.
- Are able to explain and apply all recommended safety and operating procedures.
- Know proper hand signals.
- Are able to correctly make precision lifts.
- Some states/provinces have more specific requirements
- (Michigan OSHA Part 18 requires all operators be licensed by the employer.) Further it is the responsibility of Management to issue a certificate or formal record that verifies that the person has been trained and has passed the examinations required.

THE KONECRANES TRAINING INSTITUTE'S RECOMMENDATIONS FOR CRANE OPERATORS:

- OH Crane Operator Training Course No. 700 or 808A or C
- Hands-on Experience
- Practical Evaluation on the crane the student will be using.
- Be provided refresher training with evaluation every two years.

CRANE INSPECTION PERSONNEL

Crane inspection personnel are required to be designated by the employer. Some States/Provinces have more stringent requirements. (Calif.) The Konecranes Training Institute's recommendation is that Crane Inspectors have:

- Hands-on experience working with cranes.
- Crane Inspection Course No. 818 or 819 with written evaluation.
- Pass a practical Evaluation.
- Have the ability and means to present findings.
- Refresher training with evaluation every two years (Course No. 820).

CRANE MAINTENANCE TRAINING

The new ASME B30.2-2022 specification clearly spells out that training for maintenance personnel including Electrical, Mechanical and Structural is required. To sum up OSHA 1910.179 and ASME B30.2-2022 training requirements, personnel must be competent and trained to perform maintenance on your cranes and hoists.

• Hands-on experience working with cranes.

The Konecranes Training Institute's recommendation:

Maintenance personnel as a minimum receive training, which includes:

- Trade skills Basic Electricity or Basic Mechanical
- Overhead Crane Maintenance Courses
- Overhead Crane Mechanical Maintenance Course (Course No. 809 or 811) for Mechanics.
- Training on the specific crane control system.
- Refresher and advanced skill training
- If maintenance personnel are going to need to operate cranes -Operator training should be provided.

General Information

Training is applicable to all brands of cranes and hoists. For on-site training, students should be familiar with the bulletin number(s) and equipment serial numbers which apply to their facility's particular crane control system. These numbers help Institute instructors locate specific schematics for a customer's crane.

Students are asked to bring their crane drawings or manuals to class, if they have any specific questions to address.

PRE-REQUISITES

Participants must have knowledge of either basic mechanical or electrical terminology. Practical experience with equipment maintenance and diagnostic equipment is also recommended.

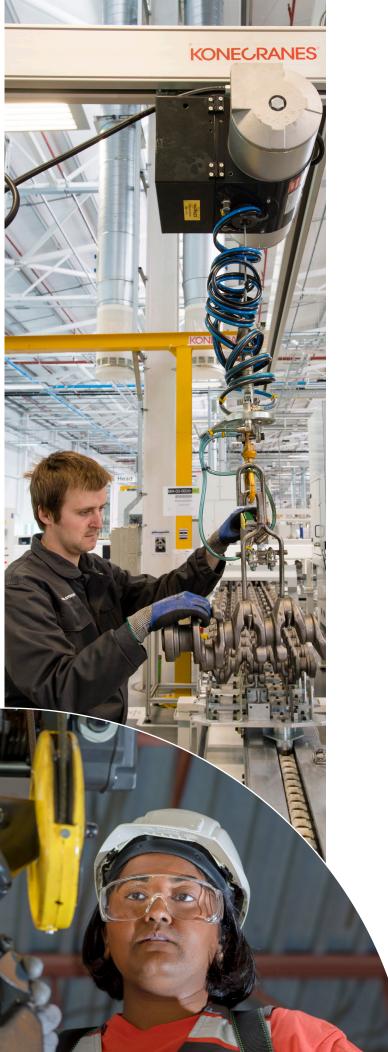
TRAINING RECORDS

Employers should keep written records on all training provided to employees. If you need a transcript of past courses for your employees, please contact the Konecranes Training Institute.

PARTIAL LIST OF REGULATORY **ORGANIZATIONS**

- OSHA 1910.179
- ASME B30.2 and others
- State/Provincial Regulations
- MSHA Mining
- US Coast Guard/Maritime
- Canadian/Provincial Regulations
- CMAA
- HMI
- NCCCO
- NEC
- OSHA 1926.1400





On-Site Courses

CALL FOR PRICING

Each year hundreds of company locations take advantage of onsite courses at their facilities. This cost effective approach saves your personnel the expense of traveling to one of our seminars.

We can offer our standard courses or customize a class to meet your specific requirements, student skill levels and schedule. Testing and certification are available including practical exams. Daily start and end times can be adjusted to limit the interruption in your schedule.

Pricing depends on a number of factors. All courses can be offered on-site. Our most popular courses are:

- Mobile Crane Operator
- Overhead Crane Inspection
- Operator Training
- Operator Train-The-Trainer
- Mechanical Maintenance
- Electrical Maintenance
- Bucket Crane Operator
- VFD Controls Smartorque Control

All of our courses can be held at your location. Hands-on training can be included at your site, on your equipment.

To request training for your team, contact your local representative, or contact us at 866.821.4006.

Program Benefits

WETRAIN SIX WAYS

KONECRANES TRAINING INSTITUTE IN MILWAUKEE: Students benefit from access to our 7,500 sq. ft. hands-on lab located in the Milwaukee area.

REGIONAL TRAINING CENTERS: We offer a variety of courses at our Regional Training Centers each year. These centers are located in Houston and Cincinnati, OH.

REGIONAL SEMINARS: Periodically scheduled in cities throughout the US reducing expenses and travel time.

ON-SITE COURSES: Eliminate additional travel expenses and let us do a standard course at your site or customize a course to meet your needs.

ON-LINETRAINING: Self-paced, on-Line courses are available. Our Overhead Crane Inspection Refresher course takes 3 to 5 hours and includes a mid-term and final exam.

WEBINARS:

Receive instructor led training without having to travel. This online option offers the same quality training as an on-site course, in real-time.

- Our training is up-to-date on all the latest federal and state regulations. Your personnel will learn how to meet and exceed OSHA and ASME B30 requirements.
- Our training uses proven best practices for crane operation and maintenance.
- We offer over 30 different courses in crane inspection, electrical and mechanical maintenance and operator training.
- We utilize professionally prepared copyrighted course workbooks, pamphlets and materials. Your course workbook will continue to serve as a valuable reference.
- Our courses utilize the latest instruction methods.
- Over 98% of Konecranes Training Institute students surveyed indicate that our training met or exceeded expectations.
- Your personnel will be trained using the same courses and expert instructors that we use to train our own crane technicians.
- Students will benefit from networking with other industry professionals.
- We offer testing and hands-on training.
- Continuing support is included. Simply call us if you have any questions after the class.

HANDS-ON TRAINING

Hands-On students should bring their own PPE to use during the class (items such as: steel toe shoes, hard hats and safety glasses). For information about what PPE is needed, contact the Konecranes Training Institute.

HANDS-ON TRAINING LAB

One of the best features of coming to our training courses in the Milwaukee area is our new 7,500 square foot teaching lab. This space has been designed with our students in mind. Hands-on training reinforces our classroom discussions and allows the direct application of what was just reviewed.

VFD Crane Control with hoist tower along with Suitcase Controllers

- P&H Static Stepless Crane Control System for both Hoists and Traverse applications.
- Five Step control wound rotor control systems with hoist tower.
- Radio Controls
- 5 ton CXT crane with smart features
- Brakes Area with Mechanical Load Brake, Electric Load Brake, Caliper Disc Brake, SBE Shoe Brake, DC Rectified Disc Brakes. & Brake Wheels
- Rigging Area with multiple rigging equipment.
 - Rigging Angle simulator for viewing forces depending on the angle.
 - Examples of bad rigging equipment
- Mechanical Maintenance Area:
 - Wheels
 - Runway Rail wear samples
 - Gear boxes, gears & pinions
 - Sheaves & Wire Rope
 - Hooks and hook latches including our hook latch trigger.
- Electrical Maintenance Area:
 - Contactor Controls
 - Limit Switches
 - Festoon Systems & trolleys
 - Conductor Bar Systems & Collectors
 - Reactors
 - Pendant Systems
- Wire Rope and Chain Hoists:
 - Konecranes CXT Hoists
 - Stahl Brand Wire Rope Hoist
 - Shepard Niles Brand Hoist
 - Morris UK Hoist
 - P&H Hevi-Lift Hoists
 - Konecranes CLX Chain Hoists
 - CM Chain Hoist
 - Konecranes Air Balancer Hoist
- Overhead Crane Models

How to Register

FIVE EASY WAYS TO REGISTER FOR INSTITUTE COURSES:

1. ONLINE: cranetrainingu.com

2. PHONE: 866.821.4006

3. E-MAIL: institute@konecranes.com

4. LOCAL: Contact your local Konecranes branch

MAIL to: Konecranes Training Institute, 5306 S. Emmer Drive, New Berlin, WI 53151

For technical questions, or for the location of the nearest regional office, call the Konecranes Training Institute at 866.821.4006.



WHEN TO REGISTER

Register anytime! However, it is strongly recommended that you register two months prior to the class start date to ensure enrollment on the preferred date.

Early-bird specials: Look for email communications to take advantage of special rates for early registration.

Class size is limited to ensure the best learning experience. If there is sufficient demand, extra course sessions may be arranged. All registrations are subject to confirmation. Confirmation letters containing logistical information will be mailed, faxed or e-mailed to enrolled participants before the class start date.

COURSE FEES

Milwaukee and Regional course fees include all course materials and lunches. All regularly scheduled course tuition prices include all course materials including student workbook and lunches. For on-site courses, contact us for pricing information. Pricing for on-site courses is based on location, number of students, course description and the length of the course.

PAYMENT

All payments should be made and sent to: **Konecranes, Inc., PO Box 641807, Pittsburgh, PA 15264–1807**

Konecranes Inc. reserves the right to screen out competing vendors from any Institute classes.

CANCELLATION POLICY

Hopefully you won't need to cancel, but if you do, please do so in writing at least one week prior to the course for a full refund. Or, if you'd like, apply your fee to a future class. There is \$225 charge on late cancellations and no refunds are made on uncanceled registrations.

The Konecranes Training Institute reserves the right to cancel any scheduled course. Fees will be refunded or applied to a future course.

Cancellations or rescheduling occurring less than 25 days prior to the course start date are subject to a charge of 25% of the total training cost plus airfare charges. Cancellations occurring less than seven days from start of on-site course are subject to 80% of the training cost.

See our On-Line Store at cranetrainingu.com which has OSHA, ASME B30 and CMAA Specifications available in a convenient bundle!







KONECRANES

Our customer portal, your KONECRANES.com, gives you quick and easy access to your crane maintenance information. Usage data from TRUCONNECT and maintenance data and asset details from MAINMAN are linked, giving you a transparent view of events and activities over any selected time interval.

CRANE OPERATOR OVERHEAD CRANE OPERATOR

1DAY | \$295/Person (Seminar) 1DAY | \$2895 10 Person Max (On-site)



DO YOUR OPERATORS KNOW:

- Emergency Stop Signals?
- How much weight they can safely lift with each crane in your plant?
- Shut down procedures?
- How to control load swing?

GENERAL DESCRIPTION

This course is geared for the crane operator and the supervisory personnel responsible for the daily operation and safe performance of cranes. The course covers major crane components, safe operating practices, daily checklists, communications, and operator inspections per OSHA, documentation requirements, and hands on demonstrations. Each participant will have the opportunity to perform an actual preoperation inspection that is required by OSHA.

COURSE OUTLINE

- What is an Overhead Crane?
- Crane Operator Qualifications
- Know the cranes you operate
- Practical instruction at a crane; Conducting a daily operator inspection
- Safe and productive lifting techniques
- Safety The Do's and Don'ts of Hoisting
- Crane Operating Hand Signals ANSI Standards
- OSHA Safety requirements on handling loads 1910.179
- Final Review

- Identify and explain the function of all major crane components and assemblies
- Define the minimum qualifications and requirements of a crane operator
- Perform and document the daily crane inspection procedure required by OSHA
- Understand the four rules of safe and proficient crane operation
- Perform precise spotting of loads and make precision lifts
- Become familiar with the proper techniques to minimize load swing
- Explain and practice all recommended hand signals
- Understand the basic rigging procedures to attach a load to the hook
- Understand the requirements of crane operators per OSHA 1910.179







CRANE OPERATOR

OVERHEAD CRANE OPERATOR & RIGGING

#808A FLOOR CRANE OPERATOR & RIGGING TRAINING | \$1090 #808C CAB OPERATOR TRAINING | ON-SITE PER REQUEST





DO YOUR OPERATORS KNOW:

- Emergency stop signals?
- How much weight they can safely lift with each crane in your plant?
- Emergency shutdown procedures for your cranes?
- How to perform OSHA required pre-operational inspections?
- Can you provide documentation showing the training program you provided to your operators?
- Do you have a refresher training program for your operators?
- Poorly trained operators could cause serious injury to your plant personnel, substantial damage to your equipment or the loads they carry. Your operators are required by OSHA to be qualified and trained to operate this equipment.

GENERAL DESCRIPTION

These courses are designed as a classroom and hands-on training program. We offer several levels of training as seen in the chart below. These courses cover all the OSHA/ASME requirements for overhead crane operation including the reasons behind the requirements. They begin with the fundamentals such as identification of major crane components and focuses on the safe and proper operation of the crane. Course lengths will vary depending on the specific type of tailoring to meet specific operations desired by the customer. Seasoned and novice operators alike will benefit from information concerning basic crane construction, basic rigging, crane controls, controlling load swing, and preoperational inspections.

COURSE OUTLINE

- Major crane components
- Safety devices
- Recommended operating procedures
- Communications
- Safe operating practices
- Hands-on training and demonstrations

- Identify all major crane components
- Explain the function of major components
- Explain and use recommended hand signals
- Explain and apply all recommended safety procedures
- Perform all recommended operating procedures
- Correctly make precision lifts
- Understand crane control operations (AC or DC)

CRANE OPERATOR

OVERHEAD CRANE OPERATOR & RIGGING TRAIN-THE-TRAINER

#808T 3 DAYS | \$2,290

MAXIMUM CLASS SIZE: 10





Do you have so many operators within your facility that having an outside contractor come in to conduct all the operator training would not be cost effective? Using an experienced operator to conduct training is a common practice in industry. Will that individual pass on any bad habits in the process? This course will give the potential trainers not only the requisite information but also instructional skills for presenting information before groups of people.

GENERAL DESCRIPTION

This course will use either the Cab and Floor Crane Operator Course #808 or the Floor Crane Operator Course #808A asdesired. These courses cover all the OSHA/ASME requirements for overhead crane operation including the reasons behind the requirements. They begin with the fundamentals such as identification of major crane components and focuses on the safe and proper operation of the crane.

COURSE OUTLINE

- Major crane components
- Safety devices
- Recommended operating procedures
- Communications
- Safe operating practices
- 20-minute training presentation

PRICE FOR ADDITIONAL STUDENT KIT

- 808T-K (12 Copies): \$495.00
- Sold only to Konecranes Trained instructors
- Best value for training your own operators!

INSTRUCTORS KIT

You will receive the following:

- PowerPoint Presentation on USB including:
- -Written safety program for your Safety Manual
- Instructors Manual with Course Outline
- Example Final exam with answer key
- Hand Signal Poster
- One student course kit (see below)

808T-K STUDENT KIT INCLUDED

12 Copies of the following:

- Course workbooks (for students)
- OSHA Overhead & Gantry Crane Regulation
- Rigging Handbook
- Hand Signal Card Pocket Safety Tips
- Order at www.konecranestraining.com
 Safety Recommendations (English & Spanish)

- Identify all major crane components
- Explain the function of major components
- Explain and use recommended hand signals
- Explain and apply all recommended safety procedures
- Perform all recommended operating procedures
- Correctly make precision lifts
- Understand crane control operations
- Hands-on training

CRANE OPERATOR BUCKET/GRAPPLE CRANE OPERATOR

#812 2 DAYS | HANDS-ON RECOMMENDED | CALL FOR PRICING



GENERAL DESCRIPTION

This course includes classroom and handson training for bucket crane operators. Major crane components, protective devices and safe operating procedures are covered in detail.

WHY SHOULD I ATTEND?

Companies who have taken this course in the past have benefitted from decreased downtime, increased operator efficiency, longer wire rope life, longer bucket or grapple life and/ or increased plant safety.

WHO SHOULD ATTEND?

Petroleum coker facilities, waste-to-energy facilities, cement and aggregate plants.

COURSE OUTLINE

- Major crane components
- Safety devices
- Recommended operating procedures
- Communications
- Safe operating practices
- Hands-on training

COURSE OBJECTIVES

• Identify and explain the function of all major crane components

• Explain and apply all hand communication signals

• Explain the function of all safety devices

• Perform recommended operating procedures

• Explain and apply recommended safety precautions

2024 SCHEDULE

This course is offered on-site only. For more information or a quote, please call 866.821.4006.





CRANE OPERATOR SMARTON OPERATOR

#SMOP 2 DAYS | CALL FOR PRICING



GENERAL DESCRIPTION

This course is based upon Konecranes Smart Crane products, including the Smarton (SMT) series, and the CXT series cranes. This course will give students the opportunity to explore the intelligent lifting features, and how to best utilize them in your production environment. This course does expect the student to have a basic crane operator's skill, that will be built upon to gain new knowledge of the intelligent and safe lifting technologies.

WHO SHOULD ATTEND

This course is designed for the operators of Konecranes Smart Crane products. As well as facility and production managers where those cranes can maximize your productivity, or anyone looking to gain further knowledge about Konecranes Smart features.

COURSE OUTLINE

- Sway Control
- Active Sway Control
- Inching
- Microspeed
- Shock Load Prevention
- Slack Rope Prevention

- Snag Prevention
- Hook Centering
- Assisted Load Turning
- Load Floating
- Follow Me
- Hoisting Synchronization

- Extended Speed Range/ Adaptive Speed Range
- Target positioning
- End Positioning
- Working Limits
- Protected Areas



KONECRANES RIGGING SEMINAR

This seminar is designed to give you the level of rigging expertise you need to meet your job requirements.

Our R1#800 Rigging Fundamentals, Inspections & Signals class is perfect for basic rigging training. R2#800A will expand upon the R1 class to give you skills to meet more chllenging situations, such as asymmetrical loads. Then, for those that need to be subject matter experts for your organization, the R3#800T Rigging Fundmentals Train-The-Trainer course encompasses both the R1 and the R2 courses, as well as provides the skills you need to teach the fundamentals of rigging to others at your facility.



R1 RIGGING FUNDAMENTALS **INSPECTIONS & SIGNALS**

#800 1DAY|\$685

#800W* 1 DAY WEBINAR | \$685 | SEE PAGE 25

*The #800W webinar cannot be substituted for the #800 live class when taking the full R1+R2+R3 rigging seminar.

GENERAL DESCRIPTION

This course is designed forpersonnel who rig loads for lifting by cranes and for their supervisors. This course is most similar to a Rigger 1 course and provides the foundation for safe rigging practices. Floor crane operators and others working with overhead cranes will benefit from this comprehensive Rigging Fundamentals course. Our instructor will be able answer your questions and cover important course material and concepts. In addition to a course workbook participants will also receive a 4" x 5" pocket handbook which highlights good and bad rigging practices, sling capacities and how to calculate unknown loads.

COURSE OUTLINE

Rigging Equipment

- Rigging Standards
- Risk Management
- The Basic Rigging Plan
- Rigging Terminology
- Good & Bad Rigging Practices

Slings & Inspections Criteria

- Wire Rope Slings
- Chain Slings
- Nylon Web Slings
- Metal Mesh Slings
- Endless Slings
- Eyebolts
- Shackles
- Hooks

Rigging Fundamentals

- Safe Rigging Practices
- Calculating Load Weight
- Rigging Calculations & Exercises
- Center of Gravity
- Turning Loads

COURSE OBJECTIVES

- Identify safe rigging practices
- Conduct prior to use inspections
- Understand basic rigging principles
- Load weight determination
- Turning loads

R2 ADVANCED RIGGING & RIGGING INSPECTION

#800A 2 DAYS | \$1,250

GENERAL DESCRIPTION

This two-day course is for people with prior rigging experience. This course is most similar to a Rigger 2 course and continues focusing on safe rigging practices, lift planning and advanced rigging skills.

- ASME B30 regulations and OSHA rigging standards.
- Inspection of Rigging Equipment
 - Inspection Records
 - Frequency
- Slings & BTH
 - Wire Rope Slings
 - Metal Mesh Slings
 - Synthetic Rope Slings
 - Synthetic Webbed Slings
 - Below the hook lifting devices
- Rigging Hardware
 - Eyebolts
 - Hoist Rings & Swivel Hoist Rings
 - Turnbuckles
 - Lifting Scales and Dynamometers
 - Snatch blocks
 - Plate Clamps
 - Manual lever operate hoists, and Hand Operated Hoists
 - Cribbing
- Lift plans based on student's actual environments.
- Advanced rigging calculations will include turning loads and center of gravity for irregular loads.
- R1 Rigging Fundamentals is required as a prerequisite to R2 Advanced training session.





R3 RIGGING FUNDAMENTALS **INSPECTIONS & SIGNALS** TRAIN-THE-TRAINER

#800T 3 DAYS | \$1,700

GENERAL DESCRIPTION

Do you have so many operators within your facility that having an outside contractor come in to conduct all the Rigging Training is not cost effective? Using an experienced person to conduct training is a common practice in industry. Will that individual pass on any bad habits in the process?

The Train-the-Trainer course is designed to provide your selected trainers with information required performing the necessary training of your operators and avoiding those bad habits. This two-day course will give the potential trainers not only the requisite information but also basic instructional skills for presenting information before groups of people.

The students will be required on the last day to make a presentation in front of the rest of the class. Time is allotted during the course for the individuals to make their "lesson plans" for use on the last day.



- Rigging Fundamentals
- Advance Rigging Concepts
- Communications & Signaling
- Safe Practices
- Conduct a 10 to 15 minute training presentation

COURSE OBJECTIVES

- Explain and use recommended hand signals
- Explain and apply all recommended safety procedures
- Hands-on training
- Adult Learning and Instructing Concepts
- Presentation Skills





INSTRUCTOR KIT

You Will Receive the Following:

- One kit per student
- Presentation on Memory Stick
- Instructors Manual with Course Outline
- Example Final exam with answer key

STUDENT COURSE KITS INCLUDED

800T-K which includes 12 Copies of the following:

- Course workbooks (for students) (Rigging Fundamentals)
- Rigging Handbook
- Hand Signal Card Pocket Safety Tips

PRICE FOR ADDITIONAL STUDENT KIT

- 800T-K (12 Copies): \$315.00
- Sold only to Konecranes Training Institute Certified instructors
- Order at www.konecranestraining.com

CERTIFICATION PERIOD

The trainers who graduate will be certified for a two-year period. After two years we recommend refresher training.

TRUCONNECT® REMOTE MONITORING





ACCESS CRANE MAINTENANCE DATA WITH yourKONECRANES.COM

yourKONECRANES.com gives you quick and easy access to your crane maintenance information. Usage data from TRUCONNECT and maintenance data and asset details from MAINMAN are linked. giving you a transparent view of events and activities over any selected time interval. Aggregated data can be viewed, analyzed and shared quickly, for a single asset or an entire fleet.

TRUCONNECT Remote Monitoring is also available as a **RETROFIT** for Konecranes CXT® cranes. If you have non-Konecranes equipment, ask your local Service branch about potential upgrades.

INSIGHTS TO HELP OPTIMIZE

YOUR OPERATIONS **AND ACTIVITIES**

TRUCONNECT®

Remote Monitoring uses sensors to gather usage data:

- Running time
- Motor starts
- Work cycles
- Brake condition

OPERATING STATISTICS:

- Work cycles
- Running hours

DATA INSIGHTS:

- Track the design working period (DWP) of selected crane components
- Observe anomalies, patterns and trends to assist you with maintenance decisions

SAFETY ALERTS:

Over-temperatures Attempted overloads **Emergency stops**

Why wait for the next time you log into yourKONECRANES.com when you can be notified about each occurrence shortly after it happens?



Text. or email. alert notifications play a key role in our Lifecycle Care in Real Time approach to crane maintenance.



WEBINAR COURSES

LIVE ONLINE | INSTRUCTOR LED

These webinar courses are held in real time with the same teachers and quality instruction materials as our in-person classes. This format allows customers to reduce costs and the time it takes to travel for training.

RIGGING FUNDAMENTALS

#800W - 1DAY WEBINAR | \$685 Course description on page 14

RIGGING FUNDAMENTALS TRAIN THE TRAINER

#800TW - 2 DAY WEBINAR | \$1,700 Course description on page 15

OVERHEAD CRANE INSPECTIONS

#819W / 819RW - 3 DAY WEBINAR | \$1,980 Course description on page 19

FREQUENT CRANE INSPECTIONS

#819MW - 1 DAY WEBINAR | \$685 Course description on page 22

MECHANICAL MAINTENANCE

#809W - 2 DAY WEBINAR | \$1,500 Course description on page 23

ELECTRICAL MAINTENACE

#807AW - 2 DAY WEBINAR | \$1,500 Course description on page 24

CRANE OPERATOR TRAIN THE TRAINER REFRESHER

#808TRW - 1 DAY WEBINAR | \$1,390

Course description on page 24





Webinar students will receive a course workbook and other handouts via mail prior to the course. Internet and phone access are necessary.



CRANE MANAGEMENT

CRANE REGULATIONS & RISK MANAGMENT

#880 1 DAY | \$685 #880W 1 DAY WEBINAR | \$685

GENERAL DESCRIPTION

This course will give supervisors, plant managers, facility managers and safety managers information on OSHA and ASME B30 requirements for overhead crane operation including requirement reasons. Good management practices are discussed as well as some accident investigations.

COURSE OUTLINE

- Safety & Introductions
- Crane Incident Studies:
 - Review of Steel Mill Crane Safety Survey
 - Safety Triangles & OSHA Incident Report
 - KTI Overhead Crane Incident Study
 - Crane Standards & Training Requirements
- Rigging Safety 5 Biggest Mistakes
- Crane Hand Signals & Communications
- Safety Facility Manager Viewpoint
- Inspection Requirements
- Incident Investigation
- Critical Component Assessments
- Conclusions to Prevent Incidents
- Crane Safety Action Plans

COURSE OBJECTIVES

- Identify applicable federal rules and regulations for material handling.
- Describe proper overhead crane use.
- Determine responsibilities of personnel associated with overhead cranes.
- Describe personnel/equipment liability.
- Identify rejection criteria for equipment
- List required inspections and frequency.
- Near miss and accident investigations.
- Discuss record keeping requirements

"The instructor was very good at his job.
I liked the information on regulations."

JAMES S., TURNER INDUSTRIES



For more information or a quote, please call 866.821.4006.

CRANE INSPECTION OVERHEAD CRANE PERIODIC INSPECTION



#819 3 DAYS | \$1,980

#819R 3 DAYS | \$1,100

#819W 3 DAYS | \$1,980

MAXIMUM CLASS SIZE: 10

GENERAL DESCRIPTION

This popular course covers a wide variety of crane configurations. Participants receive a working knowledge of all pertinent regulatory agency requirements. Attendees may participate in an optional written evaluation following the seminar.

#819R is a refresher for those who have completed course in the past and wish to keep their Inspection Card current.

WHO SHOULD ATTEND

Crane maintenance personnel, electricians, mechanics, millwrights, inspectors, maintenance supervisors, foremen, facilities engineers, or anyone else connected with your maintenance or safety program.

COURSE OUTLINE

- Crane types and service classifications
- General inspection requirements
- General crane safety and housekeeping
- Hazards/shutdown conditions
- Runways, wheels, and brakes
- Crane structure and electrical systems
- Drive machinery and hoist equipment

YOU WILL RECEIVE

- Course workbook
- Sheave Gauge
- Inspection Mirror
- OSHA 1910.179 Standards
- Safety Standards Reference Sheet
- Baseball Cap



"The review of OSHA, ASME, CMAA requirements was extremely helpful. Great course. Wonderful, knowledgeable instructor and will highly recommend this course to others."

MICHAEL P., NUCOR STEEL

- Perform inspections in accordance with all pertinent codes and regulations
- Understand and interpret applicable sections of OSHA Title 29 regulations (OSHA 29CFR)
- Have a working knowledge of ANSI/ASME Standard B30
- Recognize and perform required record keeping
- Be able to perform consistent, comprehensive crane inspections

CRANE INSPECTION OVERHEAD CRANE

OVERHEAD CRANE
INSPECTION REFRESHER

#820 1 DAY REFRESHER | \$685

#820SP ONLINE SELF-PACED (6-8 HOURS) | \$685

#820W LIVE WEBINAR | \$685

MAXIMUM CLASS SIZE: 10

GENERAL DESCRIPTION 820 ONE DAY:

attendees whose crane inspection cards are at or near expiration. (crane inspection cards are valid for two years after the date of issue.)
Participants will discuss any regulatory agency requirement changes, record keeping and new or different inspection criteria/techniques. A written evaluation will be administered and those passing will be issued a new card. Attendees must bring course books provided at initial course.

820SP ONLINE:

We recently introduced our On-Line Overhead Crane Inspection Refresher Course. This self-paced program allows students to cover the curriculum at their own pace and provides testing necessary to keep their Inspection Credentials up to date. Start and stop course at your leisure. Saving the cost and logistics of travel – many companies appreciate this option.

For larger groups, please contact KTI for on-site training options.

COURSE OUTLINE

- General inspection requirements
- General crane safety and housekeeping
- Hazards and shutdown conditions

- Perform inspections in accordance with all pertinent codes and regulations
- Understand and interpret applicable sections of OSHA Title 29 regulations
- Working knowledge of ANSI/ASME Standard B30
- Recognize and perform record keeping
- Be able to perform consistent, comprehensive crane inspections





Survey the alignment of——YOUR CRANE RAILS

Konecranes RailQ™ Runway Survey

is an industry-leading rail analysis. It delivers accurate alignment information of your rail and expert recommendations for corrective action. Konecranes RailQ Runway Survey uses a remotely operated robot combined with a visual inspection to provide you with an in-depth view of the alignment and condition of your crane rail. RailQ measurements include span, straightness, elevation and rail-to-rail elevation. RailQ can be performed on virtually any runway including those for overhead cranes, port cranes and woodyard cranes.





CRANE INSPECTION

OVERHEAD FREQUENT CRANE INSPECTION

#819 1DAY|\$685

#819MW LIVE WEBINAR | \$685

MAXIMUM CLASS SIZE: 10



This course encompasses the inspection criteria for all brands of Overhead Cranes and hoists. Maintenance and inspection staff will learn safety requirements and frequent inspection criteria in accordance with OSHA, ANSI/ASME and CMAA codes and regulations.

YOU'LL LEARN HOW TO:

- Reduce costly crane downtime
- Extend crane components life
- Lower overall maintenance costs
- Assure compliance with OSHA and ASME B30 standards

- Perform frequent inspections in accordance with all pertinent codes and regulations
- Understand wire rope inspections and rejection criteria
- Understand and interpret applicable sections of OSHA Title 29 regulations (OSHA 29CFR)
- Have a working knowledge of ANSI/ASME Standard B30.2 and others
- Recognize and perform required record keeping.
- Be able to perform consistent, comprehensive Frequent crane inspections





CRANE MAINTENANCE OVERHEAD CRANE MECHANICAL MAINTENANCE

#811 3 DAYS | HANDS-ON | \$2,450 #809 2 DAYS | ACCELERATED | \$1,500

MAXIMUM CLASS SIZE: 10



GENERAL DESCRIPTION

This popular 2 or 4 day crane maintenance training course is a must for your Maintenance Department's Mechanical staff and provides standardized criteria to evaluate and correct structural, drive machinery and hoist problems on overhead cranes. Participants also learn how to setup comprehensive preventive maintenance programs. Students will work in our hands-on lab on actual crane and hoist components. A plant tour of a crane gearing and parts manufacturing plant is included in the #811 class.

WHO SHOULD ATTEND

Crane maintenance personnel, mechanics, millwrights, inspectors, maintenance supervisors, foremen, facilities engineers, or anyone else connected with your maintenance or safety program.

COURSE OUTLINE

- Introduction, Safety, Crane Terminology and Service Classes
- Crane Bridge Tracking
- Runways and Wheels
- Crane Structural
- Brakes Load, Holding, Hydraulic and Disc
- Bridge and Trolley Drive Machinery
- Hoist Machinery Gearing and Couplings
- Preventative Maintenance
- Appendix Various Shoe Brakes

COURSE OBJECTIVES

- Learn to isolate causes of abnormal tracking
- Determine causes of abnormal component wear
- Learn component replacement criteria
- Learn replacement and adjustment procedures
- Determine needed preventive maintenance items and intervals

"(What I liked most about the seminar was) having an instructor explain situations and components instead of a manual."

-MARK G., HAMPTON NASA STEAM PLANT





CRANE MAINTENANCE OVERHEAD CRANE ELECTRICAL MAINTENANCE

#805 3 DAYS | \$2,290 #807A 2 DAYS | \$1,500



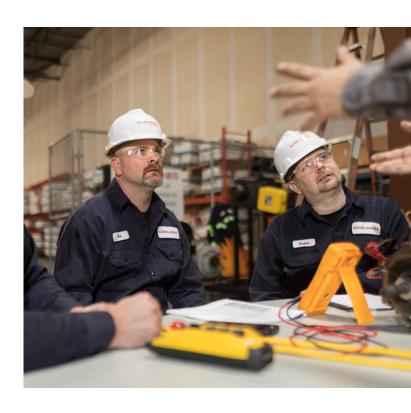
GENERAL DESCRIPTION

This course highlights electrical maintenance procedures for all types of A.C. crane controls including A.C. full magnetic, stepless and adjustable frequency drives and is considered the basic orientation to electrical maintenance.

COURSE OUTLINE

- Overhead Crane Electrical Safety
- Overhead Crane Electrical Regulations
- Electrical Tools
- OHMS Law
- Motors
 - AC Motors
 - Wound Rotor Motors
 - DC Motors
 - Motor Maintenance & Troubleshooting
- Power Distribution
 - Crane Electrical Components
 - Fuses & Circuit Breakers
 - Motor Overload
 - Contactors
 - Mechanical & Electrical Interlocks
 - Transformers & Rectifier
 - Limit Switches
 - Motor Thermistors
 - Resistors
 - Encoders
 - Brakes & Electric Load Brake Magnetorque (TM)
 - Master Controller, Radio Controls & Crane Pendants
 - PLC & Crane Monitoring Equipment
 - Crane Overload Limiter
- Variable Frequency Drives (VFD)
- Basic Speed Control
- Hands-On Student Labs (#805 in Milwaukee)
- Tour of motor manufacturing facility (#805 in Milwaukee)

- Identify the function and operation of single speed, two speed, step type, and adjustable frequency A.C. crane controls
- Analyze power and control circuits
- Identify problematic motor symptoms and correct their causes
- Perform control system inspections, tests and adjustments
- Analyze operating characteristics for troubleshooting control system failures
- Test, adjust and troubleshoot control components
- Recognize how the plugging, overload and travel limit protection circuits operate individually and in combination
- Perform brake electrical inspections, tests, adjustments and trouble shooting
- Perform electrical inspections
- Perform electrical preventive maintenance procedures



CRANE CONTROL KONECRANES VFD CRANE CONTROL

#864 3 DAYS | \$2,290

MAXIMUM CLASS SIZE: 10

GENERAL DESCRIPTION

This state-of-the-art course covers P&H™ Smartorque Control and Drivecon Crane Control for vector drives. This course begins with the fundamentals of adjustable frequency drives, then educates participants on system specific details, such as closed loop hoist applications, open loop hoist applications and scalar drive traverse applications.

COURSE OUTLINE

- Safety, protective features
- Theory of operation
- Squirrel cage motors
- Circuits and component layout
- Controls and operation
- Troubleshoot, Preventive Maintenance and Repair
- Review extensive software diagnostics
- Review extensive program parameters to include manual and autotuning
- Dynamic Braking theory and operation
- Extensive Hands-On Training



- Understand crane and inverter safety considerations
- Learn the fundamentals of adjustable frequency drives
- Learn normal operating characteristics
- Learn drive programming procedures
- Interpret symptoms and learn to use test equipment in order to localize faults



CRANE CONTROL D.C. CRANE CONTROL

#852 3 DAYS | \$2,290

MAXIMUM CLASS SIZE: 10

GENERAL DESCRIPTION

This course assists our customers by gaining the knowledge to keep their DC Crane Control Systems performing at peak levels. This course teaches the different methods of controlling D.C. motors as used on cranes. Block diagrams of various manufacturers' controls are utilized to explain the operation in a crane application. D.C. motor basics and preventive maintenance are also covered in detail. Additionally, the course covers proper preventive maintenance procedures and alignment for D.C. motor controls.

COURSE OUTLINE

- General & Electrical Safety
- Electrical Theory Power Distribution
 - Ohm's Law & Kirchoff's Laws
 - Series and Parallel Circuits
- DC Motors
 - Motor Construction & Operation
 - Series Wound & Shunt Wound Motors
 - Inspection, Testing & Troubleshooting
- Brakes
 - Inspection & Adjustment

• Brake Wheels

• Electrical Schematics & Diagrams

• Limit Switches & Motor control "power" circuits

• Acceleration controls circuits

• System testing and troubleshooting

- Understand D.C. characteristics, diode and SCR rectification
- Identify D.C. motor construction and perform maintenance
- Use system schematics to explain relay logic
- Properly text and adjust the electric control systems
- Troubleshoot the system to the faulty component



IT DOESN'T MATTER WHO MADE YOUR CRANE

When it comes to parts, service and training, it doesn't matter who made your crane. We offer genuine Konecranes spare parts as well as replacement parts for all other makes and models.

With almost a century of experience working on cranes and hoists of all types and makes, we have become a leading overhead crane maintenance supplier. Our service teams are trained to understand the unique requirements of each brand and provide professional service and training in accordance with manufacturers' recommendations and industry best practices.



CRANE CONTROL STATIC STEPLESS SETUP **AND TROUBLESHOOTING**

#841 4.5 DAYS | \$3,350

MAXIMUM CLASS SIZE: 8



GENERAL DESCRIPTION

Static Stepless is a solid state, secondary reactor control system for overhead cranes. The course focuses on practical information for set-up, trouble shooting and component replacement on the control system. Course includes classroom and lab exercises to reinforce the lesson plan.

- Understand the functions of all major system components
- Use schematic diagrams to analyze and troubleshoot the electrical system
- Understand the procedures used to test for proper operation
- Explain proper set up and adjustment procedures for the system
- Identify and correct motor problems
- Learn proper use of the test equipment
- Troubleshoot hoist and traverse (bridge & trolley) control systems
- Safety procedures
- Protective features
- A.C. to D.C. rectification
- Wound rotor motors and Magnetorque operation
- Magnetic amplifiers
- Modules and circuits
- Ancillary components
- Functional Tests
- Instrumentation
- Control Module Tests
- Resistance checks
- Voltage checks
- Tour of motor and Magnetorque manufacturing facility







CRANE CONTROL IMPULSE SERIES VFD CONTROLS

#827 3 DAYS | CALL FOR PRICING

BULLETINS 424V & 424S - CONFIRM YOUR CRANE'S BULLETIN NUMBERS PRIOR TO REGISTRATION

MAXIMUM CLASS SIZE: 10

GENERAL DESCRIPTION

The Smartorque control is a state-of-the-art scaler and flux vector drive for overhead cranes. This course begins with the fundamentals of adjustable frequency drives, then educates participants on the system specific details. This course is a combination of classroom and laboratory work.

COURSE OUTLINE

- Theory of operation
- Safety, protective features
- Squirrel cage motors
- Circuits and component layout
- Controls and operation
- Troubleshooting and repair
- Review extensive software diagnostics
- Review extensive program parameters



COURSE OBJECTIVES

- Understand crane and inverter safety considerations
- Learn the fundamentals of adjustable frequency drives
- Learn normal operating characteristics
- Learn drive programming procedures
- Interpret symptoms and learn to use test equipment to localize faults.

2024 SCHEDULE

This course is offered on-site only.
For more information or a quote, please call 866.821.4006.



MOBILE CRANES

MOBILE CRANE OPERATOR **SAFETY & INSPECTION**

#828 3 DAYS #829 2 DAYS



2024 SCHEDULE

This course is offered on-site only. For more information or a quote, please call 866.821.4006.

#828 GENERAL DESCRIPTION

This course is designed for mobile crane operators and covers the skills and knowledge needed to safely operate these cranes. As part of this course, we will cover the responsibilities of the crane operator and the standards and regulations associated with safe operation practices.

YOU WILL RECEIVE

- Load Charts
- Course Workbook
- OSHA Guide Regulations
- Mobile Crane Hand Signal Card
- Basic Rigging Booklet

COURSE OUTLINE

- Lockout tagout procedures and importance
- Block securing
- OSHA and ASME standards
- Load chart and load testing
- Safe Operating Practices
- Lift Planning
- Setting up the crane and cribbing
- Pre-operational inspections
- Basic rigging procedures
- Weather conditions and how it impacts operation
- Emergency response procedures
- Crane shutdown procedures
- Order of Responsibility

#829 GENERAL DESCRIPTION

After completion, students will have an understanding of the requirements for Mobile Crane inspections, importance of inspections, and how to inspect mobile cranes safely. We cover meeting requirements of OSHA and ASME B30.5.

YOU WILL RECEIVE

- Course workbook
- Inspection forms for Mobile Cranes (paper & electronic copies)
- 2 Year Crane Inspection Certification



COURSE OUTLINE

- Inspection types and requirements
- Lockout tagout procedures and importance
- OSHA and ASME stanards
- Safe operating practices
- Inspection of crane components
- Nondestructive testing
- Crane inspector qualifications
- Block securing
- Load chart and load testing
- Inspection tools
- Basic rigging procedures
- Inspection forms and record keeping

Bundle courses #828 & 829 to receive a discounted rate!

MOBILE CRANES

MOBILE CRANE OPERATOR, "TRAIN-THE-TRAINER"

#828T 3 DAYS

MAXIMUM CLASS SIZE: 10



GENERAL DESCRIPTION

The course must be completed after the Mobile Crane Operator course. This course will give experienced operators the ability to be potential trainers and provide the requisite information and instructional skills for presenting to groups. The main focus of this training is to equip your trainers with the skills and knowledge needed to create your own training program. Konecranes supplies you with the base matierials that can be used as is or updated to meet the needs of your organization.

COURSE OUTLINE

- Lockout tagout procedures and importance
- Block securing
- OSHA and ASME standards
- Load chart and load testing
- Safe Operating Practices
- Lift Planning
- Setting up the crane and cribbing
- Crane controls
- Site evaluation
- Power line safety
- Pre inspection and shutdown procedures

STUDENT COURSE KITS INCLUDED

Includes 12 Copies of the following:

- Course workbooks (for students)
- OSHA Overhead & Gantry Crane Regulation
- Rigging Handbook
- Hand Signal Card Pocket Safety Tips
- Safety Recommendations (English & Spanish)

PRICE FOR ADDITIONAL STUDENT KIT

- 828T (12 Copies): \$495.00
- Sold only to Konecranes Training Institute Certified instructors
- Order at www.konecranestraining.com

YOU WILL RECEIVE

- Operation & Safety instruction practices
- Presentations
- Testing
- Instructor Kit included (PowerPoint, hand signal poster, sample test)
- Student kits can be purchased for additional fee



2024 SCHEDULE

This course is offered on-site only.
For more information or a quote, please call 866.821.4006.

PORTAL CRANE COURSE **PORTAL CRANE OPERATOR TRAINING**

#838 3 DAYS

2024 SCHEDULE

This course is offered on-site only. For more information or a quote, please call 866.821.4006.

GENERAL DESCRIPTION

This course includes classroom and handson training for new, and experienced, portal crane operators. Major crane components, protective devices and safe operating procedures are covered in detail.

COURSE OUTLINE

- Major crane components
- Safety devices
- Recommended operating procedures
- Communications
- Safe operating practices
- Hands-on training
- Practice Emergency shutdown procedures

COURSE OBJECTIVES

- Identify and explain the function of all major crane components
- Explain and apply all hand communication signals
- Explain the function of all safety devices
- Perform recommended operating procedures
- Explain and apply recommended safety precautions
- Discuss emergency shutdown and exit procedures



PORTAL CRANE COURSE **PORTAL CRANE** MECHANICAL MAINTENANCE

#838 3 DAYS

MAXIMUM CLASS SIZE: 10

GENERAL DESCRIPTION

This course provides standardized criteria to evaluate and correct structural, drive machinery and hoist problems on portal cranes. Participants also learn how to set up comprehensive preventive maintenance programs. A plant tour of a crane gearing and parts manufacturing plant is included.

COURSE OBJECTIVES

- Learn to isolate causes of abnormal tracking.
- Determine causes of abnormal component wear.
- Learn component replacement criteria.
- Learn replacement and adjustment procedures.
- Determine needed preventative maintenance items and intervals.

COURSE OUTLINE

Introduction - Safety,

- •Shut down Conditions
- Service classifications & Type of Portal Cranes
- Major Crane Components

Crane Tracking

- Results of Improper Tracking
- Runway Tolerances

Runways and Wheels

- Runway Alignment
- Rail Systems & Rail Welding
- End Stops
- Wheel Features
- Trolley Wheel Tracking
- Wheel Removal & Shimming Wheels
- Equalizing & Truck Pins

Crane Structure

- Girders
- Fixed Leg
- Hinged Leg
- Gantries
- Gantry Equalizer Trucks
- Trolley
- Cab Supports
- Trolley Wheel Replacement & Alignment

Brakes

- Mechanical Load Brakes
- Electrical Load Brakes
- Holding Brakes

Gantry & Trolley Drives Systems

- Gear Boxes
- Gear Wear
- Bearings
- Couplings

Hoist Machinery

- Wire Ropes
- Drums
- Grapples
- Reeving

Preventative Maintenance

- Lubrication Charts
- Preventative Maintenance

2024 SCHEDULE

This course is offered on-site only. For more information or a quote, please call 866.821.4006.

WIRE ROPE SAFETY

During a typical inspection, only the outer wires and strands of the wire rope can be visually inspected. Konecranes $\mathsf{RopeQ^{TM}}\ \mathsf{technology}\ \mathsf{and}\ \mathsf{non-destructive}\ \mathsf{testing}\ \mathsf{methodology}\ \mathsf{analyzes}\ \mathsf{the}\ \mathsf{condition}\ \mathsf{of}\ \mathsf{the}\ \mathsf{internal}\ \mathsf{wires},\ \mathsf{strands}\ \mathsf{and}\ \mathsf{wire}\ \mathsf{rope}\ \mathsf{core}\ \mathsf{that}\ \mathsf{are}\ \mathsf{not}\ \mathsf{typically}\ \mathsf{visible}.$

RopeQ is recommended for any wire rope application and is particularly useful in process cranes in constant use, cranes that are used only occasionally, ropes that are particularly hard to inspect visually and in post-accident inspections.



REGISTRATION FORM

SEMINARS INCLUDE

ALL COURSE MATERIALS, LUNCH AND REFRESHMENTS. SEMINAR HOURS: 8AM - 4PM.

COURSEINFO	RMATION		
COURSE LOCATION:		COURSE DATES:	
STUDENT INFO	RMATION		
NAME:	E-MAIL:	Class #'s:	
NAME:	E-MAIL:	Class #'s:	
NAME:	E-MAIL:	Class #'s:	
NAME:	E-MAIL:	Class #'s:	
NAME:	E-MAIL:	Class #'s:	
COMPANY:		PHONE: CITY: STATE/ZIP:	
REGISTER • INTERNET: www.konecranestraining.com • PHONE: 1.866.821.4006		PAYMENT INFORMATION NAME ON CARD:	
• E-MAIL: institute@konecranes.com • CONTACT your local Konecranes branch or representative		CARD NUMBER:	
 MAIL this form to: Konecranes Training Institute 5306 S. Emmer Drive 		EXP DATE: AMOUNT:	
New Berlin, WI 53151		BILLING ADDRESS:	
KONECRA	ANES	SIGNATURE:	



Contact the Konecranes Training Institute, if using checks, P.O. numbers, or any other form of payment.

Providing training on ALL BRANDS of cranes and hoists including the **KONECRANES** family of brands.













F.T. Crowe & Company







































PHILADELPHIA TRAMRAIL COMPANY

Konecranes Training Institute

5306 S. Emmer Drive New Berlin, WI 53151 P 866.821.4006

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