



INTERNATIONAL SIGN ASSOCIATION

CRANE OPERATOR CERTIFICATION

BY NOVEMBER 10, 2018

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CRANE OPERATOR CERTIFICATION

CHECKLIST

What do you need to do in advance of the Crane Operator Certification rule coming into effect on November 10, 2018?

Training prepares employees to pass the certification requirements

Training isn't required. Passing the certification requirement is, and passing isn't likely without preparation. Training greatly increases the exam passage rate.

Start scheduling training now to spread out training for multiple employees. As the deadline draws nearer, more affected employers will be signing up for the training and the certification exams.

- Determine the number of employees you need to get trained and certified.
- Research the available companies that offer training at [sites near you](#), [by date](#) or [online](#) (select National Commission for the Certification of Crane Operators (NCCCO)).
- Reach out to other sign companies in your area, and see if they have staff that need to get certified as well. See if you can have a trainer come to you to do a group training for a group discount. Your company may see significant savings with a local training if you can avoid paying lodging or overtime for travel.
- Schedule any [Specialty Exams](#) that are required for your employees.
- What if your crane operators fail the certification exams? Schedule the exams with enough time in advance to take them again in case the operators don't pass the first time.

ANSWERS TO YOUR QUESTIONS

You might be wondering “Can I get out of this certification requirement?” The answer is you probably can’t. Here’s what every sign company needs to know about the Occupational Safety and Health Administration (OSHA) crane operator certification requirement.

What is the Crane Operator Certification requirement?

The purpose of the requirement is to improve worker safety by requiring operators to pass OSHA-approved proficiency exams (written and practical) to obtain a “certification.” The rule also requires employers to provide necessary training and evaluation to ensure operator “qualification” to operate the specific equipment used on the job. The operator certification addresses the four main causes of worker accidents: electrocution; being crushed by the equipment; struck by the equipment or a load; and falls. Training prepares operators to recognize the principal hazards associated with crane use. You can read the [full OSHA requirements here](#).

Who in my shop needs to get certified?

Only the crane operator must be certified. The rigger and signal person must be “qualified” for the position, but are not required to be certified. This includes knowledge of the unit’s operating controls, where to locate safety manuals and how to prevent contact with power lines. If a business uses more than one crane operator, they each must be certified.

By when do my operators need to be certified?

The current rule requires certification of crane operators by **November 10, 2018**.

What exams do crane operators need to pass to meet the certification requirement?

The OSHA requirement is simply for crane operators to be “qualified or certified to operate the equipment.” The rule then describes four options to obtain qualification. Most sign companies will be interested in pursuing **Option 1** (“Certification by an accredited crane operator testing organization.”), although **Option 4** (“Licensing by a government entity”) may be relevant for some companies that work only within a single state or municipality.

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Who offers the exams?

Under the provisions of **Option 1**, at least three accredited organizations currently offer certification: the National Commission for the Certification of Crane Operators (NCCCO); the National Center for Construction Education and Research (NCCER); and the Operating Engineers Certification Program (OIECP). Each organization has a slightly different testing procedure and cost structure, though each meets the OSHA requirements.

While any of these certifications will work for sign companies, the NCCCO standard and exam is offered most widely by trainers in locations nationwide. Although NCCER and OIECP testing are on par with NCCCO, ISA's online crane resource often describes and explains the specific details of NCCCO examinations because that testing procedure likely will apply to the largest segment of ISA members.

How will the certification requirement impact my sign business?

Fees: The operator must pass a written exam (the Core Examination plus one or more Specialty Examinations) and the practical exam to prove they understand and are compliant with OSHA's requirements. OSHA requires that companies pay for certification of employees. Current testing fees are around \$200 per person (varying with online or in-person options) for the written exam and \$60 for the practical exam. Retest fees are the same as for first-time testing. For recertification (after 5 years), the written exam is expected to cost around \$175. A complete list of NCCCO fees are published here (<http://nccco.org/nccco/get-cco-certified/cco-exam-fees>). Additional fees may apply for late registrations, rescheduling, returned checks, etc.

Time: The written exam is divided into a Core Examination plus one to four Specialty Examinations. Candidates are allowed 90 minutes to complete the Core Examination and 60 minutes to complete each Specialty Examination. Allow for a half-day window for the practical exam: 15 minutes for the actual exam per candidate, plus additional time for hands-on training and pre-testing inspections. Note: All candidates taking the practical exam at that site may be using the same crane.

Insurance: As certification is designed to reduce injuries, it is possible you can save money on your workers' compensation insurance. Contact your insurance provider to find out specifically how this may affect your premiums.

Contractual requirements: As the deadline approaches, verified certification may be required by clients, property owners or as part of the municipal permitting process.

BY NOVEMBER 10, 2018

What if my crane operator(s) don't take training?

Passing the certification isn't likely without preparation. Taking a prep course (usually lasting 3-4 days) immediately before sitting for the exams greatly increases the passage rate. Hundreds of training providers offer 2-4 day prep courses, followed by the NCCCO exam. While more time and cost intensive up front, training may ensure a better and faster certification.

NCCCO has a small listing of online/internet training providers (<http://nccco.org/nccco/training-resources/training-providers/online-training>). They provide up to 12-16 hours of self-directed training, ranging in cost from approximately \$150 to \$600. In contrast to the small number of online training providers, NCCCO has a listing of hundreds of training centers for classroom training.

Note: If you fail the certification exams, you do not have an option to retake them immediately. NCCCO requires advance notice of at least four (4) days before sitting for the written exam with a \$50 late fee for registration within two weeks of the exam date. Exam results are mailed to candidates approximately 12 business days after the examination administration or 72 hours for computer-based exam locations.

What if my crane operator(s) don't get certified?

In August 2016, OSHA fines increased dramatically. The maximum penalty for a serious violation increased to \$12,471. The ceiling for willful and repeat violations also rose to \$124,709. ISA recommends member companies obtain certification and comply with the OSHA requirements so your business will not lose time waiting for its certification, potentially delaying client installations.

Why should I get certification now?

Planning ahead will enable your business to get the certifications needed at the lowest cost and with the smallest disruption to the staff and workflow. Certification, when done correctly, has been shown to reduce accidents, save lives and reduce injuries. The certification provides employers with a sound basis on which to base their assessment of crane operator competency. All crane operators must be certified by November 10, 2018.

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The deadline was originally set for 2014 then was pushed back twice until 2018. Could this certification requirement be delayed again or revoked?

No.

A separate question is whether this rule could be further delayed or eliminated altogether. In the July 2017 federal Regulatory Agenda, the White House and federal agencies terminated 860 rules (469 withdrawals; 391 reclassifications to “long-term” or “inactive”; https://www.reginfo.gov/public/jsp/eAgenda/InactiveRINs_2017_Agenda_Update.pdf). The crane rule was not among those 860 included in the regulatory rollback.

ISA believes that the Administration and OSHA still intend to implement crane operator certification (and the other provisions of 29 CFR Part 1926) as soon as possible.

I only fabricate signs. I don't install signs. Does this affect my business?

The certification exams are designed for operators who are trained and currently work in crane operation. The certification is required for any piece of equipment having a maximum (rated) capacity greater than 2,000 lbs., even if the equipment only moves loads weighing less than 2,000lbs, and for any piece of equipment used to hoist, lower or horizontally move a load. For the sign, graphics and visual communications industry specifically, this is most likely a boom truck, mobile truck crane or articulating crane. Power shovels, excavators and backhoes are specifically excluded. Most service vans, aerial ladders, or other lift platforms do not incorporate cranes with a maximum rated capacity greater than 2,000 lbs and would not be subject to the operator certification provisions of this rule.

Also, sign company fabricators must be aware that this rule requires employers to verify operator certification claims for and lessor cranes.

Can you explain more about this 2,000 lb. capacity exception?

The operator qualification requirement has several exceptions, including derricks, sideboom cranes and equipment with a maximum manufacturer-rated capacity of 2,000 pounds or less. Crane owners must be aware that the exemption is based on the manufacturer-rated capacity of the equipment, even if the crane never is used to carry a 2,000+ pound load. The following pages provide context, excerpting relevant portions from the rule.



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Crane Operator Certification Rule

(29 CFR Part 1926; “Cranes
and Derricks in Construction”)

Important Provisions
Addressing an Exception for
Equipment With Rated Capacity
of 2,000 Pounds or Less

clearance distance to each side of the power line is within the radius of vertical travel of the load.

(4) The load is over a shaft.

(5) The load is over a cofferdam, except where there are no employees in the fall zone of the load.

§ 1926.1427 Operator qualification and certification.

(a) The employer must ensure that, prior to operating any equipment covered under subpart CC, the person is operating the equipment during a training period in accordance with paragraph (f) of this section, or the operator is qualified or certified to operate the equipment in accordance with the following:

(1) When a non-military government entity issues operator licenses for equipment covered under subpart CC, and that government licensing program meets the requirements of paragraphs (e)(2) and (j) of this section, the equipment operator must either be:

(i) Licensed by that government entity for operation of equipment within that entity's jurisdiction; or

(ii) qualified in compliance with paragraph (d) of this section.

(2) Where paragraph (a)(1) of this section is not applicable, the certification or qualification must comply with one of the options in paragraphs (b) through (d) of this section.

(3) **Exceptions:** Operator qualification or certification under this section is not required for operators of derricks (*see* § 1926.1436), sideboom cranes (*see* § 1926.1440), or equipment with a maximum manufacturer-rated hoisting/lifting capacity of 2,000 pounds or less (*see* § 1926.1441).

(4) Whenever operator qualification or certification is required under § 1926.1427, the employer must provide the qualification or certification at no cost to operators who are employed by the employer on November 8, 2010.

(b) *Option (1): Certification by an accredited crane operator testing organization.*

(1) For a testing organization to be considered accredited to certify operators under this subpart, it must:

(i) Be accredited by a nationally recognized accrediting agency based on that agency's determination that industry recognized criteria for written testing materials, practical examinations, test administration, grading, facilities/equipment and personnel have been met.

(ii) Administer written and practical tests that:

(A) Assess the operator applicant regarding, at a minimum, the knowledge

and skills listed in paragraphs (j)(1) and (2) of this section.

(B) Provide different levels of certification based on equipment capacity and type.

(iii) Have procedures for operators to re-apply and be re-tested in the event an operator applicant fails a test or is decertified.

(iv) Have testing procedures for re-certification designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section.

(v) Have its accreditation reviewed by the nationally recognized accrediting agency at least every three years.

(2) An operator will be deemed qualified to operate a particular piece of equipment if the operator is certified under paragraph (b) of this section for that type and capacity of equipment or for higher-capacity equipment of that type. If no accredited testing agency offers certification examinations for a particular type and/or capacity of equipment, an operator will be deemed qualified to operate that equipment if the operator has been certified for the type/capacity that is most similar to that equipment and for which a certification examination is available. The operator's certificate must state the type/capacity of equipment for which the operator is certified.

(3) A certification issued under this option is portable and meets the requirements of paragraph (a)(2) of this section.

(4) A certification issued under this paragraph is valid for 5 years.

(c) *Option (2): Qualification by an audited employer program.* The employer's qualification of its employee must meet the following requirements:

(1) The written and practical tests must be either:

(i) Developed by an accredited crane operator testing organization (*see* paragraph (b) of this section); or

(ii) Approved by an auditor in accordance with the following requirements:

(A) The auditor is certified to evaluate such tests by an accredited crane operator testing organization (*see* paragraph (b) of this section).

(B) The auditor is not an employee of the employer.

(C) The approval must be based on the auditor's determination that the written and practical tests meet nationally recognized test development criteria and are valid and reliable in assessing the operator applicants regarding, at a minimum, the knowledge and skills listed in paragraphs (j)(1) and (2) of this section.

(D) The audit must be conducted in accordance with nationally recognized auditing standards.

(2) *Administration of tests.*

(i) The written and practical tests must be administered under circumstances approved by the auditor as meeting nationally recognized test administration standards.

(ii) The auditor must be certified to evaluate the administration of the written and practical tests by an accredited crane operator testing organization (*see* paragraph (b) of this section).

(iii) The auditor must not be an employee of the employer.

(iv) The audit must be conducted in accordance with nationally recognized auditing standards.

(3) The employer program must be audited within 3 months of the beginning of the program and at least every 3 years thereafter.

(4) The employer program must have testing procedures for re-qualification designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section. The re-qualification procedures must be audited in accordance with paragraphs (c)(1) and (2) of this section.

(5) *Deficiencies.* If the auditor determines that there is a significant deficiency ("deficiency") in the program, the employer must ensure that:

(i) No operator is qualified until the auditor confirms that the deficiency has been corrected.

(ii) The program is audited again within 180 days of the confirmation that the deficiency was corrected.

(iii) The auditor files a documented report of the deficiency to the appropriate Regional Office of the Occupational Safety and Health Administration within 15 days of the auditor's determination that there is a deficiency.

(iv) Records of the audits of the employer's program are maintained by the auditor for three years and are made available by the auditor to the Secretary of Labor or the Secretary's designated representative upon request.

(6) A qualification under this paragraph is:

(i) Not portable. Such a qualification meets the requirements of paragraph (a) of this section only where the operator is employed by (and operating the equipment for) the employer that issued the qualification.

(ii) Valid for 5 years.

(d) *Option (3): Qualification by the U.S. military.*

(1) For purposes of this section, an operator who is an employee of the U.S.

military is considered qualified if he/she has a current operator qualification issued by the U.S. military for operation of the equipment. An employee of the U.S. military is a Federal employee of the Department of Defense or Armed Forces and does not include employees of private contractors.

(2) A qualification under this paragraph is:

(i) Not portable. Such a qualification meets the requirements of paragraph (a) of this section only where the operator is employed by (and operating the equipment for) the employer that issued the qualification.

(ii) Valid for the period of time stipulated by the issuing entity.

(e) *Option (4): Licensing by a government entity.*

(1) For purposes of this section, a government licensing department/office that issues operator licenses for operating equipment covered by this standard is considered a government accredited crane operator testing organization if the criteria in paragraph (e)(2) of this section are met.

(2) *Licensing criteria.*

(i) The requirements for obtaining the license include an assessment, by written and practical tests, of the operator applicant regarding, at a minimum, the knowledge and skills listed in paragraphs (j)(1) and (2) of this section.

(ii) The testing meets industry recognized criteria for written testing materials, practical examinations, test administration, grading, facilities/equipment and personnel.

(iii) The government authority that oversees the licensing department/office, has determined that the requirements in paragraphs (e)(2)(i) and (ii) of this section have been met.

(iv) The licensing department/office has testing procedures for re-licensing designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section.

(3) A license issued by a government accredited crane operator testing organization that meets the requirements of this option:

(i) Meets the operator qualification requirements of this section for operation of equipment only within the jurisdiction of the government entity.

(ii) Is valid for the period of time stipulated by the licensing department/office, but no longer than 5 years.

(f) *Pre-qualification/certification training period.* An employee who is not qualified or certified under this section is permitted to operate equipment only as an operator-in-training and only

where the requirements of this paragraph are met.

(1) The employer must provide each operator-in-training with sufficient training prior to operating the equipment to enable the operator-in-training to operate the equipment safely under limitations established by this section (including continuous monitoring) and any additional limitations established by the employer.

(2) The tasks performed by the operator-in-training while operating the equipment must be within the operator-in-training's ability.

(3) *Trainer.* While operating the equipment, the operator-in-training must be continuously monitored by an individual ("operator's trainer") who meets all of the following requirements:

(i) The operator's trainer is an employee or agent of the operator-in-training's employer.

(ii) The operator's trainer is either a certified operator under this section, or has passed the written portion of a certification test under one of the options in paragraphs (b) through (e) of this section, and is familiar with the proper use of the equipment's controls.

(iii) While monitoring the operator-in-training, the operator's trainer performs no tasks that detract from the trainer's ability to monitor the operator-in-training.

(iv) For equipment other than tower cranes: The operator's trainer and the operator-in-training must be in direct line of sight of each other. In addition, they must communicate verbally or by hand signals. For tower cranes: The operator's trainer and the operator-in-training must be in direct communication with each other.

(4) *Continuous monitoring.* The operator-in-training must be monitored by the operator's trainer at all times, except for short breaks where all of the following are met:

(i) The break lasts no longer than 15 minutes and there is no more than one break per hour.

(ii) Immediately prior to the break the operator's trainer informs the operator-in-training of the specific tasks that the operator-in-training is to perform and limitations to which he/she must adhere during the operator trainer's break.

(iii) The specific tasks that the operator-in-training will perform during the operator trainer's break are within the operator-in-training's abilities.

(5) The operator-in-training must not operate the equipment in any of the following circumstances unless the exception stated in paragraph (f)(5)(v) of this section is applicable:

(i) If any part of the equipment, load line or load (including rigging and

lifting accessories), if operated up to the equipment's maximum working radius in the work zone (see § 1926.1408(a)(1)), could get within 20 feet of a power line that is up to 350 kV, or within 50 feet of a power line that is over 350 kV.

(ii) If the equipment is used to hoist personnel.

(iii) In multiple-equipment lifts.

(iv) If the equipment is used over a shaft, cofferdam, or in a tank farm.

(v) In multiple-lift rigging operations, except where the operator's trainer determines that the operator-in-training skills are sufficient for this high-skill work.

(g) Under this section, a testing entity is permitted to provide training as well as testing services as long as the criteria of the applicable accrediting agency (in the option selected) for an organization providing both services are met.

(h) *Language and Literacy Requirements.*

(1) Tests under this section may be administered verbally, with answers given verbally, where the operator candidate:

(i) Passes a written demonstration of literacy relevant to the work.

(ii) Demonstrates the ability to use the type of written manufacturer procedures applicable to the class/type of equipment for which the candidate is seeking certification.

(2) Tests under this section may be administered in any language the operator candidate understands, and the operator's certificate must note the language in which the test was given. The operator is qualified under paragraph (b)(2) of this section to operate equipment that is furnished with materials required by this subpart that are written in the language of the certification. The operator may only operate equipment furnished with such materials.

(i) *[Reserved.]*

(j) *Certification criteria.* Qualifications and certifications must be based, at a minimum, on the following:

(1) A determination through a written test that:

(i) The individual knows the information necessary for safe operation of the specific type of equipment the individual will operate, including all of the following:

(A) The controls and operational/performance characteristics.

(B) Use of, and the ability to calculate (manually or with a calculator), load/capacity information on a variety of configurations of the equipment.

(C) Procedures for preventing and responding to power line contact.

(D) Technical knowledge similar to the subject matter criteria listed in

Appendix C of this subpart applicable to the specific type of equipment the individual will operate. Use of the Appendix C criteria meets the requirements of this provision.

(E) Technical knowledge applicable to:

(1) The suitability of the supporting ground and surface to handle expected loads.

(2) Site hazards.

(3) Site access.

(F) This subpart, including applicable incorporated materials.

(ii) The individual is able to read and locate relevant information in the equipment manual and other materials containing information referred to in paragraph (j)(1)(i) of this section.

(2) A determination through a practical test that the individual has the skills necessary for safe operation of the equipment, including the following:

(i) Ability to recognize, from visual and auditory observation, the items listed in § 1926.1412(d) (shift inspection).

(ii) Operational and maneuvering skills.

(iii) Application of load chart information.

(iv) Application of safe shut-down and securing procedures.

(k) *Phase-in*.

(1) The provisions of this section are applicable November 8, 2010, except for paragraphs (a)(2) and (f) which are applicable November 10, 2014.

(2) When § 1926.1427(a)(1) is not applicable, all of the requirements in paragraphs (k)(2)(i) and (ii) of this section apply until November 10, 2014:

(i) The employer must ensure that operators of equipment covered by this standard are competent to operate the equipment safely.

(ii) Where an employee assigned to operate machinery does not have the required knowledge or ability to operate the equipment safely, the employer must train that employee prior to operating the equipment. The employer must ensure that each operator is evaluated to confirm that he/she understands the information provided in the training.

§ 1926.1428 Signal person qualifications.

(a) The employer of the signal person must ensure that each signal person meets the Qualification Requirements (paragraph (c) of this section) prior to giving any signals. This requirement must be met by using either Option (1) or Option (2) of this section.

(1) *Option (1)—Third party qualified evaluator.* The signal person has documentation from a third party qualified evaluator (*see* Qualified

Evaluator (third party), § 1926.1401 for definition) showing that the signal person meets the Qualification Requirements (*see* paragraph (c) of this section).

(2) *Option (2)—Employer's qualified evaluator.* The employer's qualified (*see* Qualified Evaluator (not a third party), § 1926.1401 for definition) evaluator assesses the individual and determines that the individual meets the Qualification Requirements (*see* paragraph (c) of this section) and provides documentation of that determination. An assessment by an employer's qualified evaluator under this option is not portable—other employers are not permitted to use it to meet the requirements of this section.

(3) The employer must make the documentation for whichever option is used available at the site while the signal person is employed by the employer. The documentation must specify each type of signaling (*e.g.* hand signals, radio signals, *etc.*) for which the signal person meets the requirements of paragraph (c) of this section.

(b) If subsequent actions by the signal person indicate that the individual does not meet the Qualification Requirements (*see* paragraph (c) of this section), the employer must not allow the individual to continue working as a signal person until re-training is provided and a re-assessment is made in accordance with paragraph (a) of this section that confirms that the individual meets the Qualification Requirements.

(c) *Qualification Requirements.* Each signal person must:

(1) Know and understand the type of signals used. If hand signals are used, the signal person must know and understand the Standard Method for hand signals.

(2) Be competent in the application of the type of signals used.

(3) Have a basic understanding of equipment operation and limitations, including the crane dynamics involved in swinging and stopping loads and boom deflection from hoisting loads.

(4) Know and understand the relevant requirements of § 1926.1419 through § 1926.1422 and § 1926.1428.

(5) Demonstrate that he/she meets the requirements in paragraphs (c)(1) through (4) of this section through an oral or written test, and through a practical test.

§ 1926.1429 Qualifications of maintenance & repair employees.

(a) Maintenance, inspection and repair personnel are permitted to operate the equipment only where all of the following requirements are met:

(1) The operation is limited to those functions necessary to perform maintenance, inspect the equipment, or verify its performance.

(2) The personnel either:

(i) Operate the equipment under the direct supervision of an operator who meets the requirements of § 1926.1427 (Operator qualification and certification); or

(ii) Are familiar with the operation, limitations, characteristics and hazards associated with the type of equipment.

(b) Maintenance and repair personnel must meet the definition of a qualified person with respect to the equipment and maintenance/repair tasks performed.

§ 1926.1430 Training.

The employer must provide training as follows:

(a) *Overhead powerlines.* The employer must train each employee specified in § 1926.1408(g) and § 1926.1410(m) in the topics listed in § 1926.1408(g).

(b) *Signal persons.* The employer must train each employee who will be assigned to work as a signal persons who does not meet the requirements of § 1926.1428(c) in the areas addressed in that paragraph.

(c) *Operators.*

(1) *Operators-in-Training for equipment where certification or qualification is required by this subpart.* The employer must train each operator-in-training in the areas addressed in § 1926.1427(j). The employer must provide re-training if the operator-in-training does not pass a qualification or certification test.

(2) *Transitional Period.* During the four-year phase-in period for operator certification or qualification, as provided in § 1926.1427(k), employers must train each operator who has not yet been certified or qualified in the areas addressed in § 1926.1427(j).

(3) *Operators excepted from the requirements of § 1926.1427.* The employer must train each operator excepted under § 1926.1427(a) from the requirements of § 1926.1427 on the safe operation of the equipment the operator will be using.

(4) The employer must train each operator of the equipment covered by this subpart in the following practices:

(i) On friction equipment, whenever moving a boom off a support, first raise the boom a short distance (sufficient to take the load of the boom) to determine if the boom hoist brake needs to be adjusted. On other types of equipment with a boom, the same practice is applicable, except that typically there is no means of adjusting the brake; if the

Option (2) or Option (4) of paragraph (n)(5) of this section.

(7) The barge, pontoons, vessel or other means of flotation used:

(i) Are structurally sufficient to withstand the static and dynamic loads of the crane/derrick when operating at the crane/derrick's maximum rated capacity with all anticipated deck loads and ballasted compartments.

(ii) Have a subdivided hull with one or more longitudinal watertight bulkheads for reducing the free surface effect.

(iii) Have access to void compartments to allow for inspection and pumping.

§ 1926.1438 Overhead & gantry cranes.

(a) *Permanently installed overhead and gantry cranes.* The requirements of § 1910.179, except for § 1910.179(b)(1), and not the requirements of this subpart CC, apply to the following equipment when used in construction and permanently installed in a facility: overhead and gantry cranes, including semigantry, cantilever gantry, wall cranes, storage bridge cranes, and others having the same fundamental characteristics.

(b) *Overhead and gantry cranes that are not permanently installed in a facility.*

(1) This paragraph applies to the following equipment when used in construction and not permanently installed in a facility: Overhead and gantry cranes, overhead/bridge cranes, semigantry, cantilever gantry, wall cranes, storage bridge cranes, launching gantry cranes, and similar equipment having the same fundamental characteristics, irrespective of whether it travels on tracks, wheels, or other means.

(2) The following requirements apply to equipment identified in paragraph (b)(1) of this section:

(i) Sections 1926.1400 through 1926.1414; §§ 1926.1417 through 1926.1425; § 1926.1426(d), §§ 1926.1427 through 1926.1434; § 1926.1437, § 1926.1439, and § 1926.1441.

(ii) The following portions of § 1910.179:

(A) Paragraphs (b)(5),(6),(7); (e)(1),(3),(5),(6); (f)(1),(4); (g); (h)(1),(3); (k); and (n) of § 1910.179.

(B) The definitions in § 1910.179(a) except for "hoist" and "load." For those words, the definitions in § 1926.1401 apply.

(C) Section 1910.179(b)(2), but only where the equipment identified in paragraph (b)(1) of this section (§ 1926.1438) was manufactured before September 19, 2001.

(iii) For equipment manufactured on or after September 19, 2001, the

following sections of ASME B30.2–2005 (incorporated by reference, *see* § 1926.6) apply: 2–1.3.1; 2–1.3.2; 2–1.4.1; 2–1.6; 2–1.7.2; 2–1.8.2; 2–1.9.1; 2–1.9.2; 2–1.11; 2–1.12.2; 2–1.13.7; 2–1.14.2; 2–1.14.3; 2–1.14.5; 2–1.15.; 2–2.2.2; 2–3.2.1.1. In addition, 2–3.5 applies, except in 2–3.5.1(b), "29 CFR 1910.147" is substituted for "ANSI Z244.1."

§ 1926.1439 Dedicated pile drivers.

(a) The provisions of subpart CC apply to dedicated pile drivers, except as specified in this section.

(b) Section 1926.1416(d)(3) (Anti two-blocking device) does not apply.

(c) Section 1926.1416(e)(4) (Load weighing and similar devices) applies only to dedicated pile drivers manufactured after November 8, 2011.

(d) In § 1926.1433, only §§ 1926.1433(d) and (e) apply to dedicated pile drivers.

§ 1926.1440 Sideboom cranes.

(a) The provisions of this standard apply, except § 1926.1402 (Ground conditions), § 1926.1415 (Safety devices), § 1926.1416 (Operational aids), and § 1926.1427 (Operator qualification and certification).

(b) Section 1926.1426 (Free fall and controlled load lowering) applies, except § 1926.1426(a)(2)(i). Sideboom cranes in which the boom is designed to free fall (live boom) are permitted only if manufactured prior to November 8, 2010.

(c) Sideboom cranes mounted on wheel or crawler tractors must meet all of the following requirements of ASME B30.14–2004 (incorporated by reference, *see* § 1926.6):

(1) Section 14–1.1 ("Load Ratings").

(2) Section 14–1.3 ("Side Boom Tractor Travel").

(3) Section 14–1.5 ("Ropes and Reeling Accessories").

(4) Section 14–1.7.1 ("Booms").

(5) Section 14–1.7.2 ("General Requirements—Exhaust Gases").

(6) Section 14–1.7.3 ("General Requirements—Stabilizers (Wheel-Type Side Boom Tractors)").

(7) Section 14–1.7.4 ("General Requirements—Welded Construction").

(8) Section 14–1.7.6 ("General Requirements—Clutch and Brake Protection").

(9) Section 14–2.2.2 ("Testing—Rated Load Test"), except that it applies only to equipment that has been altered or modified.

(10) In section 14–3.1.2 ("Operator Qualifications"), paragraph (a), except the phrase "When required by law."

(11) In section 14–3.1.3 ("Operating Practices"), paragraphs (e), (f)(1)—(f)(4), (f)(6), (f)(7), (h), and (i).

(12) In section 14–3.2.3 ("Moving the Load"), paragraphs (j), (l), and (m).

§ 1926.1441 Equipment with a rated hoisting/lifting capacity of 2,000 pounds or less.

The following paragraphs of this section specify requirements for employers using equipment with a maximum rated hoisting/lifting capacity of 2,000 pounds or less.

(a) The employer using this equipment must comply with the following provisions of this subpart: § 1926.1400 (Scope); § 1926.1401 (Definitions); § 1926.1402 (Ground conditions); § 1926.1403 (Assembly/disassembly—selection of manufacturer or employer procedures); § 1926.1406 (Assembly/disassembly—employer procedures); §§ 1926.1407 through 1926.1411 (Power line safety); § 1926.1412(c) (*Post-assembly*); §§ 1926.1413 through 1926.1414 (Wire rope); § 1926.1418 (Authority to stop operation); §§ 1926.1419 through 1926.1422 (Signals); § 1926.1423 (Fall protection); § 1926.1425 (Keeping clear of the load) (except for § 1926.1425(c)(3) (qualified rigger)); § 1926.1426 (Free fall and controlled load lowering); § 1926.1432 (Multiple crane/derrick lifts—supplemental requirements); § 1926.1434 (Equipment modifications); § 1926.1435 (Tower cranes); § 1926.1436 (Derricks); § 1926.1437 (Floating cranes/derricks and land cranes/derricks on barges); § 1926.1438 (Overhead & gantry cranes).

(b) *Assembly/disassembly.*

(1) In addition to compliance with §§ 1926.1403 (Assembly/disassembly—selection of manufacturer or employer procedures) and 1926.1406 (Assembly/disassembly—employer procedures), the employer must also comply with § 1926.1441(b)(2)–(3).

(2) *Components and configuration.* The employer must ensure that:

(i) The selection of components, and the configuration of the equipment, that affect the capacity or safe operation of the equipment complies with either the:

(A) Manufacturer instructions, recommendations, limitations, and specifications. When these documents and information are unavailable, a registered professional engineer familiar with the type of equipment involved must approve, in writing, the selection and configuration of components; or

(B) Approved modifications that meet the requirements of § 1926.1434 (Equipment modifications).

(ii) *Post-assembly inspection.* Upon completion of assembly, the equipment is inspected to ensure that it is in compliance with paragraph (b)(2)(i) of

this section (see § 1926.1412(c) for post-assembly inspection requirements).

(3) *Manufacturer prohibitions.* The employer must comply with applicable manufacturer prohibitions.

(c) Operation—procedures.

(1) The employer must comply with all manufacturer procedures applicable to the operational functions of the equipment, including its use with attachments.

(2) *Unavailable operation procedures.* The employer must:

(i) When the manufacturer's procedures are unavailable, develop, and ensure compliance with, all procedures necessary for the safe operation of the equipment and attachments.

(ii) Ensure that procedures for the operational controls are developed by a qualified person.

(iii) Ensure that procedures related to the capacity of the equipment are developed and signed by a registered professional engineer familiar with the equipment.

(3) *Accessibility.* The employer must ensure that:

(i) The load chart is available to the operator at the control station;

(ii) Procedures applicable to the operation of the equipment,

recommended operating speeds, special hazard warnings, instructions, and operator's manual are readily available for use by the operator.

(iii) When rated capacities are available at the control station only in electronic form and a failure occurs that makes the rated capacities inaccessible, the operator immediately ceases operations or follows safe shut-down procedures until the rated capacities (in electronic or other form) are available.

(d) Safety devices and operational aids.

(1) The employer must ensure that safety devices and operational aids that are part of the original equipment are maintained in accordance with manufacturer procedures.

(2) *Anti two-blocking.* The employer must ensure that equipment covered by this section manufactured more than one year after November 8, 2010 have either an anti two-block device that meets the requirements of § 1926.1416(d)(3), or is designed so that, in the event of a two-block situation, no damage or load failure will occur (for example, by using a power unit that stalls in response to a two-block situation).

(e) Operator qualifications. The employer must train each operator, prior

to operating the equipment, on the safe operation of the type of equipment the operator will be using.

(f) *Signal person qualifications.* The employer must train each signal person in the proper use of signals applicable to the use of the equipment.

(g) [Reserved.]

(h) *Inspections.* The employer must ensure that equipment is inspected in accordance with manufacturer procedures.

(i) [Reserved.]

(j) *Hoisting personnel.* The employer must ensure that equipment covered by this section is not used to hoist personnel.

(k) *Design.* The employer must ensure that the equipment is designed by a qualified engineer.

§ 1926.1442 Severability.

Should a court of competent jurisdiction hold any provision(s) of subpart CC to be invalid, such action shall not affect any other provision of the subpart.

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Appendix A to Subpart CC of Part 1926—Standard Hand Signals

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