

This information is taken from the OSHA web site. This is not an attempt by Total Tool to interpret the standard; it is for informational purposes only.

The first section is an excerpt for the 1910.179 standard regarding testing. The following pages are OSHA interpretation letters regarding load testing.

OSHA STANDARD ON TESTING

Overhead and gantry cranes. - 1910.179

1910.179(k)

Testing -

1910.179(k)(1)

Operational tests.

1910.179(k)(1)(i)

Prior to initial use all new and altered cranes shall be tested to insure compliance with this section including the following functions:

..1910.179(k)(1)(i)(a)

1910.179(k)(1)(i)(a)

Hoisting and lowering.

1910.179(k)(1)(i)(b)

Trolley travel.

1910.179(k)(1)(i)(c)

Bridge travel.

1910.179(k)(1)(i)(d)

Limit switches, locking and safety devices.

1910.179(k)(1)(ii)

The trip setting of hoist limit switches shall be determined by tests with an empty hook traveling in increasing speeds up to the maximum speed. The actuating mechanism of the limit switch shall be located so that it will trip the switch, under all conditions, in sufficient time to prevent contact of the hook or hook block with any part of the trolley.

1910.179(k)(2)

Rated load test. Test loads shall not be more than 125 percent of the rated load unless otherwise recommended by the manufacturer. The test reports shall be placed on file where readily available to appointed personnel.

OSHA Interpretations

January 3, 1989

Mr. Bransford Pickett
Rigging Engineer
National Steel and Shipbuilding Company
P.O. Box 85278
San Diego, California 92138

Dear Mr. Pickett:

This in response to your letter of December 7, 1988, concerning the "Rated Load Test" for cranes as specified at 29 CFR 1910.179(k)(2).

Overhead and gantry cranes should not be rated in excess of 80 percent of the test load. Therefore, in order to rate a crane to 100 percent of the design intended loading, the test load must be 125 percent of the rated load. The only exception to this requirement would be when a crane manufacturer specifies a different test loading criteria. In that case, the crane manufacturer's procedures shall be adhered to.

If we may be of further assistance, please contact us.

Sincerely,

Thomas J. Shepich, Director
Directorate of Compliance Programs

December 7, 1988

U.S. Department of Labor
Mr. Thomas J. Shepich
Director, Compliance Programs 200 Constitution Ave.
Washington, D.C. 20210

Attn: Mr. Thomas S. Shepich:

Paragraph K2, part 1910.179, Title 29, specifies the upper limit of a Rated Load Test shall not exceed 125% of the rated load unless otherwise recommended by the manufacturer. Please specify what minimum load below 125% of the rated load is permissible in the rated load test, since none is specified in K2, 1910.179, Title 29.

Reference K2, 1910.179, Title 29.

Bransford Pickett
Rigging Engineer

MEMORANDUM FOR: JAMES W. LAKE
REGIONAL ADMINISTRATOR

FROM: JOHN B. MILES, JR., DIRECTOR
DIRECTORATE OF FIELD OPERATIONS

SUBJECT: Interpretation of 1910.179, Overhead and Gantry Cranes

The position of OSHA regarding the application of 29 CFR 1910.179 to monorails, monorail cranes, top running single girder cranes and overhead hoists has not changed since our 1972 interpretation by John J. Klocko. Such equipment is not covered under 1910.179. Prior correspondence reiterating this position are attached for your reference.

Hazardous operational aspects observed by OSHA field staff pertaining to monorails, monorail cranes, top running single girder cranes and overhead hoists, should be regulated under Section 5(a)(1) of the Act. Such enforcement sections should reference applicable portions of the pertinent ANSI standard and conform with guidelines in the FOM. ANSI standards for lifting devices and for which there are no applicable OSHA standard include:

ANSI B30.11 Monorail Systems and Underhung Cranes

ANSI B30.16 Overhead Hoists

ANSI B30.17 Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)

November 2, 1993

Mr. Robert A. McAdoo
Safety Director
Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, North Dakota 56501-0664

Dear Mr. McAdoo:

Thank you for your inquiry of May 5, addressed to Bruce C. Beelman, Area Director for the Occupational Safety and Health Administration (OSHA) in Bismarck, North Dakota requesting information as to whether rated load testing is required for engineer designed I-beams and attachments from which an underhung lifting device trolley is suspended. Your letter was forwarded here for response. Please accept our apology for the delay in responding.

Underhung trolley/lifting devices are excluded in the scope of application in Section 2-0.1 at ANSI 30.2 - 1967, required by 29 CFR 1910.179(b)(2) to meet the design specifications of the overhead and gantry cranes.

Section 5(a)(1) of the Occupational Safety and Health (OSH) Act, however, requires that each employer furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death of serious physical harm to employees.

OSHA considers exposure of employees to the risk of injury due to possible failure of support components of underhung trolley/lifting devices to be a recognized hazard. Rated load testing is one way in which employees may be protected against this hazard. For practical purposes, this means that employees utilizing underhung trolley/lifting devices must conduct "rated load tests" prior to initial use on all new, extensively repaired, and altered underhung trolley/lifting devices in the workplace. These tests are required to verify the loading capacity of the underhung trolley/lifting devices, as installed. The tests must be performed after the device is installed on the supporting structures (including I-beams) and connectors. Independent testing of I-beams and attachments is not required. Test loads must not be more than 125% of the manufacturer's rated load unless otherwise recommended by the manufacturer. The resulting load rating for the hoist must not be more than 80% of the maximum load sustained during the test. These requirements would not be applicable in working situations where employees would never be exposed to potentially falling hoist components, loads or supporting elements.

The above requirements are taken from ANSI/ASME standard B30.17d - 1990, Section 17 - 2.22 Rated Load Test. Although this is not an OSHA standard, and is not incorporated by reference in any OSHA standard, we believe the provisions must be followed even though B30.17d appears to be advisory in nature, utilizing "should" rather than "shall" constructions in its text. OSHA's policy, however, is to allow this particular provision to be understood as mandatory. The general policy allowing this is addressed by the OSHA Field Operations Manual at Chapter IV, A.2.d.(4), which allows the should portions of ANSI standards which are not predecessors to section 6(a) standards to be cited as an OSH Act Section 5(a)(1) violation in the presence of a serious hazard. We believe the potential collapse of an underhung trolley/lifting device is a serious hazard.

Thank you for your interest in occupational safety and health. If we may be of further assistance please contact us.

Sincerely,

Roger A. Clark, Director
Directorate of Compliance Programs

MAR 4 1991

Mr. Thomas W. Hagerty
Mark Crane Service, Inc.
8500 Clinton Road
Cleveland, Ohio 44144

Dear Mr. Hagerty:

This is in response to your letter of January 14, in which you requested clarification of Occupational Safety and Health Administration (OSHA) standard on Overhead and Gantry Cranes, 29 CFR 1910.179.

Your specific questions and our responses are listed below for each of the related sections of the standard, 1910.179:

(b)(1) Does this standard apply to underhung cranes, hoists, and monorails? This standard does not apply to underhung cranes, overhead hoists, or monorails. Underhung cranes and monorails are covered in ANSI B30.11-1980, a National Consensus Standard. Under 1910.179 a hoist is defined as an apparatus which may be a part of an applicable crane, exerting a force for lifting or lowering. Requirements for hoisting equipment can be found in 1910.179(h)(1).

(b)(2) Does existing equipment constructed and installed prior to August 31, 1971 apply to the specification? In addition, do cranes constructed prior to this date and later modernized need to comply? Existing equipment constructed and installed prior to August 31, 1971 is not required to meet this specification. Cranes constructed prior to this date and later modernized are also exempted from this specification; however, such cranes must meet the requirements of 1910.179 (b)(3), Modifications.

(c)(3) Are fire extinguisher required in cabs? Fire extinguisher are not specifically required in cabs, and carbon tetrachloride extinguisher are prohibited. If a fire extinguisher is provided, the employer shall ensure that operators are familiar with the operation and care of the extinguisher.

(d)(2)(iv) Are any clearances required on the footwalks to machinery, electrical controls, etc.? 1910.179 (d)(1)(ii) states: "Where footwalks are located in no case shall less than 48 inches of headroom be provided. Additional requirements for the construction of footwalks can be found in 1910.179 (d)(2)(i), (ii) and (iv).

(g)(1)(iii) Does 240 volts a.c. satisfy the 150 volts a.c. maximum requirement in pendant pushbuttons if the 240 volts a.c., when in a single phase condition at the pendant, is less than this requirement? This section calls for the voltage at the pendant pushbuttons not to exceed 150 volts for a.c. and 300 volts for d.c. If the voltage can be safely reduced so as never to exceed the maximum allowable voltage, then it would be considered acceptable.

(k)(2) Are rated load tests required for new and altered cranes? Yes, rated load tests are required for new and altered cranes.

We hope this helps to clarify these requirements for you. If we may be of further assistance, please do not hesitate to contact us.

Sincerely,

Patricia K. Clark, Director
Directorate of Compliance Programs