ASME HST-2–2023
(Revision of ASME HST-2–2018)

Performance Standard for Hand Chain Manually Operated Chain Hoists

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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FOREWORD

ASME HST-2 is one in a series that provides performance requirements for hoists. Originally published in 1983, ASME HST-2 was developed by the ASME HST Standards Committee, Hoists — Overhead to guide manufactures, purchasers, and users of hand chain manually operated chain hoists.

Standards in the ASME HST series are as follows:

Designator	Title
ASME HST-1	Performance Standard for Electric Chain Hoists
ASME HST-2	Performance Standard for Hand Chain Manually Operated Chain Hoists
ASME HST-3	Performance Standard for Lever Hoists
ASME HST-4	Performance Standard for Overhead Electric Wire Rope Hoists
ASME HST-5	Performance Standard for Air Chain Hoists
ASME HST-6	Performance Standard for Air Wire Rope Hoists

ASME HST-2–2023 contains a Nonmandatory Appendix B that provides guidance to assist both the manufacturer and the end user in configuring a hoist for use in a potentially explosive environment. The requirements of this Standard shall be applied with the requirements of ASME B30.16.

This Standard is available for public review on a continuing basis. This provides an opportunity for additional public review input from industry, academia, regulatory agencies, and the public-at-large.

ASME HST-2–2023 was approved by the American National Standard Institute as an American National Standard on August 18, 2023.

ASME HST COMMITTEE
Hoists — Overhead

(The following is the roster of the committee at the time of approval of this Standard.)

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Revisions and Errata. The committee processes revisions to this Standard on a continuous basis to incorporate changes that appear necessary or desirable as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published in the next edition of the Standard.

In addition, the committee may post errata on the committee web page. Errata become effective on the date posted. Users can register on the committee web page to receive e-mail notifications of posted errata.

This Standard is always open for comment, and the committee welcomes proposals for revisions. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent background information and supporting documentation.

Cases

(a) The most common applications for cases are

(1) to permit early implementation of a revision based on an urgent need

(2) to provide alternative requirements

(3) to allow users to gain experience with alternative or potential additional requirements prior to incorporation directly into the Standard

(4) to permit the use of a new material or process

(b) Users are cautioned that not all jurisdictions or owners automatically accept cases. Cases are not to be considered as approving, recommending, certifying, or endorsing any proprietary or specific design, or as limiting in any way the freedom of manufacturers, constructors, or owners to choose any method of design or any form of construction that conforms to the Standard.

(c) A proposed case shall be written as a question and reply in the same format as existing cases. The proposal shall also include the following information:

(1) a statement of need and background information

(2) the urgency of the case (e.g., the case concerns a project that is underway or imminent)

(3) the Standard and the paragraph, figure, or table number(s)

(4) the edition(s) of the Standard to which the proposed case applies

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ASME HST-2–2023
SUMMARY OF CHANGES

Following approval by the ASME HST Committee and ASME, and after public review, ASME HST-2–2023 was approved by the American National Standards Institute on August 18, 2023.

ASME HST-2–2023 includes the following changes identified by a margin note, **(23)**.

Page	*Location*	*Change*
1	Section 2-0.1	Subparagraph (c)(7) added
1	Section 2-0.2	In-text Notes under *chain*, *hand* and *chain, load* revised
4	Section 2-0.3	Updated
4	Section 2-0.4	Revised
11	Form 2-1.13-1	Revised
12	A-1.2	In-text reference citation updated
12	A-1.4	Updated
13	A-2.2	Revised
14	Table A-2.3.3-1	First row, last column, and Note (4) added
13	A-2.4	Revised
14	A-2.5	Revised in its entirety
15	A-2.6	Last sentence added
15	A-3.1	Revised in its entirety
14	Table A-2.3.4-1	Last column and Note (4) added
15	A-3.2	Last sentence added
15	A-3.2.1	In-text reference citation updated
15	A-3.2.3	Revised in its entirety
15	A-3.2.4	First sentence revised
15	A-3.3	Revised
16	A-3.4	Revised in its entirety
16	A-3.5	Last two sentences added
16	Table A-3.4-1	First row added
16	A-3.5.1	First sentence added
17	A-3.5.2.1	Revised in its entirety
17	A-3.5.2.3	In first sentence, cross-reference citation updated
17	A-3.5.2.4	Added
17	A-3.8.3	Reference updated
17	A-3.8.4	References updated
17	A-4.1.1	Revised
18	A-4.1.2	(1) Title revised (2) First paragraph revised and designated as A-4.1.2.1 and subsequent paragraph redesignated (3) In para. A-4.1.2.2, last sentence added
18	A-4.1.3	Revised

Page	*Location*	*Change*
18	A-4.1.4	Last sentence added
18	A-4.1.5	Last sentence added
18	A-4.1.6	Last sentence added
19	A-4.3	Revised
19	A-5	Revised
20	Nonmandatory Appendix B	Added

Chapter 2-0
Scope, Definitions, References, and Appendix

SECTION 2-0.1: SCOPE (23)

(a) This Standard establishes performance requirements for hand chain manually operated chain hoists for vertical lifting service involving material handling of freely suspended (i.e., unguided) loads, using a welded link type load chain as a lifting medium, with one of the following types of suspension:

(1) hook or clevis

(2) trolley

(b) This Standard is applicable to hoists manufactured after the date on which this Standard is issued. Differential pulley and self-locking worm drive type hoists are not covered in this Standard.

(c) This Standard is not applicable to

(1) damaged or malfunctioning hoists

(2) hoists that have been misused or abused

(3) hoists that have been altered without authorization of the manufacturer or a qualified person

(4) hoists used for lifting or supporting people

(5) hoists used for the purpose of drawing both the load and the hoist up or down the hoist's own load chain

(6) hoists used in applications where the load on the hand chain hoist is not freely suspended from the hand chain hoist

(7) hoists used for marine and other applications as required by the Department of Defense (DOD) unless Nonmandatory Appendix A has been invoked

The requirements of this Standard shall be applied together with the requirements of ASME B30.16. Please also refer to ASME B30.16 for requirements pertaining to marking, construction, installation, inspection, testing, maintenance, and operation.

SECTION 2-0.2: DEFINITIONS (23)

ambient temperature: the temperature of the atmosphere surrounding the hoist.

beam: an overhead standard structural shape or specially fabricated shape on which a trolley operates.

chain, hand: the chain provided to control movement of a hand-chain-operated hoist or trolley (see Figure 2-0.2-1).

NOTE: Hand chain properties do not conform to those shown in ASME B30.9.

chain, load: the load-bearing chain in the hoist.

NOTE: Load chain properties do not conform to those shown in ASME B30.9.

conditions, abnormal operating: environmental conditions that are unfavorable, harmful, or detrimental to or for the operation of a hoist, such as excessively high or low ambient temperatures, exposure to weather, corrosive fumes, dust-laden or moisture-laden atmospheres, and hazardous locations.

conditions, normal operating: conditions during which a hoist is performing functions within the scope of the original design.

hand chain drop: the distance to the lowest point of the hand chain measured from the saddle of the load hook at its upper limit of travel (see Figure 2-0.2-1).

hand chain overhaul: the number of feet (meters) the hand chain must travel to raise the load hook 1 ft (1 m).

hand chain pull: the average force measured in pounds (kilonewtons) exerted by the operator on the hoist hand chain to lift the rated load.

hand chain wheel: a wheel with formed pockets on its periphery to allow torque to be transmitted when a force is applied to the hand chain.