ASME NOG-1–2025
(Revision of ASME NOG-1–2020)

Rules for Construction of Overhead and Gantry Cranes (Top Running Bridge, Multiple Girder)

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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The American Society of Mechanical Engineers
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FOREWORD

The Committee on Cranes for Nuclear Power Plants was first established in 1976. In 1980, the name and scope of the Committee were revised from the Committee on Cranes for Nuclear Power Plants to the Committee on Cranes for Nuclear Facilities.

This Standard or portions thereof can be applied to cranes at facilities other than nuclear where enhanced crane safety may be required, and can be provided by means of either single-failure-proof features or a seismic design.

The first edition of NOG-1 was approved in 1983, the second in 1989, the third in 1995, the fourth in 1998, the fifth in 2002, the sixth in 2004, the seventh in 2010, the eighth in 2015, and the ninth in 2020. This 2026 edition contains revisions made since the 2020 edition; revisions have been made throughout all sections. These revisions are the result of committee evaluation, inquiries, and changing technology and industry needs. ASME NOG-1–2026 received the approval of the American National Standards Institute on October 27, 2025.

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

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T. V. Vine, *Contributing Member*, Berry Lake Consulting, LLC

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SUBCOMMITTEE ON ENGINEERING SUPPORT

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S. Huffard, WECTEC, LLC
G. Jenich, PAR Systems
P. Kanakasabai, Konecranes Nuclear Equipment and Services, LLC
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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 email 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, 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

(4) the editions of the Standard to which the proposed case applies

(d) A case is effective for use when the public review process has been completed and it is approved by the cognizant supervisory board. Approved cases are posted on the committee web page.

Interpretations. Upon request, the committee will issue an interpretation of any requirement of this Standard. An interpretation can be issued only in response to a request submitted through the online Inquiry Submittal Form at https://go.asme.org/InterpretationRequest. Upon submitting the form, the inquirer will receive an automatic email confirming receipt.

ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Standard requirements. If, based on the information submitted, it is the opinion of the committee that the inquirer should seek assistance, the request will be returned with the recommendation that such assistance be obtained. Inquirers can track the status of their requests at https://go.asme.org/Interpretations.

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ASME NOG-1–2025
SUMMARY OF CHANGES

Following approval by the ASME CNF Standards Committee and ASME, and after public review, ASME NOG-1–2025 was approved by the American National Standards Institute on October 27, 2025.

ASME NOG-1–2025 includes the following changes identified by a margin note, **(25)**.

Page	*Location*	*Change*
3	1150	Definitions of *bridge girders*; *crane girders*; *girders*; *hook, duplex*; *hook, single-prong*; and *rope anchor* added Definitions of *hook, dual-load path*; *nondestructive examination*; and *runway* revised
9	1160	Updated
15	4120	Revised
17	4137	Added
22	Table 4153.6-1	Revised
23	Table 4153.6-2	Revised
27	Figure 4160-1	Revised
28	Table 4211-1	(1) ASTM Specification A500, Grade or Class revised (2) Note (3) revised
26	4220	Paragraphs (a) and (b) revised
31	4251.4	Subparagraph (a)(2) revised
32	4252	Paragraphs 4252.1 through 4252.3 revised
33	4300	Paragraphs 4310 through 4340 revised
33	Table 4311-1	Revised
37	Table 4331.1-1	Former Table 4332.1-1 redesignated and revised
38	Table 4332.1-1	Added
41	4423.5	Revised
41	4424	Revised
42	4472	Revised
43	4490	Added
46	5168	(1) Definitions of σ_Y, τ_{XYA}, and τ_{EXYT} added (2) Definition of σ deleted
47	5210	Subparagraph (b) revised
48	5321.2	Second paragraph added
50	5411.4	Revised
50	5411.5	Equation (5) revised
52	5412	Title revised
57	Table 5415.1-1	Revised
58	5420	(1) Title revised (2) Subparagraph (a)(1)(-b) revised
58	5422.1	Subparagraph (c) revised in its entirety and subparas. (d) and (e) added

Page	*Location*	*Change*
65	5428.1	Subparagraphs (a) and (b) revised
68	5428.3	Revised
68	5428.4	Added and former para. 5428.4 redesignated
78	Table 5452.4-1	Editorially revised
78	Table 5453.1-1	Note (1) editorially revised and Note (4) added
79	5455.2	Subparagraph (a) revised
79	5455.4	Revised
79	5456.1	Subparagraph (a)(2) revised
84	5473	In second sentence, "τ_x" revised to τ_S"
84	5476	In subpara. (f), eqs. (20), (23), (25), (26), and (29) through (31) revised
88	5477	Revised
91	5478	Former para. 5477(b) redesignated and revised
91	5479	Former para. 5477(c) redesignated and reformatted
89	Figure 5477-2	Title revised
92	Figure 5478-1	(1) Former Figure 5477-4 redesignated (2) Title revised
92	Figure 5478-2	(1) Former Figure 5477-5 redesignated (2) Title revised
109	Table 6472.2-3	Revised
114	7100	Subparagraphs (c) and (g) revised
116	Table 7210-1	Revised
139	Table II-2	For D(2)-1, "Supplemental Criteria" in subpara. (a)(3) revised
149	B-5477	Equation references updated
152	Table C-1	Revised
183	Nonmandatory Appendix D	Added

Section 1000
Introduction

1100 GENERAL

Cranes covered under this Standard shall be designed in accordance with the Standard's requirements but not necessarily with its recommendations. The word *shall* is used to denote a requirement, the word *should* is used to denote a recommendation, and the word *may* is used to denote permission, which is neither a requirement nor a recommendation.

1110 Scope

This Standard covers electric overhead and gantry multiple girder cranes with top running bridge and trolley used at nuclear facilities and components of cranes at nuclear facilities. The items qualified by this Standard are the bridge wheels up through the crane bridge and trolley. The runway rails and rail clips are qualified with the runway and building structure and shall also meet the requirements of paras. 4160 and 4460 (see Figure 1110-1).

1120 Applications

This Standard applies to the design, manufacture, testing, inspection, shipment, storage, and erection of the cranes covered by this Standard.

1130 Responsibility

The cranes covered by this Standard are classified into three types (see para. 1150, *crane, Type*), depending upon crane location and usage of the crane at a nuclear facility.

The owner shall be responsible for determining and specifying the crane type. The owner shall also be responsible for determining and specifying the environmental

Figure 1110-1
Crane Boundary

