

MH27.2 – 2009
(a reaffirmation of MH27.2 – 2003)



Specifications for Enclosed Track Underhung Cranes and Monorail Systems

Abstract:

These proposed specifications apply to underhung cranes whose end trucks operate on the internal flange of a runway using enclosed track section; and to trolleys (carriers) operating on single-track monorail systems, including all curves, switches transfer devices, lift and drop sections, and associated equipment. Systems used for transporting personnel require special considerations and are not included in these specifications.



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A Division of Material Handling Industry
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American National Standard

Specifications for Enclosed Track Underhung Cranes and Monorail Systems

Monorail Manufacturers Association, Inc. (MMA)

An Affiliated Trade Association of Material Handling Industry of America,
A Division of Material Handling Industry

Approved December 2, 2009

American National Standards Institute, Inc.

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This standard, which was developed under the ANSI Canvass method and approved by ANSI on December 2, 2009, represents suggested design practices and performance testing criteria for crane and monorail equipment. It was developed with the sole intent of offering information to parties engaged in the manufacture, marketing, purchase, or use of crane and monorail equipment. This standard is advisory only and acceptance is voluntary and the standard should be regarded as a guide that the user may or may not choose to adopt, modify, or reject. The information does not constitute a comprehensive safety program and should not be relied upon as such. Such a program should be developed and an independent safety adviser consulted to do so.

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Foreword (This foreword is not part of American National Standard MH27.2-2009)

This standard was sponsored by the Monorail Manufacturers Association, Inc. in the interest of improved uniformity of patented track underhung crane and monorail performance and enhanced public safety. Since the intention of this standard is to encourage better communication between the manufacturer and the user, it should be regarded as a guide rather than a rigid specification.

This standard has been subjected to the American National Standards Institute's Canvass Review and was approved as an ANSI Standard on September 10, 2003 as MH27.1-2003. Now the standard has been reaffirmed following editorial changes to add clarification to existing requirements.

At the date of approval of this standard, the Monorail Manufacturers Association, Inc. consisted of the following member companies:

Acco Material Handling Solutions
Columbus McKinnon Corporation (CM)
Demag Cranes & Components Corporation
Gobel, Inc.
Ingersoll-Rand Co.
Spanco, Inc.
TC/American Monorail Inc.
United States Monorail, Division of American Crane and Hoist Corp.

Suggestions for improvement, and questions regarding interpretation of this standard will be welcome. They should be sent to: MH 27.2 Committee (MMA), Material Handling Industry of America, 8720 Red Oak Blvd., Suite 201, Charlotte, NC, 28217-3992 or standards@mhia.org.

SPECIFICATIONS FOR ENCLOSED TRACK UNDERHUNG CRANES AND MONORAIL SYSTEMS

Table of Contents

Foreword	iii
Section 1 - Scope	1
Section 2 - Referenced Specifications and Publishers	1
Section 3 - Duty Service Classification	3
Section 4 - General Specifications	5
Section 5 - Runway and Monorail Track	7
Section 6 - Track Loadings and Design	8
Section 7 - Suspension Fittings	11
Section 8 - Carriers or Trolleys	11
Section 9 - Cranes, Transfer Cranes, and Interlocking Cranes	12
Section 10 - Track Switches	13
Section 11 - Track Openers	14
Section 12 - Vertical Drop or Lift Sections	14
Section 13 - Cab Controlled Carriers and Cranes (when provided)	14
Section 14 - Brakes	14
Section 15 - Electrical Equipment	15
Section 16 - Electrification	16
Section 17 - Glossary	16

List of Tables

Table 1 -	Duty Service Classification	4
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List of Figures

Figure 1 -	Runway Alignment Tolerance	9
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SPECIFICATIONS FOR ENCLOSED TRACK UNDERHUNG CRANES AND MONORAIL SYSTEMS

SECTION 1 – Scope

- 1.1** These specifications apply to underhung cranes whose end trucks operate on the internal flange of a runway using enclosed track section; and to trolleys (carriers) operating on single-track monorail systems, including all curves, switches, transfer devices, lift and drop sections, and associated equipment. Systems used for transporting personnel require special considerations and are not included in these specifications.
- 1.2** Hoist(s) and/or trolley(s) may be supplied by the crane or monorail manufacturer or by the purchaser. In either case, the hoist(s) and trolley(s) shall comply with the applicable sections of ASME B30.16, Safety Standard for Overhead Hoists (Underhung); ASME 30.11, Safety Standard for Monorails and Underhung Cranes, and appropriate ASME HST Performance Standards. If the hoist(s) and/or trolley(s) are supplied by the purchaser, the crane builder shall be provided with dimensional drawings with all required data including wiring diagrams, carrier collector locations and weights.
- 1.3** This specification includes consideration for cranes and monorail equipment only. It does not include consideration for the design of the building, the design of supporting structure, electrical power supply, or erection. All references to loads and dimensions are based on English units unless otherwise noted.
- 1.4** Sections 1 through 14 are for use in normal ambient temperatures and atmospheric conditions; any other conditions require special consideration.

SECTION 2 – Referenced Specifications and Standards

Within the text, reference is made to the following publications, copies of which may be obtained from the publishers as indicated.

Manual for Steel Construction (most recent)

Publisher:

American Institute of Steel Construction, Inc. (AISC)

1 East Wacker Drive, Suite 3100

Chicago, IL 60601

www.aisc.org

Specifications for Aluminum Structures (most recent)

Publisher:

The Aluminum Association, Inc.

818 Connecticut Avenue, N.W.

Washington, DC 20006

www.aluminum.org