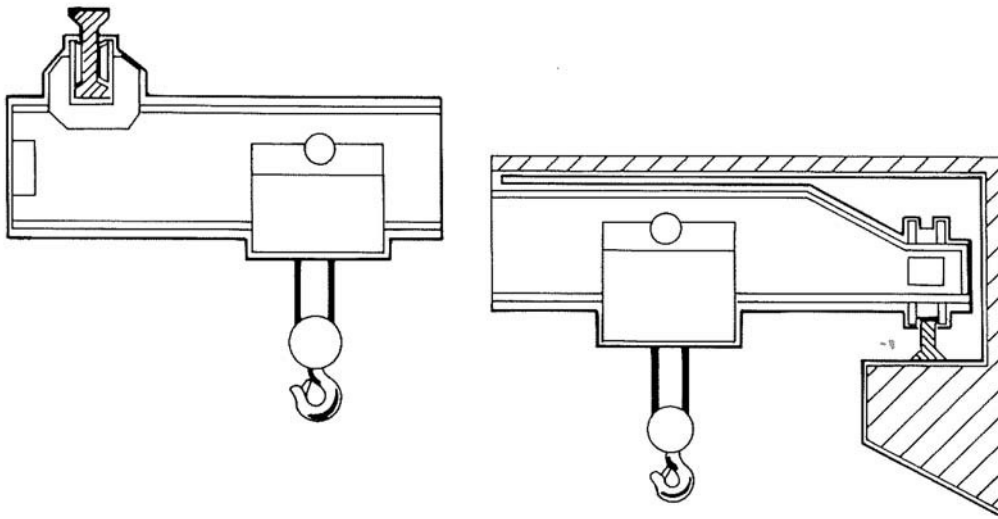


Buyer's Guide Top Running & Under Running Single Girder
Electric Traveling Cranes Utilizing Under Running Trolley Hoist

Prepared by
The Crane Manufacturers Association of America, Inc

74



Released December 2008

Disclaimer for CMAA BUYERS' GUIDE

This Guide, which was developed by the Crane Manufacturers Association of America an independent trade association affiliated with the Material Handling Industry of America (“MHIA”), a division of the Material Handling Industry (“MHI”), provides guidance about the proper selection of a material handling system and covers issues such as the service for which it will be used, the frequency of its use, matching its speed with manufacturing needs, budget and more. It was developed with the sole intent of offering information to parties engaged in selecting and purchasing such a material handling system. This Guide is advisory only and should be regarded as a simple tool that the buyer may or may not choose to follow, adopt, modify, or reject. The following information does not constitute a comprehensive safety program, cannot guard the buyer from pitfalls in selecting and purchasing such a system, and should not be relied upon as such. Such a program should be developed, and an independent adviser should be consulted to do so.

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DISCLAIMER OF WARRANTY. CMAA, the Material Handling Industry, MHIA, and their members make no warranties of any kind, express, implied, or statutory, in connection with the information in this Guide and specifically disclaim all implied warranties of merchantability or of fitness for particular purpose.

INDEMNIFICATION. By referring to or otherwise employing This Guide, the user agrees to defend, protect, indemnify, and hold CMAA, the Material Handling Industry, MHIA, their members, their officers, agents, and employees harmless from and against all claims, losses, expenses, damages, and liabilities, direct, incidental, or consequential, arising from acceptance or use or alleged use of this Guide, including loss of profits and reasonable attorneys' fees which may arise out of the acceptance or use or alleged use of this Guide. The intent of this provision and of the user is to absolve and protect CMAA, the Material Handling Industry, MHIA, their members, their officers, agents, and employees from any and all loss relating in any way to this Guide, including those resulting from the user's own negligence.

CMAA Buyer's Guide

INTRODUCTION

The Crane Manufacturers Association of America, known as CMAA, is an organization of over thirty leading American manufacturers of electric overhead traveling cranes and components.

CMAA has published standardized crane specifications for almost sixty years. Two publications in particular, *CMAA 70 – Specifications for Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes* and *CMAA 74 – Specifications for Top Running & Under Running Single Girder Electric Traveling Cranes Utilizing Under Running Trolley Hoist*, are recognized throughout the United States as the *de facto* standards of industrial crane design.

CMAA traces its roots to the Electric Overhead Crane Institute, known as EOCI, which was founded in 1927 by leading crane manufacturers of that time to promote standardization of cranes, uniform quality and performance. EOCI published standardized specifications in 1949 and again in 1961.

CMAA Specification 70, first published in 1971, superseded *ECCI 61*. Since 1971, *CMAA Specification 70* has been republished several times with changes and updates managed by CMAA's Engineering Committee. *CMAA Specification 74* was first published in 1974 to provide similar design information on single girder cranes.

CMAA has organized this Buyer's Guide to promote standardization and to assist prospective buyers of electric overhead traveling cranes in selection of equipment most suitable for their applications.

Thank you for your interest in CMAA and its Members.

BUYER'S GUIDE

FOR

TOP RUNNING & UNDER RUNNING SINGLE GIRDER ELECTRIC TRAVELING CRANES UTILIZING UNDER RUNNING TROLLEY HOISTS SPECIFICATION #74, REV. 2004

The proper selection of a material handling system involves determining several key items, which include:

1. The “Service” the system will be used for and
2. The “Frequency” of its use and
3. The “Speed” of the system necessary to match process parameters and
4. The Buyers Budget.

Beginning on page 7 is a set of “Crane Inquiry Data Sheets”. This is an excellent starting point to discuss your requirements with the crane manufacturer. Some items require your input, while a discussion with the crane manufacturer would be best for judgment-type questions where his knowledge would help you arrive at an optimal solution.

Page 12 outlines “Crane Service Classifications” that provides guidelines for selecting the proper crane based on the load spectrum reflecting the actual service conditions as closely as possible.

On page 13 is Figure 6.2, “Suggested Operating Speeds”, from CMAA Specification #74, which provides additional guidelines for selecting the proper travel and hoisting speeds.

Slides providing insight into the many different types of overhead material handling equipment built by our member companies is available on our website under CMAA Buyer's Guide. These can be used as references as you select cranes and equipment to solve your material handling needs.

CMAA recommends that the Buyer review the following set of questions with its prospective crane system supplier.

Verify key components with your crane supplier:

1. Is crane designed as per Specifications for Top Running and Under Running Single Girder Electric Traveling Cranes Utilizing Under Running Trolley Hoist – CMAA Specification #74, Revised 2004?

☐ Yes ☐ No

2. Design stresses in accordance with CMAA Spec #74 – 1.7?

☐ Yes ☐ No

3. Welding – Design, Fabrication, Testing and Welder Qualifications in accordance with AWS D14.1? (see CMAA Spec #74 - 3.2)

☐ Yes ☐ No

4. Are static/dynamic load factors and load combinations consistent with CMAA requirements? (see CMAA Spec #74 - 3.3)

☐ Yes ☐ No

5. Are calculated stresses within the limitations / guidelines of Section 3.4? (see CMAA Spec #74 - 3.4)

☐ Yes ☐ No

6. Have the allowable stress ranges based on class of service been considered (fatigue)? (see CMAA Spec #74 - 3.4.7)

☐ Yes ☐ No

7. Girder design – Proportional requirements, Factors of Safety on Buckling consistent with CMAA? (see CMAA Spec #74 - 3.4.8 & 3.5.1)

☐ Yes ☐ No

8. Is the girder deflection as per the requirements of CMAA, which requires deflection no greater than 1/888? The deflection specified by CMAA is a good compromise between providing an economical design and a rigid structure. For applications requiring precise placement, a stiffer bridge may be desired. (see CMAA Spec #74 - 3.5.5)

☐ Yes ☐ No

9. Bolting – Are structural bolted joints designed in accordance with CMAA requirements? (see CMAA Spec #74 - 3.8)

☐ Yes ☐ No

10. CMAA Spec 74 does not comment on the design of the hoist but refers one to ASME B30.16 and the ASME HST hoist performance standards. Is the hoist supplied in accordance with ASME B30.16 and the applicable HST standard?

☐ Yes ☐ No

11. Load suspension parts of the hoist are designed to a min. 5:1 on ultimate strength? (see ASME B30.16)

☐ Yes ☐ No

12. Wire rope safety factor min. 5:1?
(OSHA 1910.179(h)(2)(1) (ASME HST-4 – 3.4)

☐ Yes ☐ No

NOTE: Rope used for holding or lifting molten metal shall not exceed 12.5% of published breaking strength. (Min. safety factor = eight (8))

13. Type of wire rope or chain & size

14. Does hoist or hoisting machinery meet or exceed Guide for Minimum Pitch Diameter of Running Sheaves? (see ASME HST-4 3.6)

☐ Yes ☐ No

15. Are bearings provided consistent with the duty cycle selected?
(see ASME HST-4M 3.8)

☐ Yes ☐ No

16. Are Brakes mechanical and thermal ratings consistent with HST requirements and class of service? (see ASME HST 4M – 3.9)

NOTE: OSHA 1910.179 (f)(2)(VI) Each independent hoisting unit of a crane handling hot metal and having power control braking means shall be equipped with at least two (2) holding brakes.

☐ Yes ☐ No

17. Is shafting design in accordance with CMAA requirements?
(see CMAA Spec #74 - 4.11)

☐ Yes ☐ No

18. Allowable wheel loads in compliance with CMAA requirements?
(see CMAA Spec #74 - 4.7), (see OSHA 1910.179 (e)(2)(3))

☐ Yes ☐ No

19. Are bumpers sized according to the CMAA requirements?
(see CMAA Spec #74 - 4.8)

☐ Yes ☐ No

20. All panel and interconnecting wiring in accordance with NFPA NEC Article 610?
(see CMAA Spec #74 - 5)

☐ Yes ☐ No

21. Are motors designed and constructed in accordance with NEMA MG-1?
(see CMAA Spec #74 - 5.2)

☐ Yes ☐ No

22. Have the bridge and trolley requirements been calculated in accordance with CMAA guidelines for the class of service? (see CMAA Spec #74 - 5.3)

☐ Yes ☐ No

23. Are the controls sized for the class of service? (see CMAA Spec #74 – 5.4)

☐ **Yes** ☐ **No**

24. Are short circuit devices and overload devices in compliance with NFPA NEC Article 610? (see CMAA Spec #74 – 5.6)

☐ **Yes** ☐ **No**

25. Is a fourth runway electrification ground bar included?
(see CMAA Spec #74 – 5.11.6)

☐ **Yes** ☐ **No**

26. Are Rail Sweeps provided? (see OSHA 1910.179 (e)(4))

☐ **Yes** ☐ **No**

SECTION 3.1.1
74-6 CRANE INQUIRY DATA SHEET
FIGURE 6.1

Customer _____

Spec No. _____

Date _____

1. Number Cranes Required _____.

2. Capacity: Hoist(s) _____ Tons

3. Required Hook Lift (Max. Including Pits or Wells Below Floor Elevation)

Hoist _____ Ft. _____ In.

4. Approximate Length of Runway _____ Ft.

5. Number of Cranes on Runway _____.

6. Service Information: (Description of Use)

Hoist:

Number of Lifts per Hour _____ Hours per Day _____

Height of Lift _____

Hook _____ Magnet _____ Other _____

Give Size & Weight of Magnet or any Attachment

Trolley:

Number Moves per Hour _____ Hours per Day _____ Speed _____ fpm

Average Movement _____ Ft.

Bridge:

Number Moves per Hour _____ Hours per Day _____ Average Movement _____

7. Furnish complete information regarding special conditions such as acid fumes, steam, high temperatures, high altitudes, excessive dust or moisture, very severe duty, special or precise load handling:

8. Ambient Temperature in Building: Max. _____ Min. _____

9. Material Handled _____

10. Speeds Required: Hoist _____ fpm Bridge _____ fpm Trolley _____ fpm

11. Crane to Operate: Indoors _____ Outdoors _____ Both _____

12. Current: Volts _____ Phase _____ Hertz _____ AC Volts _____ DC

13. Method of Control: Cab _____ Floor _____ Remote _____

14. Location of Control: End of Crane _____ Center _____ On Trolley _____

Other _____

15. Type of Control (Give complete information, including number of speed points)

Full Magnetic _____ Static _____ Other _____

16. Type of Control Enclosure: _____

17. Type of Motors: (Give complete information) _____

18. Must wiring comply with Special Conditions or Codes _____

Describe briefly (See Items 7 & 8) _____

19. Are Runway Conductors to be included:

Type: Loose Wires _____ Rigid Wires _____ Angles _____

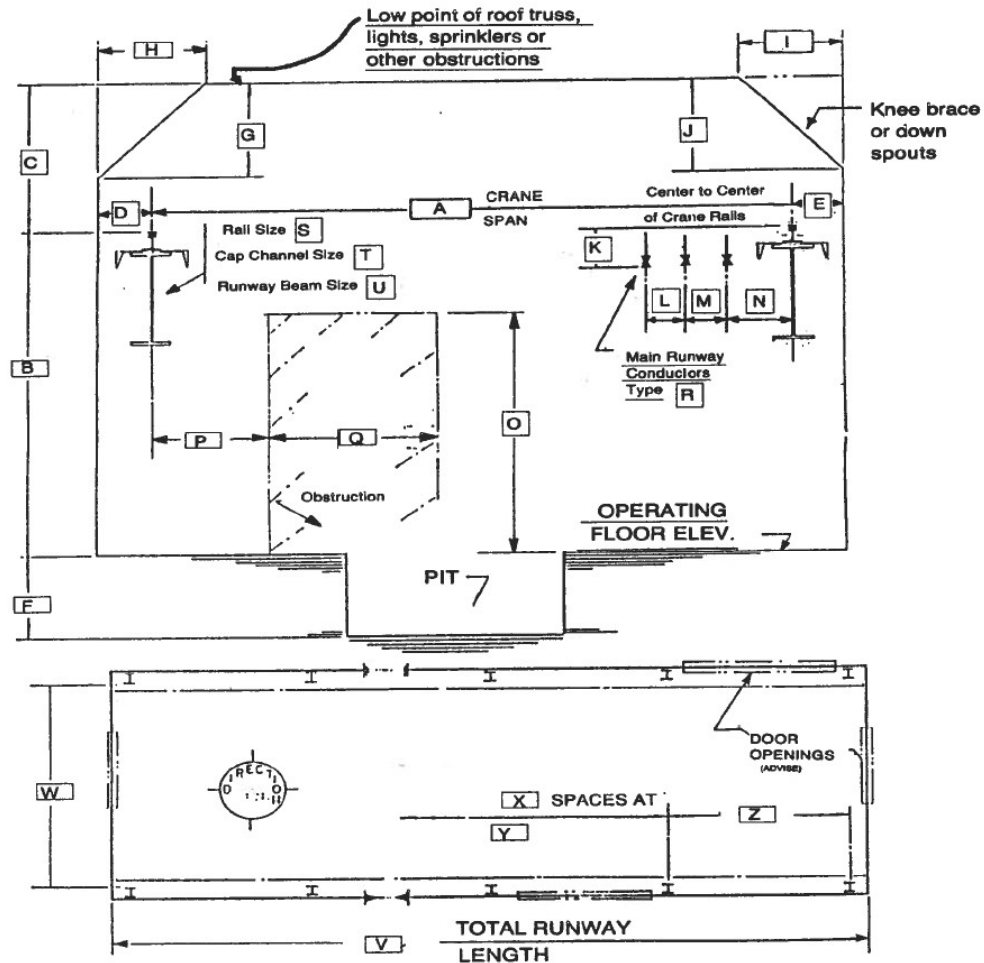
Insulated (Mfr) _____ Other _____

20. List of Special Equipment or Accessories Desired _____

21. Specify when double hook cranes, double trolley cranes or special cranes are required giving detailed information on hook spacing, etc.

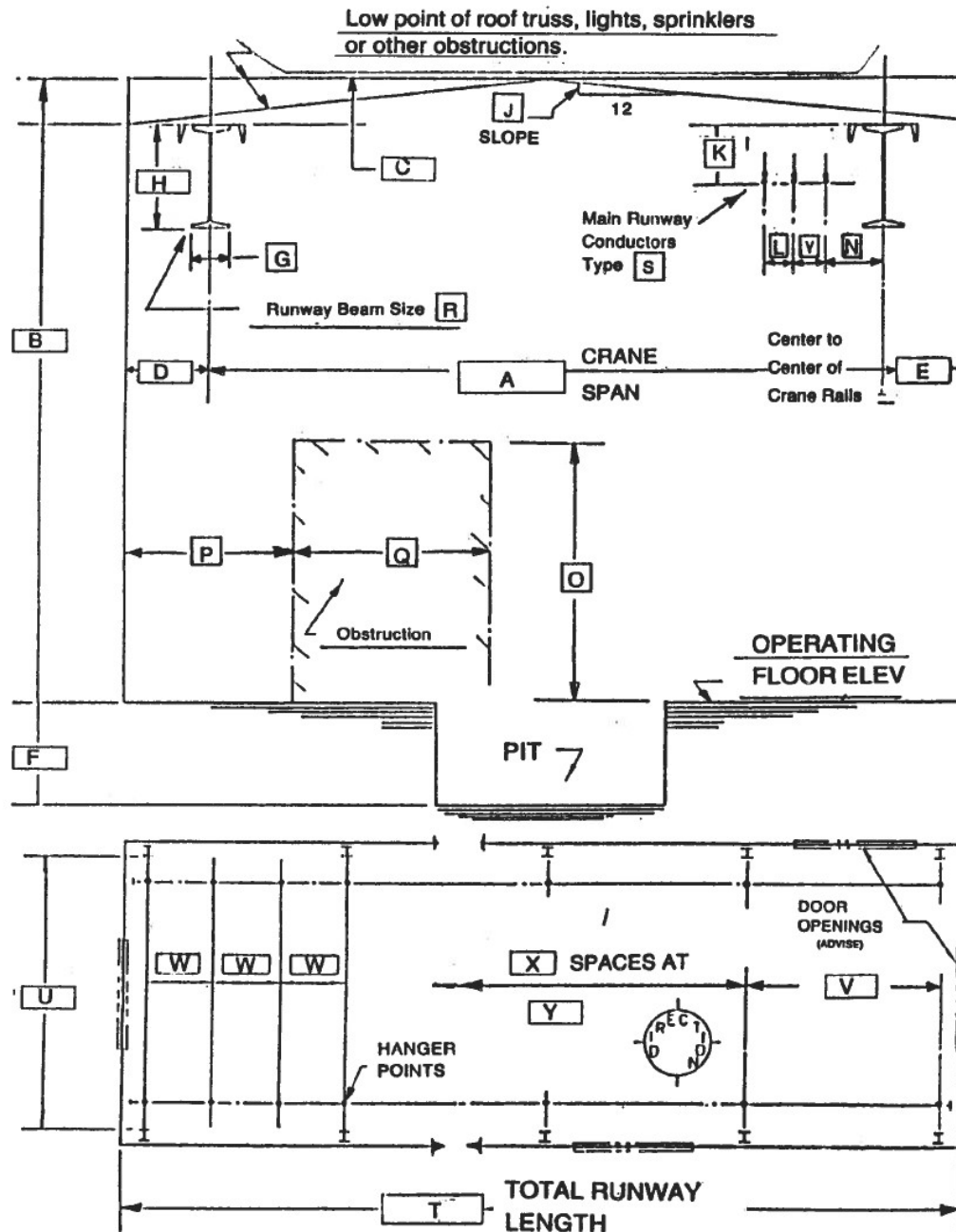
22. Complete attached building clearance drawing, making special note of any obstructions which may interfere with the crane, including special clearance conditions underneath the girders or cab.

BUILDING CLEARANCES FOR TOP RUNNING SINGLE GIRDER CRANES



A _____ E _____ I _____ Q _____ U _____ Y _____
B _____ F _____ J _____ R _____ V _____ Z _____
C _____ G _____ K _____ S _____ W _____
D _____ H _____ L _____ T _____ X _____

A _____ E _____ I _____ M _____ Q _____ U _____ Y _____
B _____ F _____ J _____ N _____ R _____ V _____ Z _____
C _____ G _____ K _____ O _____ S _____ W _____
D _____ H _____ L _____ P _____ T _____ X _____

CRANE INQUIRY DATA SHEET
**BUILDING CLEARANCES
 FOR UNDER RUNNING SINGLE GIRDER CRANES**


A	E	I	N	R	V
B	F	J	O	S	W
C	G	K	P	T	X
D	H	L	Q	U	Y

Section 2.1.2

74-2 CRANE CLASSIFICATIONS

CMAA Crane Service Classes

CMAA has established crane service classes so that the most economical crane for a particular installation may be specified in accordance with *Specifications for Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes-No. 70* or *Specifications for Top Running and Under Running Single Girder Electric Overhead Cranes Utilizing Under Running Trolley Hoist-No. 74*. The crane service classification is based on the load spectrum reflecting the actual service conditions as closely as possible. The CMAA Crane Service Classes are as follows:

CLASS A (STANDBY OR INFREQUENT SERVICE)

This service class covers cranes which may be used in installations such as power houses, public utilities, turbine rooms, motor rooms and transformer stations where precise handling of equipment at slow speeds with long, idle periods between lifts are required. Capacity loads may be handled for initial installation of equipment and for infrequent maintenance.

CLASS B (LIGHT SERVICE)

This service covers cranes which may be used in repair shops, light assembly operations, service buildings, light warehousing, etc. where service requirements are light and the speed is slow. Loads may vary from no load to occasional full rated loads with two to five lifts per hour, averaging ten feet per lift.

CLASS C (MODERATE SERVICE)

This service covers cranes which may be used in machine shops or paper mill machine rooms, etc., where service requirements are moderate. In this type of service the crane will handle loads which average 50 percent of the rated capacity with 5 to 10 lifts per hour, averaging 15 feet, not over 50 percent of the lift at rated capacity.

CLASS D (HEAVY SERVICE)

This service covers cranes which may be used in heavy machine shops, foundries, fabricating plants, steel warehouses, container yards, lumber mills, etc., and standard duty bucket and magnet operations where heavy duty production is required. In this type of service, loads approaching 50 percent of the rated capacity will be handled constantly during the working period. High speeds are desirable for this type of service with 10 to 20 lifts per hour averaging 15 feet, not over 65 percent of the lifts at rated capacity.

This information has been presented for reference purposes only. For more information regarding load spectrum, mean effective load factors, load classes, load cycles and how these relate to the determination of crane service classes, please refer to *Specifications for Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes-No. 70* or *Specifications for Top Running and Under Running Single Girder Electric Overhead Cranes Utilizing Under Running Trolley Hoist-No. 74*. These documents are available for purchase online at <http://www.mhia.org/bookstore> or through the Literature Department at 704-676-1190.

Section 3.1.2

FIGURE 6.2

**SUGGESTED OPERATING SPEEDS
FEET PER MINUTE
FLOOR CONTROLLED CRANES**

CAPACITY IN TONS	HOIST			TROLLEY			BRIDGE		
	SLOW	MEDIUM	FAST	SLOW	MEDIUM	FAST	SLOW	MEDIUM	FAST
3	14	35	45	50	80	125	50	115	175
5	14	27	40	50	80	125	50	115	175
7.5	13	27	38	50	80	125	50	115	175
10	13	21	35	50	80	125	50	115	175
15	13	19	31	50	80	125	50	115	175
20	10	17	30	50	80	125	50	115	175
25	8	14	29	50	80	125	50	115	175
30	7	14	28	50	80	125	50	115	150

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What is CMAA?

What is CMAA? CMAA is the Crane Manufacturers Association of America, Inc., and independent trade association affiliated with the Material Handling Industry. CMAA traces its roots to the Electric Overhead Crane Institute, known as EOICI, which was founded in 1927 by leading crane manufacturers of that time to promote the standardization of cranes as well as uniform quality and performance. The voluntary association was incorporated as the Crane Manufacturers Association of America, Inc., in 1955. Member Companies, representing the Crane industry, serve the world market from operations based in the United States, Canada, and Mexico.

CMAA Mission

Our Mission is to deliver exceptional value to our end-users, channel partners, members and industry associates while serving the overhead material handling industry. CMAA achieves this through:

- Safety Advocacy
- Engineering Specifications and Standards Development
- Educational Materials
- Member Professional Development
- Recruiting and Developing a representative, active membership

CMAA Vision

As the premier, preferred brand in the materials handling industry, CMAA:

- Is recognized as the leading advocate for the safe application and operation of overhead traveling crane equipment and related products.
- Engineering specifications are widely recognized as the preferred design standard for overhead traveling cranes, integrated crane systems, and crane components.
- Is recognized as the leading authority and the principal resource in the overhead traveling crane industry.
- Conducts business professionally with a spirit of enthusiasm, cooperation, honesty and integrity.
- Positions its Members to achieve marketplace leadership and:
 - Deliver superior value in their products and services.
 - Provide products and services that are safe and productive.
 - Provide high value and versatile solutions
 - Develop knowledgeable and expert channel partners.
 - Provide an environment in which our customers can confidently purchase and derive superior value from our products.



For information regarding membership, standards, specifications, market research initiatives, industry statistics, literature or publications. CMAA Managing Director Hal Vandiver: hvandiver@mhia.org, Executive Assistant Cathy Moose: cmoose@mhia.org

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Call the Material Handling Institute Literature Department at 800-345-1815 or 704-676-1190 or go to www.mhia.org/cmaa , “Publications and Resources”, to order the following CMAA publications:

#10089 – CMAA Specification 70, *Specifications for Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes*

The purpose of this book is to provide a basis for uniform quality and performance. This specification contains information, which should be helpful to the purchasers and users of cranes and to the engineering and architectural professions. While much of this information must be of a general nature, the items listed may be checked with individual manufacturers and comparisons made which can lead to optimum selection of equipment. 92 Pages, \$85.00 ea. plus shipping

#10090 – CMAA Specification 74, *Specifications for Top Running and Under Running Single Girder Electric Overhead Traveling Cranes Utilizing Under Running Trolley Hoist*

This book promotes standardization and provides a basis for uniform quality and performance. It contains information which should be helpful for purchasers and users of cranes, as well as engineers and architects. Text consists of seven sections: general specifications, crane service classification, structural design, mechanical design, electrical equipment, crane inquiry data sheet and a glossary. 76 Pages, \$85.00 ea. plus shipping

#10197 – CMAA Specification 78, *Standards and Guidelines for Professional Services Performed on Overhead Traveling Cranes and Associated Hoisting Equipment*

Specification 78 has been purposely developed by CMAA to recognize overhead traveling crane service and the service of associated hoisting equipment as an “industry” worthy of having guidelines and standards for providing high-quality, professional services performed by safety minded, manufacturer-trained and certified technicians. With the introduction of Specification 78, CMAA intends to set higher performance standards and raise customer expectations related to service of overhead traveling cranes and associated hoisting equipment. 40 Pages, \$30.00 ea. plus shipping

#10099 – Crane Operator’s Manual

This 29-page manual lists qualifications required to be a crane operator, as well as “shall and shall not’s.” Safety is stressed by describing the best way to operate a crane. It also explains why a crane should be operated safely. The safety suggestions are intended to supplement company safety practices and crane manufacturers’ instructions. \$5.00 ea. plus shipping

10078 - CMAA Crane Service Classes

CMAA has established crane service classes so that the most economical crane for a particular installation may be specified in accordance with Specifications for Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes - No. 70 or Specifications for Top Running and Under Running Single Girder Electric Overhead Cranes Utilizing Under Running Trolley Hoist - No. 74. FREE DOWNLOAD

#10102 – Overhead Crane Inspection and Maintenance Checklist

This checklist, published by the Crane Manufacturers Association of America, Inc., aids owners of overhead cranes when conducting periodic maintenance inspections. While the proper installation, operation, testing, and maintenance of cranes are a continuing responsibility of the owner/user in accordance with the current approved standards, this checklist provides a minimal list of components to be inspected regularly. \$10.00 per pack of 50 checklists, plus shipping

#10059 – The Fundamentals of Overhead Crane Safety Training Program

This product is a DVD training program designed to visually reflect safe operating practices for a wide variety of cranes to successfully run an in-house overhead safety program. The package includes a 45-minute training video covering, Basic Components, Warning, Hand Signals, Pre-Energization Inspection: Cab Cranes, Pre-Energization – Floor Controlled Cranes, Inspection with Electrical Power Applied, Load Lifting, Transferring, and Depositing, Magnet and Bucket Attachments, Parking and Securing Cranes and Summary. CMAA literature is also included, CMAA Spec 70, Spec 74,, Spec 78, Crane Operators Manual and more. \$395.00 ea. plus shipping

#10098 – Operational Guide for Lifting Devices

The Operational Guide for Lifting Devices are guidelines intended to provide you with general procedures for installation, inspection, maintenance and repairs, and operation and operator training for below-the-hook lifting devices. Lifting devices, sometimes called below-the-hook lifters, attach hoists to their loads. FREE DOWNLOAD

#10210 – Multiple Girder Buyer's Guide, *For Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes*

CMAA has organized this Buyer's Guide to promote standardization and to assist prospective buyers of electric overhead traveling cranes in selection of equipment most suitable for their application. FREE DOWNLOAD.

#10211 – Single Girder Buyer's Guide, *For Top Running and Under Running Single Girder Electric Overhead Traveling Cranes Utilizing Under Running Trolley Hoist*

CMAA has organized this Buyer's Guide to promote standardization and to assist prospective buyers of electric overhead traveling cranes in selection of equipment most suitable for their applications. FREE DOWNLOAD

#10212 – Below The Hook Devices Buyers Guide

CMAA has organized this Buyer's Guide to promote standardization and to assist prospective buyers of below-the-hook lifting devices in selection of equipment most suitable for their application. FREE DOWNLOAD

#10198 – Overhead Material Handling Market History and Forecast

This 59-page presentation has been developed for professional researchers interested in learning more about the statistical characteristics of the overhead material handling market for planning purposes. Information is presented in chart form to reveal information about market size and growth, product mix, domestic production, imports, exports, consumption, capacity utilization, economic indicators, market potential and a variety of other insights. Source data has been gathered principally from the U.S. Department of Commerce (USDOC), the U.S. International Trade Commission (USITC), the U.S. Bureau of Economic Analysis (BEA) and the U.S. Federal Reserve Board (FRB). Insights are provided by MHIA Staff and the Managing Director of CMAA, HMI and MMA, independent trade associations affiliated with the Material Handling Industry of America. (NOTE: This document will be emailed to you after you complete your order. This could take up to 24 hours – please do not order if you need it immediately).

\$750.00

#10036 – Selecting the Right Overhead Crane

This publication concentrates on the owner's responsibility to select a qualified crane supplier by highlighting a number of factors as they pertain to application and facility. FREE DOWNLOAD

#10091 – CMAA Consensus of the national Electrical Code

The 1996 National Electrical Code has a number of paragraphs affecting cranes. Some of these paragraphs are subject to verifying interpretations. The information published represents the consensus of interpretation by members of the Crane Manufacturers Association of America, Inc. and is shown in block form with 1996 N.E.C. references, followed by explanatory notes. FREE DOWNLOAD

#10034 – What is CMAA?

This brochure provides a general overview of the Crane Manufacturer's Association, Inc., its membership, literature and publications. FREE DOWNLOAD.

#10085 – MH27.1, *Specification for Patented Track Underhung Cranes & Monorail Systems*

Approved and published in 2009, this publication was developed by the Monorail Manufacturers Association, Inc. to assist manufacturers and users of underhung cranes and monorail systems. This specification was originally approved as an MMA consensus standard in 1973, was subjected to the ANSI Canvass Review Process, and is now available as an American National Standard. Includes discussion of curves, switches, transfer devices, trolleys, lift and drop sections and associated equipment.

#10087 – MH27.2 , *Specification for Enclosed Track Underhung Cranes & Monorail Systems*

Approved and published in 2009, this publication was developed by the Monorail Manufacturers, Inc. in the interest of improved uniformity of underhung crane and monorail performance and enhanced public safety. This standard, that 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.



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www.BushmanAvonTec.com

Demag Cranes & Components

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Solon, OH 44139
(440) 248-2400
www.demag-us.com

Harrington Hoists Inc.

401 West End Avenue
Manheim, PA 17545
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www.harringtonhoists.com

Capco Crane & Hoist Inc.

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Rowley, MA 01969
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www.transtech.com

Magnetek, Inc.
N49 W 13650 Campbell Drive
Menomonee Falls, WI 53051
(800) 288-8178
www.magnetekmh.com

ProservAnchor Crane Group
455 Aldine Bender
Houston, TX 77060
(281) 405-9048
www.proserveanchor.com

Whiting Corporation
26000 S. Whiting Way
Monee, IL 60449
(708) 587-2000
www.whitingcorp.com

North American Industries, Inc.
80 Holton Street
Woburn, MA 01801
(781) 897-4100
www.naicranes.com

Sissco Material Handling Equip.
186 Route 206 South
Hillsborough, NJ 08844
(908) 359-9767
www.sisscohoist.com

Yale Hoists
240 Pennsylvania Avenue
Salem, MI 44460
(800) 742-9269
www.yalehoists.net

OMI Crane Systems, Inc.
1515 I-20 Service Road
Royse City, TX 75189
(972) 636-8000
www.omicranes.com

Spanco, Inc.
Morgantown Business Park
604 Hemlock Road
Morgantown, PA 19543
(800) 869-2080
www.spanco.com

Zenar Corporation
7301 South 6th Street
Oak Creek, WI 53154
(414) 764-1800
www.zenarcrane.com

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