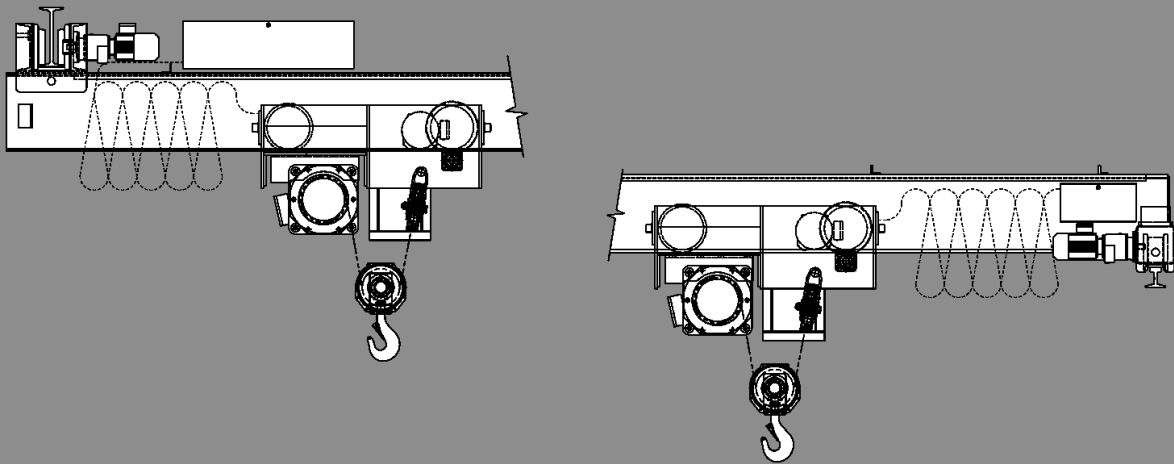


**Specifications for Top Running & Under Running Single Girder
Electric Traveling Cranes Utilizing Under Running Trolley Hoist**

Prepared by
The Crane Manufacturers Association
of America, Inc.

74



**CMAA Specification #74, Revised 2015
Supersedes Specification #74, Revised 2010**



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CMAA SPECIFICATION NO. 74-2015
SPECIFICATIONS FOR TOP RUNNING AND UNDER RUNNING SINGLE GIRDER
ELECTRIC TRAVELING CRANES UTILIZING UNDER RUNNING TROLLEY HOIST

INTRODUCTION

This Specification has been developed by the Crane Manufacturers Association of America, Inc. (CMAA), an organization of leading electric overhead traveling crane manufacturers in the United States, for the purpose of promoting standardization and providing a basis for equipment selection. The use of this Specification should not limit the ingenuity of the individual manufacturer but should provide guidelines for technical procedure.

In addition to Specifications, the publication contains information which could 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, it may be checked with individual manufacturers, and comparisons may be made, leading to the selection of the proper equipment.

These Specifications consist of eight Sections, as follows:

- 74-1 General Specifications
- 74-2 Crane Classification
- 74-3 Structural Design
- 74-4 Mechanical Design
- 74-5 Electrical Equipment
- 74-6 Inquiry Data Sheet and Speeds
- 74-7 Glossary
- 74-8 Index

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SUMMARY OF CHANGES SINCE THE 2010 REVISION OF SPECIFICATION #74

Added the "CMAA Specification Interpretation Request Procedure" on page 5.

Section 1.4.1.1.5..... L_r defined for cantilevered runway Sections

Section 1.4.1.2.3.....Maximum wheel load definition added for cantilevered Sections

Section 1.4 and Table 1.4.2-1.....Revised to specifically address crane runways

Section 1.5.8.....New Section for Runway Current Collectors

Section 1.5.9.....New Section for Runway Grounding Conductor

Section 3.3.2.2.1.....Revised Section for operational wind loading

Sections 3.3.2.5 & 3.7.3.....Reference to stress levels removed

Section 3.3.2.6.1.....Added maximum value for lambda

Section 3.3.2.6.3.....Added to Section to consider internal diaphragm stresses

Table 3.4.7-2A.....Revised the Table to specify types of testing required for certain weld types

Figure 3.4.7-2B.....Updated

Section 3.4.8.3.....Revised design factor equations

Section 3.5.1.....Revised Section for proportions for welded box girders.

Section 3.5.4.1.....Revised to include errata issued for 2010 edition

Section 3.5.5.4.....Revised to add lateral deflection limits

Section 3.9.3.....New Section for gantry stability

Sections 4.2.2 & 4.2.3.....Revised gear quality classification Section

Section 5.2.8.1.3.3.....Revised to include errata issued for 2004 edition

Section 5.4.7.4.....New Section for Control System Markings

Section 5.5.....Revised Section for Resistors

Section 5.6.16.....New Section for Lightning Protection

Section 5.6.17.....New Section for Below-the-Hook Devices

Sections 5.9.3.1-5.9.3.3.....New Sections for Power Circuit Limit Switches

Section 5.14.....Revised Section for Inverters

Section 5.16.....New Section for Collision Avoidance

Section 5.17.....New Section for Weigh Scale Systems

Miscellaneous improvements:

- * Commentary has been provided to newly added or revised Sections.
- * Improved cross-referencing between main Sections.
- * Improved formatting.

CMAA SPECIFICATION INTERPRETATION REQUEST PROCEDURE

A request for interpretation of CMAA's specifications is to be designated as an "Action Alert Inquiry."

Only written inquiries about interpretations and the applicability of CMAA Specifications 70, 74 and 78 will be given a response by the CMAA Engineering and Safety Advocacy Workgroup. CMAA does not provide: design guidance, design critique, advice, comments on non-CMAA documents etc. Inquiries of this nature, if received, will be declined.

Send all written requests for interpretation of Specifications 70, 74 and 78, identifying the particular Specification and the Section numbers in question via email to cmaa-info@mhi.org or via Fax to 704-676-1199 to the attention of CMAA.

Interpretation requests must identify the sender by name, title, company name, address and telephone number and be on company letterhead. They must also be specific and concise.

The following is the CMAA procedure for processing and responding to interpretation requests.

1. CMAA assigns an Action Alert Inquiry number to each written inquiry.
2. CMAA immediately forwards the inquiry to the CMAA Engineering Vice President. Based on the nature and substance of the inquiry, the Vice President selects either a non-balloted or balloted response. Non-balloted responses generally will be selected for simple obvious replies and for inquiries to be declined. Inquiries for interpretation of CMAA Specifications 70, 74 and 78 will be balloted.
3. Response time for inquiries typically range from one week to one month, if balloted.

This Specification is accompanied by explanatory commentaries.

The commentaries in this Specification are not a part of the Specification and do not constitute a formal interpretation of the Specification (which can be obtained only through requests as indicated above). The commentaries, therefore, solely reflect the personal opinions of the editor or other contributors and do not necessarily represent the official position of CMAA or its technical committees.

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