1.0 PURPOSE

1.1 Identify compliance requirements for hoists, trolleys, and cranes.

2.0 SCOPE

2.1 Includes lever hoists, manual and powered chain hoists, manual and powered trolleys, and overhead traveling bridge cranes.

3.0 CODES AND STANDARDS

3.1 OSHA Section 1910.179 of Title 29, "Occupational Safety and Health Regulations – Overhead and Gantry Cranes"

3.2 NFPA 70, "National Electrical Code"

3.3 ANSI/ASME B30.2, "Safety Standard – Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Hoist)"

3.4 ANSI/ASME B30.16, "Safety Standard – Overhead Hoists (Underhung)"

3.5 ANSI/ASME B30.17, "Safety Standard – Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)" NOTE: ANSI/ASME B30.11, "Safety Standard – Monorails and Underhung Cranes" was withdrawn and consolidated into this standard, ANSI/ASME B30.17.

3.6 ANSI/ASME B30.21, "Safety Standard – Manually Lever Operated Lever Hoists"

3.7 ANSI/ASME HST-1, "Performance Standard for Electric Chain Hoists"

3.8 ANSI/ASME HST-2, "Performance Standard for Hand Chain Manually Operated Chain Hoists"

3.9 ANSI/ASME HST-3, "Performance Standard for Manually Lever Operated Chain Hoists"

3.10 ANSI/ASME HST-4, "Performance Standard for Overhead Electric Wire Rope Hoists"

3.11 ANSI/ASME HST-5, "Performance Standard for Air Chain Hoists"

3.12 CMAA 70, "Specifications for Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes"

3.13 CMAA 74, Specifications for Top Running & Under Running Single Girder Electric Overhead Traveling Cranes Utilizing Under Running Trolley Hoist"

4.0 COMPLIANCE REQUIREMENTS

4.1 There are many organizations that develop regulations and standards for hoists and cranes. These organizations can be categorized into federal agencies, organizations of professionals, trade associations, and state agencies. There is also an additional special entity – the American National Standards Institute, or ANSI.

4.1.1 Federal

The federal government produces the Code of Federal Regulations (CFR), which contains rules published in the Federal Register by the Executive departments and agencies of the Federal Government. It is divided into 50 titles covering broad areas subject to Federal regulation. Title 29 is

titled Labor and it is administered by the U.S. Department of Labor – the Occupations Safety and Health Administration (**OSHA**). Title 29 contains several parts and subparts that deal with hoists and cranes. These requirements are federal law and are frequently the subject of visits by OSHA inspectors.

4.1.2 Organizations of Professionals

There are many organizations that develop standards for just about any product you can think of. Those that develop standards for hoists and cranes are the American Society of Mechanical Engineers (**ASME**) and the National Fire Protection Association (**NFPA**). The ASME produces safety standards and performance standards, while the NFPA produces electrical standards.

4.1.3 Industry Associations

These are associations between companies involved in the same industry. For hoists there is the Hoist Manufacturer's Institute (**HMI**). For cranes there is the Crane Manufacturer's Association of America (**CMAA**). The HMI no longer produces standards; their performance standards were turned over to ASME in the 1980's. The CMAA produces standards for cranes.

4.1.4 State Agencies

State and local agencies enact ordinances that contain requirements ranging from zoning to building requirements to electrical construction. Usually, these ordinances affect hoists and cranes only in the area of electrical construction. These ordinances typically require compliance with NFPA 70, which is titled the "National Electrical Code (**NEC**)".

4.1.5 ANSI

ANSI is a federation of standards developing organizations in the U.S. It serves as the administrator and coordinator of the U.S. private sector voluntary standardization system. ANSI does not itself develop American National Standards; rather it facilitates development by establishing consensus among qualified groups. Standards from professional organizations and from industry associations can be submitted to the ANSI consensus process. After successful completion the standard becomes an American National Standard (ANS). To retain this, the standard must be maintained in accordance with ANSI requirements. Generally, this process is considered to result in better standards. And ANSs carry more credibility and are referenced more often than non-ANSs.

4.2 Overlap

Naturally, with so many regulations and standards there is overlap. For example, the OSHA regulation for cranes contains requirements that are very similar to the NEC and to some of the ASME standards. And the CMAA standards contain requirements that are very similar to the ASME standards.

4.3 Non-Compliance

Owner's of non-compliant hoist and crane equipment can be subject to any of the following:

- Reduction in safety, damages, injury, or death (and resultant legal action)
- Fines levied by OSHA
- Fines levied by a state or local agency
- Reduction in performance
- Costly retrofits

END