CAN/CSA-B167-08 – Overhead travelling cranes – Design, inspection, testing, maintenance, and safe operation
Welding Requirements

This document provides an overview of the requirements of *CAN/CSA*-B167-08 – Overhead travelling cranes – Design, inspection, testing, maintenance, and safe operation with respect to welding. It is designed to provide guidance for individuals and organizations involved in the design, construction, installation, erection, inspection, maintenance, repair or modification of lift carriages.

This document is only for general guidance purposes; reference to the full text of CSA B167 should be made. For further information, please contact the CWB at 1-800-844-6790 or info@cwbgroup.org.

Introduction

Welding is a key joining method used in the fabrication of overhead travelling cranes. To ensure welds of the highest quality and the safety of both the users of overhead travelling cranes and the general public, CSA Standard B167 provides specific requirements around the welded fabrication and welding inspection of such equipment.

Welded Fabrication

CSA B167 provides the following requirements:

4.3.7 Structural welding:
Welding shall be in accordance with the requirements of CSA W59 and shall be performed under the guidance of a qualified engineer.

4.4.2 Crane design
4.4.2.1 The manufacturer shall ensure that the bridge assembly
(a) is welded
(i) in a facility certified by the Canadian Welding Bureau (CWB); and
(ii) by CWB-certified welders; or
(b) has an equivalent level of assurance as determined by a person qualified in structural design and welding practices in accordance with CSA W47.1.

7. Maintenance
7.3.3 Welding
Welding shall be in accordance with the requirements of CSA W59 and shall be performed under the guidance of a qualified engineer.

CSA Standards W59 provides guidance on weld design, fabrication techniques, inspection and other key considerations around welding for steel.

CSA Standard W59 requires that contractors performing work under this standard be certified under the requirements of CSA Standard W47.1 unless the Engineer of record approves the contractor for the work to be undertaken. CSA Standard W47.1 provides requirements for the qualification of welders and welding operators, welding procedures and welding supervisory and engineering personnel.

An organization meeting the requirements of CSA Standard W47.1 will have qualified welders, accepted welding procedures and accepted supervisory/engineering personnel. All elements of the welding operation will be independently verified by the Canadian Welding Bureau on an on-going basis.

For a listing of all organizations that currently meet the requirements of CSA Standard W47.1 please see *www.cwbgroup.org*.

Please note that there are no domestic or international equivalents to CSA Standard W47.1. Other national systems, such as that of the American Welding Society (AWS) do not include key concepts such as independent and ongoing verification and welding supervisors/engineers. The CWB strongly cautions the reader around accepting substitutions; doing so may contravene the intent of CSA B167 and place public safety at risk.

Welding Inspection

CSA Standard W59 requires that all welds be visually inspected. In addition, when required by contract weld inspection must be completed by certified welding inspectors or a welding inspection organization following the requirements of CSA Standard W178.2 or CSA Standard W178.1 respectively. It also requires that CSA Standard W59 be followed for the acceptance criteria for all welds. It should be noted that CSA Standard W178.2 has individual "product categories" that inspectors may qualify to, including one for CSA Standard W59.

For a listing of all organizations and individuals who currently meet the requirements of CSA Standard W178.1 and CSA Standard W178.2, please see *www.cwbgroup.org* .