

## ***CAN/CSA S269.3-92 Concrete Formwork Welding Requirements***

This document provides an overview of the requirements of CAN/CSA S269.3-09 Concrete formwork with respect to welding. It is designed to provide guidance for individuals and organizations involved in the design, fabrication, erection and use of concrete formwork in Canada.

This document is only for general guidance purposes; reference to the full text of CSA S269.3 should be made. For further information, please contact the CWB at 1-800-844-6790 or [info@cwbgroup.org](mailto:info@cwbgroup.org).

### **Introduction**

Welding is a key joining method used in the fabrication and erection of concrete formwork. To ensure welds of the highest quality and the safety of both the users of buildings and the general public, CSA Standard A269.3 provides specific requirements around the standard practices for concrete formwork and welded fabrication.

### **Welded Fabrication**

CSA A269.3 provides the following requirements:

#### ***3. Reference publications:***

*3.1 This Standard refers to the following publications and where such reference is made it shall be to the edition listed below including all amendments published thereto.*

<i>CSA W47.1</i>	<i>Certification of Companies for Fusion Welding of Steel Structures</i>
<i>CSA W47.2</i>	<i>Certification of Companies for Fusion Welding of Aluminum</i>
<i>CSA W59</i>	<i>Welded Steel Construction (Metal Arc Welding)</i>

CSA Standard W47.1 and CSA Standard W47.2 provide requirements for the qualification of welders and welding operators, welding procedures and welding supervisory and engineering personnel. A company certified to CSA W47.1 or CSA W47.2 Division 1 requires having full time engineer(s) and a company certified to Division 2 requires having retained part time engineer(s).

CSA Standard W59 and CSA Standards W59.2 provide 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 W59.2 requires that contractors performing work under this standard be certified under the requirements of CSA Standard W47.2.

An organization meeting the requirements of CSA Standard W47.1 and / or CSA Standards W47.2 will have qualified welders, operators, 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.

Please note that there are no domestic or international equivalents to CSA Standard W47.1 and / or CSA Standard W47.2. Other national systems, such as that of the American Welding Society (AWS) do not include key concepts such as independent and on-going verification and welding supervisors/engineers. The CWB strongly cautions the reader around accepting substitutions; doing so may contravene the intent of CSA S269.3 and place public safety at risk.

For a listing of all organizations that currently meet the requirements of CSA Standard W47.1 and CSA Standard W47.2 please see [www.cwbgroup.org](http://www.cwbgroup.org).

### **Welding Inspection**

CSA Standard W59 and CSA Standard W59.2 require 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 and CSA Standard W59.2 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 and one for CSA Standard W59.2.

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](http://www.cwbgroup.org).

