

CAN/CSA A448.1-10 Repair of Reinforced Concrete in Buildings

This document provides an overview of the requirements of CAN/CSA A448.1-10 Repair of reinforced concrete in buildings with respect to welding. It is designed to provide guidance for individuals and organizations involved in the procedures pertaining to repairs of reinforced concrete in buildings.

This document is only for general guidance purposes; reference to the full text of CSA A448.1 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 repair of reinforcing bars in concrete construction. To ensure welds of the highest quality and the safety of both the users of buildings and the general public, CSA Standard A448.1 provides specific requirements around the standard practices for repair of concrete and welded fabrication of rebar structures.

Welded Fabrication

CSA A448.1 provides the following requirements:

10.3.4 Welded splices

10.3.4.1 The welding of reinforcement shall be performed only with the approval of the engineer and in accordance with the requirements of CSA W186. Welding shall be performed by certified personnel only.

CSA Standard W186 provides requirements for the qualification of welders and welding operators, welding procedures and welding supervisory and engineering personnel. A company certified to CSA W186 Division 1 requires having full time engineer(s) and a company certified to Division 2 requires having retained part time engineer(s).

Please note that there are no domestic or international equivalents to CSA Standard W186. 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 A448.1 and place public safety at risk.

For a listing of all organizations that currently meet the requirements of CSA Standard W186 please see www.cwbgroup.org.

Welding Inspection

CSA Standard W186 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 W186 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.