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**CSA W117.2:19**  
National Standard of Canada



# **Safety in welding, cutting, and allied processes**



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| <b>L. Genesove</b>    | Ontario Ministry of Labour,<br>Toronto, Ontario, Canada  | <i>Non-voting</i> |
| <b>D. Green</b>       | DDC Technology Ltd,<br>Rocanville, Saskatchewan, Canada<br><i>Category: Producer Interest</i>                      |                   |
| <b>T. Griffin</b>     | Manitoba Dept of Labour and Immigration,<br>Winnipeg, Manitoba, Canada<br><i>Category: Regulatory Authority</i>    |                   |
| <b>C. Haas</b>        | Haas Inspection Services,<br>Portugal Cove, Newfoundland and Labrador, Canada                                      | <i>Non-voting</i> |
| <b>D.B. Hardy</b>     | Plumbers, Steam Fitters and Welders UA Local 46,<br>Toronto, Ontario, Canada<br><i>Category: User Interest</i>     |                   |
| <b>S. Hedrick</b>     | American Welding Society,<br>Miami, Florida, USA   | <i>Non-voting</i> |
| <b>F. Hegholz</b>     | Rostec Enterprises Inc,<br>Rosalind, Alberta, Canada   | <i>Non-voting</i> |
| <b>R. Hopkins</b>     | Infrastructure Health and Safety Association,<br>Mississauga, Ontario, Canada                                      | <i>Non-voting</i> |
| <b>D.L. Hurd</b>      | MJH Environmental Indoor Air Quality Specialist,<br>Elizabethtown, Ontario, Canada                                 | <i>Non-voting</i> |

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|------------------------|--|-------------------|
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| <b>J.M. LeBlanc</b>    | Louis Hébert Uniforme Inc,<br>Laval, Québec, Canada  | <i>Non-voting</i> |
| <b>C.J. LeBlanc</b>    | Nova Scotia Department of Labour & Advanced Education,<br>Sydney, Nova Scotia, Canada<br><i>Category: Regulatory Authority</i> |                   |
| <b>J.F. Legvari</b>    | Kubota Materials Canada Corporation,<br>Orillia, Ontario, Canada<br><i>Category: Producer Interest</i>                         |                   |
| <b>G.M. Liss</b>       | University of Toronto,<br>Toronto, Ontario, Canada   | <i>Non-voting</i> |
| <b>D.R. Luciani</b>    | CWB Group,<br>Milton, Ontario, Canada  | <i>Non-voting</i> |
| <b>H. Lueke</b>        | Lueke Consulting Inc,<br>Sherwood Park, Alberta, Canada  | <i>Non-voting</i> |
| <b>A. MacGillivray</b> | Ontario Power Generation,<br>Oshawa, Ontario, Canada<br><i>Category: User Interest</i>   |                   |
| <b>D. MacKinnon</b>    | Alberta Pipe Trades College,<br>Edmonton, Alberta, Canada<br><i>Category: User Interest</i>                                    |                   |
| <b>J.S. MacRae</b>     | Hamilton, Ontario, Canada  | <i>Non-voting</i> |
| <b>R.J. Malcolm</b>    | MWG Apparel Corp.,<br>Winnipeg, Manitoba, Canada   | <i>Non-voting</i> |
| <b>A.F. Manz</b>       | AF Manz Associates,<br>Union, New Jersey, USA  | <i>Non-voting</i> |
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| <b>D.S. Nix</b>       | Compliance InSight Consulting Inc,<br>Kitchener, Ontario, Canada  | <i>Non-voting</i> |
| <b>M. Noroozian</b>   | Canaweld Inc,<br>Vaughan, Ontario, Canada   | <i>Non-voting</i> |
| <b>S. Pitre</b>       | Plumbers, Steam Fitters and Welders UA Local 46,<br>Toronto, Ontario, Canada  | <i>Non-voting</i> |
| <b>W.J. Poole</b>     | West Haldimand and Norfolk General Hospital,<br>Hagersville, Ontario, Canada  | <i>Non-voting</i> |
| <b>K. Porter</b>      | Service NL Occupational Health and Safety Div,<br>St. John's, Newfoundland and Labrador, Canada                           | <i>Non-voting</i> |
| <b>M. Purvis</b>      | Aggregate Industries,<br>Saugus, Massachusetts, USA   | <i>Non-voting</i> |
| <b>A.E. Rocheleau</b> | General Dynamics Land Systems-Canada Ltd,<br>London, Ontario, Canada<br><i>Category: User Interest</i>                    |                   |
| <b>M. Russo</b>       | Infrastructure Health and Safety Association,<br>Mississauga, Ontario, Canada<br><i>Category: General Interest</i>        |                   |
| <b>B. Spurrell</b>    | Nalcor Energy Lower Churchill Project,<br>St. John's, Newfoundland and Labrador, Canada<br><i>Category: User Interest</i> |                   |
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# Preface

This is the seventh edition of W117.2, *Safety in welding, cutting, and allied processes*. It supersedes the previous editions published in 2012, 2006, 2001, 1994, 1987, and 1974. Its subject is the health and safety of welders and welding operators.

This Standard has been developed through a consensus process that ensures that the requirements will be accepted and followed throughout the welding industry. The goal is to encourage fresh thinking and attitudes. Everyone involved in the industry must become aware of the importance of welding safety and the need to make continual improvements in the welding environment over time.

This edition of W117.2 has been revised to reflect changes that have occurred in the Canadian welding industry in response to the most recent review of injuries and fatalities within the industry. These changes are presented with the expectation that they will be implemented and with the hope of preventing further injuries and fatalities.

This Standard was prepared by the Technical Committee on Safety in Welding, Cutting, and Allied Processes, under the jurisdiction of the Strategic Steering Committee on Construction and Civil Infrastructure, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

## Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
- 3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
- 4) *To submit a request for interpretation of this Standard, please send the following information to [inquiries@csagroup.org](mailto:inquiries@csagroup.org) and include “Request for interpretation” in the subject line:*
  - a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
  - b) *provide an explanation of circumstances surrounding the actual field condition; and*
  - c) *where possible, phrase the request in such a way that a specific “yes” or “no” answer will address the issue.*

*Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are available on the Current Standards Activities page at [standardsactivities.csa.ca](http://standardsactivities.csa.ca).*
- 5) *This Standard is subject to review within five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to [inquiries@csagroup.org](mailto:inquiries@csagroup.org) and include “Proposal for change” in the subject line:*
  - a) *Standard designation (number);*
  - b) *relevant clause, table, and/or figure number;*
  - c) *wording of the proposed change; and*
  - d) *rationale for the change.*

# CSA W117.2:19

## ***Safety in welding, cutting, and allied processes***

### **1 Scope**

#### **1.1 Objective**

##### **1.1.1**

This Standard provides minimum requirements and recommendations to protect persons who work in an environment affected by welding, cutting, and allied processes from illness and injury and to prevent damage to property arising from the installation, operation, and maintenance of equipment used in these processes.

##### **1.1.2**

This Standard specifies the elements of a welding health and safety program (see Clause 4) that are necessary to implement the requirements and recommendations specified in this Standard.

#### **1.2 Applicability**

##### **1.2.1**

This Standard applies to all personnel working in an environment affected by welding, cutting, and allied processes.

##### **1.2.2**

The requirements of this Standard apply to the processes illustrated in the Master chart of welding and allied processes (see Figures A.1 and A.2).

**Note:** *One should consult the authority having jurisdiction, together with this Standard, to ensure compliance to mandatory legislative requirements.*

#### **1.3 Exclusions**

This Standard does not apply to

- a) the design or manufacture of welding or safety equipment; and
- b) storage, use, and handling of natural gas and propane in accordance with CSA B149.1 and CSA B149.2.

#### **1.4 Terminology**

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.