

## WELDING MANUAL

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**This manual is designed for employees who weld on pipeline equipment and facilities. It is used by field-based operations employees, contractors, and engineering staff as a reference guide for topics related to cutting and welding pipeline equipment and facilities.**

This manual consists of three sections:

1. Welder Qualification
2. Maintenance and Repair Welding
3. Gas Cutting

Section	Section Title	Section Description
1	Welder Qualification	<ul style="list-style-type: none"> <li>• Explains how to qualify welding personnel, including what types of welding tests are performed, when tests are required, and test weld acceptance standards.</li> <li>• Provides procedures for testing coupons.</li> <li>• Contains information in the Appendices regarding welding procedure specifications (WPS).</li> </ul>
2	Maintenance and Repair Welding	<ul style="list-style-type: none"> <li>• Identifies requirements for welding on main lines, pipe and fittings, and tanks.</li> <li>• Includes information on setting up and inspecting welding equipment and defect repair.</li> <li>• Provides procedures for reducing magnetic fields, measuring tank strain, welding on tanks, butt welding, measuring steel thickness, and more.</li> <li>• Contains information on mag particle and ultrasonic inspection.</li> <li>• Includes safety “infograms” in the Appendices (checklists for setting-up welding equipment;</li> </ul>

		using welding equipment; welding ergonomics; and more). Note: if clients want to use these infograms, they will have to contact the Canadian Centre for Occupational Health and Safety for permission. (For more information on CCOHS refer clients to <a href="http://www.ccohs.ca">www.ccohs.ca</a> ).
3	Gas Cutting	<ul style="list-style-type: none"> <li>• Identifies requirements for gas cutting equipment.</li> <li>• Provides procedures for connecting and operating gas cutting equipment.</li> <li>• Includes safety “infograms” in the Appendices (checklists for handling cylinders; regulator set-up; dealing with leaking and overheating cylinders; and more).</li> </ul>