



IOM International Organization for Migration
OIM Organisation Internationale pour les Migrations
OIM Organización Internacional para las Migraciones

WELDING GLOSSARY

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WORD	DEFINITION	WORD (NATIONAL LANGUAGE)	DEFINITION (NATIONAL LANGUAGE)
Abrasive	A material, such as sand, silicon or crushed stone, used for surface cleaning		
Acetylene Gas	A chemical combination of two elements: carbon and hydrogen		
Alloy	A metal that is made by mixing two or more metals, or a metal and another substance		
Alternating Current (AC)	Is an electrical current in which magnitude and direction change in cycles, as opposed to direct current, in which direction is constant		
Arc Welding (Shielded Metal Arc Welding)	A welding process where similar materials are joined with a heating process caused by an electric arc. In the most common use, this process includes the use of a filler metal. Arc welding refers to a group of welding processes that use a welding power supply to create an electric arc between an electrode and the base material to melt the metals at the welding point. They can use either direct (DC) or alternating (AC) current, and consumable or non-consumable electrodes. The welding region is sometimes protected by some type of inert or semi-inert gas, known as a shielding gas, and/or an evaporating filler material		
Argon	Is a chemical element designated by the symbol Ar. Argon has atomic number 18 and is the third element in group 18 of the periodic table (noble gases). Argon is present in the Earth's atmosphere at slightly less than 1%, making it the most common noble gas on Earth.		
Beveling	Preparing the ends of the pipes to be welded by machining them so that the angle of the		

	edges is anything but 90°		
Brazing	A process where metals are joined by using a filler metal that melts at a temperature above 450°C		
Butt Joint (Butt Weld)	A joint (or weld) where the two pieces being connected come directly together in the same plane		
Buzz Box	Another term for a general-purpose arc welder. The name is derived from the sound made when the welder is running		
Consumable & non consumable electrodes -	Consumable electrodes provide a path for the current. They also supply filler metal to the joint. Non- consumable electrodes are only used as a conductor for the electrical current, such as in gas tungsten arc welding		
Cutting Tip	The part of an oxygen torch that directs the flow of the gas.		
Cutting Torch	The device used in oxygen cutting to control and direct the flow of the gasses used for cutting and heating metal		
Cylinder	A container to store and transport compressed gas		
Defective Weld	A weld with one or more of the following defects: Porosity, undercut, slag inclusion and improper weld size		
Direct Current (DC)	- Or " <i>continuous current</i> ," is considered as the constant flow of electrons in the single direction from low to high potential		
Down Hand Weld	A vertical weld where the welder starts at the top and works downward		
Edge Weld	A weld where the edges of two pieces come together		
Electrode (Arc Welding)	A rod made up of filler metal with a coating on it designed to aid and protect the bead during the welding process.		
Electrode Holder	The "handle" portion of the arc welder that holds the electrode in place.		
Face Shield (Helmet)	A safety device worn over the face to protect the eyes and face from the arc, sparks and molten metal. Arc welding without proper eye protection can lead (quickly) to permanent		

	damage to the eyes.		
Ferrous	Containing or relating to iron		
Fillet Weld	A weld joining two pieces of metal that are more or less perpendicular to each other		
Filler metal	Is a metal added in the making of a joint through welding, brazing or soldering. Various types of filler metals exist		
Fixture	A tool or device used to hold pieces in place for welding.		
Flat Weld	A weld where the pieces being joined come together horizontally in front of and below the welder		
Flux	A substance that facilitates soldering, brazing and welding by chemically cleaning the metals to be joined		
Fuel Gases	Gases mixed with oxygen in heating and cutting operations.		
Gas Tungsten Arc Welding (GTAW) or (TIG)	Commonly known as tungsten inert gas (TIG) welding ; an arc welding process that uses a non-consumable tungsten electrode to produce the weld		
Hand Shield	Similar to a <i>Face Shield</i> or <i>Helmet</i> , but held in front of the face rather than worn		
Iron	A base element that is the primary substance in the makeup of steel, cast iron and wrought iron		
Inert gas/Shielding gas	A gas that does not normally combine chemically with materials. Their purpose is to protect the weld area from atmospheric gases, such as oxygen, nitrogen, carbon dioxide and water vapor		
Lap Joint	A joint where two pieces of metal lap over each other, allowing a bead to be placed between the edge of one piece and the face of the other		
MIG Welding (Metal Inert Gas)	Also known as wire-feed welding, although it is possible to do wire-feed welding without the inert gas. Metals that are difficult to arc weld may be MIG welded		
Mild Steel	Steel with less than 0.15%		

	carbon. (Also called low carbon steel). Most steel in common use is mild steel.		
Out-Of-Position Weld	Any weld where the work is not flat in front of the welder.		
Overhead Weld	An inverted weld where the pieces being joined are above the welder.		
Oxyfuel	Pure oxygen combined with gas		
Plasma	A gas that has been heated to the point where it will conduct electricity		
Plasma Cutting	A cutting process where the metal is heated to the melting point by an arc through the plasma and then removed by the pressure of the gas as directed by the nozzle. CNC (computer numeric control) plasma cutters are used for precise cutting of complex patterns in metal.		
Polarity	The polarity of a machine refers to direction of current flow. Polarity can only be obtained on a DC machine.		
Radiation	Energy from heat or light that you cannot see.		
Shielding Gas	<i>See Inert gas</i>		
Slag Inclusion	Non-metallic material trapped in a weld.		
Soldering	A method of joining metal parts using a filler material (solder) that has a melting temperature below 450°C .		
Spot Weld	A weld between two overlapping pieces of material; normally used for sheet metal		
Tack Weld	A small weld used to hold pieces of an assembly in place prior to the final (continuous) welding.		
TIG Welding (Tungsten Inert Gas)	A welding process where an inert gas protects the molten metal from the atmosphere to produce a high quality weld.		

Tungsten	A non-consumable material used in TIG welding to carry current to the weld puddle. (very hard, heavy, steel-grey-to-white transition metal; W in the periodic table.)		
Up -Hand Weld	A vertical weld where the welder starts at the bottom and works upward.		
Ventilate	To cause fresh air to enter and move around an enclosed space		
Weave Bead	A welding pattern often used in butt welds where the welder moves the arc back and forth across the joint while also moving along it		
Weld	To join two pieces of metal together permanently by melting the parts that touch.		
Welder (noun)	A person whose job is welding		
Welding Power Supply	A device that provides an electrical current to perform welding		
Welding Rod	A means of delivering filler metal to the weld. In arc welding, the rod is called an electrode		
Voltage (V)	Is the pressure required to move the electric current		

This glossary was based on parts of the Welding Terminology prepared by the Winnipeg Technical College and the Department of Labour and Immigration of Manitoba available at:
<http://www.jcfswinnipeg.org/documents/Welders-Terminology.pdf>