

WELDING TECHNICAL TERMS - 5

1. **OXIDIZED** - combined with oxygen.
2. **OXIDIZING FLAME** - the flame produced by an excess of oxygen in the torch mixture. The excess oxygen tends to burn the molten metal.
3. **OXYACETYLENE WELDING (OXW)** - a process in which oxygen and acetylene are combined and burned to provide the heat for welding.
4. **OXYGEN (O₂)** - a colorless, odorless gas making up about one-fifth of the earth's atmosphere. Used in OFW and OCF to support combustion.
5. **PARTS POSITIONER** - a device that holds the weldment and rotates or otherwise positions it for welding operations. For robotic welding, the positioned may be positioned by a controller and computer program.
6. **PENETRANT** - a liquid applied to the surface of a weld to locate discontinuities and make them visible.
7. **PENETRATION** - the depth of fusion of the weld below the surface.
8. **PETROLEUM-BASED** - term used to describe lubricants. Flammable lubricants derived from petroleum must not be used to lubricate any part of a welding or cutting outfit.
9. **PHYSICAL PROPERTIES** - the physical characteristics used to identify or describe a metal, such as color, melting temperature, or density.
10. **PINCH FORCE** - in short circuiting GMAW metal transfer, the magnetic force that squeezes off the droplet of the molten electrode metal.
11. **PIPE SCHEDULE NUMBER** - a one-, two-, or three-digit number that classifies pipe. Schedule numbers are determined by a combination of the pipe's inside diameter and its wall thickness.
12. **PLASMA** - a temporary physical state assumed by a gas after it has been exposed to , and reacted to, an extremely high temperature.
13. **PLASMA ARC CUTTING (PAC)** - a process using an electric arc and fast-flowing ionized gases to cut metal.
14. **PLASTIC** - soft and easily shaped: a metal that is in a plastic state is almost molten.
15. **PLUG WELD** - weld made through a hole in one piece of metal that is lapped over another piece.
16. **POLARITY** - direction of the flow of electrons in a closed direct current welding circuit. When the electrons flow from the electrode to the base metal, the polarity is DCEN (direct current electrode negative) or DCSP. When the current flows from the base metal to the electrode, the polarity is DCEP (direct current electrode positive), or DCRP.
17. **POROSITY** - the presence of gas pockets or voids in weld metal.
18. **POST FLOW** - shielding gas flow that continues for a short time after the weld current stops.
19. **POUNDS PER SQUARE INCH (PSI)** - the unit of measurement for pressure in the US conventional system.
20. **PREHEATING** - a process that heats the metal to a specified temperature prior to a surfacing or welding operation. Also, the process of heating base metal to its kindling temperature before cutting.