

# Welding Technical Terms - 3

1. **HEAT-AFFECTED ZONE (HAZ)** – the area of the base metal around the joint that has been changed (mechanically or in microstructure) by welding, brazing, or soldering.
2. **HORIZONTAL (2G) POSITION** – weld performed on a nearly horizontal weld axis and a nearly vertical surface.
3. **HOT PASS** – the second pass in a multiple-pass welding joint.
4. **INCLUSIONS** – foreign matter introduced to, and remaining in, welds or castings.
5. **INCOMPLETE FUSION** – failure of weld metal to fuse completely with base metal or the proceeding bead.
6. **INSPECTION** – the process of examining welds for suitability without damaging or destroying them.
7. **JOINT PENETRATION** – the depth that a weld extends into the joint from the surface.
8. **KEYHOLE** – an enlarged root opening that looks like an old-fashioned keyhole.
9. **LACK of FUSION** – a weld defect resulting from failure of the weld metal and base metal to mix (fuse) completely.
10. **LEG OF THE FILLET WELD** – the shortest distance from the toe of the weld to the point where the pieces of base metal touch.
11. **LOW HYDROGEN ELECTRODES** – electrodes used for SMAW that have little or no hydrogen in them.
12. **MAGNETIC FIELD** – field created around a wire or electrode whenever electricity travels through that wire or electrode.
13. **MAGNETIC PARTICLE INSEPECTION** – procedure used to check a weld for flaws, using a liquid that contains magnetic particles. The particles are drawn into the flaws when a magnetic field is applied to the weldment.
14. **MANIFOLD** – an assembly of pipes that delivers gas from several cylinders into a single pipe for distribution to several work stations.
15. **MANUAL WELDING** – welding in which time, distance, speed and other variables are controlled by the person making the weld.
16. **MECHANICAL PROPERTIES** – description of a material's behavior when force is applied to determine that material's suitability for mechanical use. Examples – tensile strength, hardness, modulus of elasticity, elongation, fatigue limit.
17. **METAL TRANSFER** – movement of metal from one surface to another (as in metal transfer wear)
18. **METAL-TO-METAL WEAR RESISTANCE** – the ability of a material to resist wear from metal-to-metal contact.
19. **MIXING CHAMBER** – part of the welding torch in which gases come together and are mixed before combustion.
20. **MULTIPLE-PASS Weld** – a welding joint requiring many passes.