

WELDING TECHNICAL TERMS - 8

1. **SHIELDED METAL ARC WELDING (SMAW):** a welding process in which the base metal is heated to fusion temperature by an electric arc created between a covered metal electrode and the base metal.
2. **SHIELDING GAS:** a gas, usually inert, that is used to blanket the weld area and prevent contamination from the air.
3. **SHORT CIRCUIT:** in the short circuiting transfer process, the condition that occurs when the electrode touches the base metal, causing metal from the electrode to enter the weld.
4. **SIDE BEND:** a test performed by bending a weld sample to the side toward the thickness of the metal. The side bend is used on thick material.
5. **SINGLE-STAGE REGULATOR:** a regulator that reduces cylinder pressure in one stage (step).
6. **SLAG:** the hard, brittle metal that covers a finished shielded metal arc, flux cored arc, and submerged arc welding beads; metal oxides and other materials that form on the underside of a flame or arc cut.
7. **SLAG INCLUSIONS:** nonfused, nonmetallic substances in the weld metal.
8. **SLOPE:** the downward curve of the volt-ampere diagram for an arc welding machine.
9. **SOLDERING:** a group of welding processes that join materials by heating them to the soldering temperature and by using a filler metal having a liquids below 840 F (450 C) and below the solidus of the base metals.
10. **SOLID STATE WELDING:** a group of welding processes that weld metals at temperatures below the melting point of the base metal, without the addition of filler metal. Examples are friction, explosion, and ultrasonic welding.
11. **SOLIDIFY:** to become solid or hard.
12. **SPARK LIGHTER:** device that creates a spark to ignite the oxyfuel gas torch flame.
13. **SPATTER:** scattering of molten metal droplets over the surface near an arc weld.
14. **SPOOL:** the drum, mounted on the wire drive mechanism that contains the electrode wire for gas metal arc welding.
15. **SPRAY TRANSFER:** a gas metal arc process which has an arc voltage high enough to continuously transfer the voltage high enough to continuously transfer the electrode metal across the arc in small globules.
16. **SQUEEZE TIME:** in resistance welding, the time, measured in cycles that the electrodes are under a force to clamp the parts and ensure good electrical flow.
17. **STAGGERED INTERMITTENT WELDS:** intermittent welds, made on both sides of a joint that are offset from each other.
18. **STAINLESS STEEL:** alloy steel, containing chromium that resists corrosion and oxidation (rusting).
19. **STEP-DOWN TRANSFORMER:** electrical device used in welding machines that reduces voltage and increases amperage in its secondary circuit.
20. **STRAIN:** the reaction of an object to stress.