Across
3. A device which transfers current to a continuous electrode
7. Weld metal in excess of the quantity required to fill a joint
8. Cavity type discontinuities formed by gas entrapment during solidification
9. In arc and gas welding, the metal particles expelled during welding and which do not form a part of the weld.
11. A groove melted into the base metal adjacent to the toe or root of a weld and left unfilled by weld metal
14. The metal (material) to be welded, brazed, soldered, or cut.
15. The exposed surface of a weld on the side from which welding was done
18. The metal (material) to be added in making a welded, brazed, or soldered joint
19. An arc welding process which produces coalescence of metals by heating them with an arc between a continuous filler metal (consumable) electrode and the work. Shielding is obtained entirely from an externally supplied gas or gas mixture. Some methods of this process are called MIG or CO2 welding (nonpreferred terms).
21. A weld of approximately triangular cross section joining two surfaces approximately at right angles to each other in a lap joint, T-joint or corner joint
22. In arc welding, a depression at the termination of a weld bead or in the molten weld pool

Down
1. A device which directs shielding media
2. Protective gas used to prevent atmospheric contamination
4. Conventional mode for MIG welding. This general purpose MIG welding mode uses constant voltage for short arc, globular and spray transfer
5. The junction between the face of a weld and the base metal
6. A depression on the face of the weld or root surface extending below the surface of the adjacent base metal
10. A fracture-type discontinuity characterized by a sharp tip and high ratio to length and width to opening displacement
12. The distance from the root of the joint to the toe of the fillet weld
13. Protection equipment worn to protect the welder’s face and neck
16. The protrusion of weld metal beyond the toe, face, or root of the weld
17. A type of weld bead made without appreciable weaving motion
20. The percentage of time during an arbitrary test period, usually 10 min. during which a power supply can be operated at its rated output without overloading