as-welded: adj. pertaining to the condition of weld metal, welded joints, and weldments after welding but prior to any subsequent thermal, mechanical, or chemical treatments.

backgouging: the removal of weld metal and base metal from the weld root side of a welded joint to facilitate complete fusion and complete joint penetration upon subsequent welding from that side.

backhand welding: a welding technique in which the welding torch or gun is directed opposite to the progress of welding.

backing: a material placed at the root of a weld joint for the purpose of supporting molten weld metal so as to facilitate complete joint penetration. The material may or may not fuse into the joint. See also retainer.

backing gas: a gas, such as argon, helium, nitrogen, or reactive gas, which is employed to exclude oxygen from the root side (opposite from the welding side) of weld joints.

base metal: the metal or alloy that is welded, brazed, or cut.

head-up cycle: part of the butt-fusing process to ensure complete contact between the heater surface and the pipe ends. The head-up cycle begins when initial contact of the pipe ends to the heater is made at butt-fusing pressure until an indication of melt is observed around the pipe circumference.

bond line (brazing and thermal spraying): the cross section of the interface between a braze or thermal spray deposit and the substrate.

braze: a joint produced by heating an assembly to suitable temperatures and by using a filler metal having a liquidus above 840°F (450°C) and below the solidus of the base materials. The filler metal is distributed between the closely fitted surfaces of the joint by capillary action.

brazer: one who performs a manual or semiautomatic brazing operation.

brazing: a group of metal joining processes which produces coalescence of materials by heating them to a suitable temperature, and by using a filler metal having a liquidus above 840°F (450°C) and below the solidus of the base materials. The filler metal is distributed between the closely fitted surfaces of the joint by capillary action.

brazing operator: one who operates machine or automatic brazing equipment.

brazing temperature: the temperature to which the base metal(s) is heated to enable the filler metal to wet the base metal(s) and form a brazed joint.

brazing temperature range: the temperature range within which brazing can be conducted.