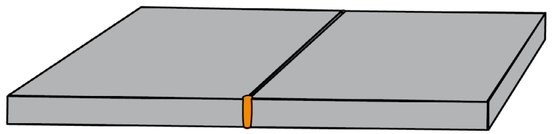
Common Welding Joints Kit

Learn to identify the most common welding joints.

Access your curriculum online:
https://www.realityworks.com/commonwelding-downloads

Butt Joint – Tack Only

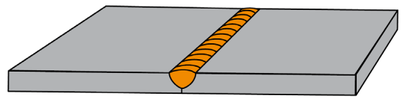
A



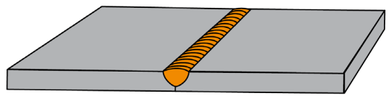
Typically used on materials less than a ¼" or where full joint penetration isn't required.

Butt Joint – SMAW and GMAW

B



Butt Joint - SMAW



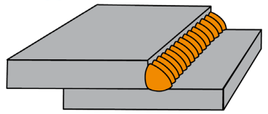
Butt Joint - GMAW

When two pieces of material are "butted" together to create a longer unit.

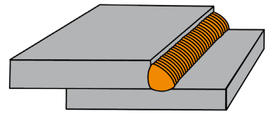
One model included with welds on each side.

Lap Joint – SMAW and GMAW

C



Lap Joint - SMAW



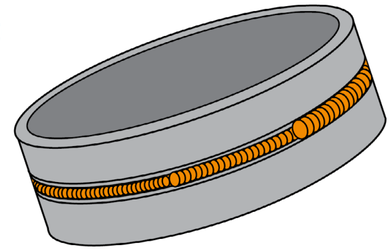
Lap Joint - GMAW

Formed when a piece of material overlaps another piece of material in a parallel format.

One model included with welds on each side.

V-Groove Butt Joint – 6-inch Pipe

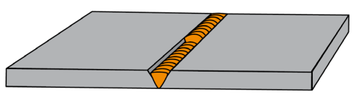
D



Used to connect the ends of pipes together to create a pipeline, or join shorter pieces to make a pipe spool that will meet the piping requirement.

Groove Joint – SMAW 2-Pass

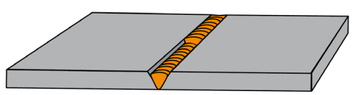
E



Has 3 main parts to it: the bevel angle, a root opening, and a root face if applicable. This weld is done with the SMAW process and has a ROOT PASS and COVER PASS to make a 2-pass weld. More passes can be done if needed, depending on the weld.

Groove Joint – GMAW 2-Pass

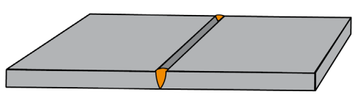
F



Has 3 main parts to it: the bevel angle, a root opening, and a root face if applicable. This weld is done with the GMAW process and has a ROOT PASS and COVER PASS to make a 2-pass weld, More passes can be done if needed, depending on the weld.

Groove Joint – Tack Only

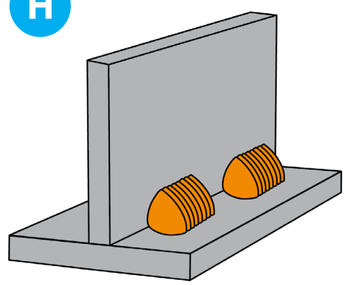
G



Used when a welder cannot easily get access to both sides of the joint. The weld zone is tapered to create a "V" shape to meet required standards. They are tacked at the ends to maintain the root opening as designated by a WPS.

Tee Joint – Staggered Intermittent Weld

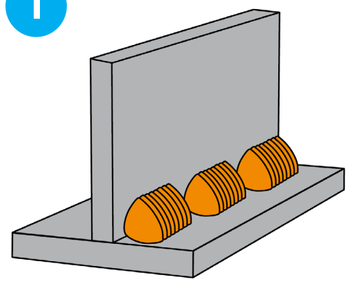
H



Made when the weld joint doesn't require a full-length weld, but the welds are offset from each other on the opposite sides of the weld joint.

Tee Joint – Chain Intermittent Weld

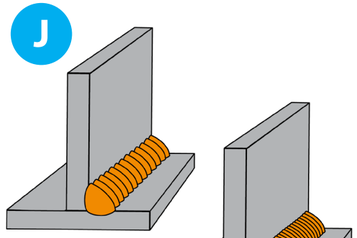
I



Made when the weld joint doesn't require a full-length weld. This may be used to prevent warpage of a finished component, or when materials of different thickness meet.

Tee Joint – SMAW and GMAW

J



Tee Joint - SMAW

Tee Joint - GMAW

When two pieces of material intersect at a 90-degree angle. This results in the weld being made on the edge of one piece and the face of the other piece.

One model included with welds on each side.

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