4-H WELDING
County Only Project

Requirements:

Must be in grade 6 or above to participate. Any welding process and mode of transfer is allowed but must be noted on the Information/Craft Card.

Grades 6 & 7 Beginner
Complete and exhibit one of the following:
a. 6" T fillet
b. 6" Lap Joint
c. 6" Butt Joint
Welds will be judged on weld consistency in weld size and length and lack of imperfections (undercut, underfill, etc.) See attached drawings for specifics.

Grades 8 & 9 Intermediate
Complete and exhibit one of the following:
a. a sample weld using a flat position pipe to flat.
b. a joint listed above using overhead welds.
c. a small project using overhead welds
Welds will be judged on weld consistency in weld size and length and lack of imperfections (undercut, underfill, etc.) See attached drawings for specifics.
Must supply a simple drawing with the correct weld symbol called out for the weld used.

Grades 10 & 11 Advanced
Complete and exhibit one of the following:
a. A pipe to pipe weld in position. (looking for a hot pass, multiple filler passes, and a weaved cap)
b. a joint listed above using vertical welds correct for the welding process.
c. a small project using out of position welds.
Welds will be judged on weld consistency in weld size and length and lack of imperfections (undercut, underfill, etc.) See attached drawings for specifics.
Must supply a simple drawing with the correct weld symbol called out for the weld used.

Grade 12 Senior
Member **may** choose to make their project using any or multiple welding processes. Accompanying this **shall** be a paper explaining the use of different gases, different alloys and different wires. Also, must have a simple drawing and call out 3 different types of welds used.

*All projects must be accompanied by the provided welding/craft card.

Welding Information/Craft Card

Name_____ County_____ Grade_____

Division: **Beginner** **Intermediate** **Advanced** **Senior**

Process(s) used (Circle): GMAW (MIG) GTAW (TIG) SMAW (Stick) FCAW (Flux Core)

Other:

Electrode number:

Electrode diameter:

Amperage or dial setting:

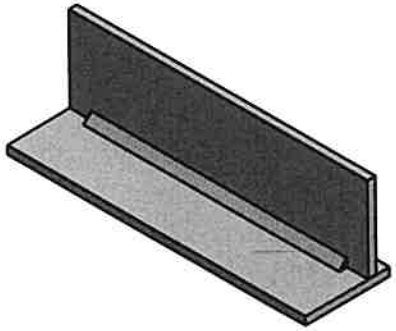
Polarity setting:

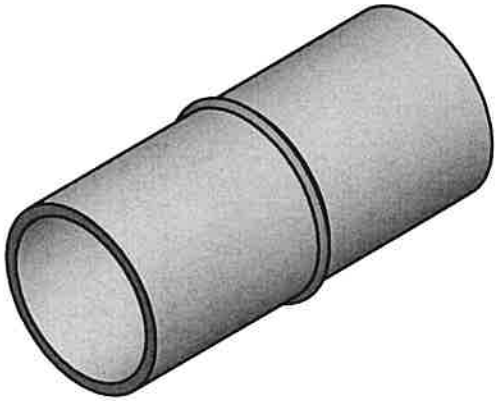
Safety equipment used:

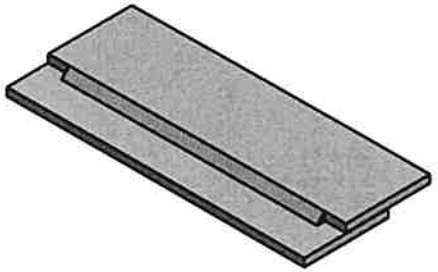
Joint Type if applicable:

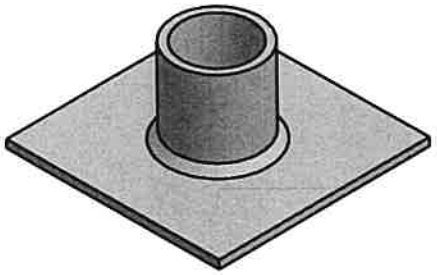
Joint Examples

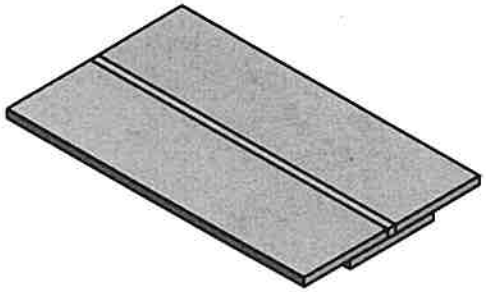
Clay Co 4H Welding





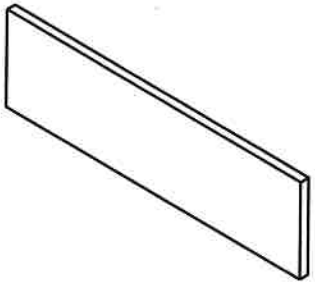


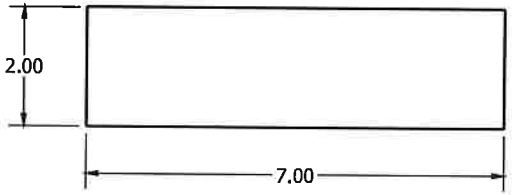


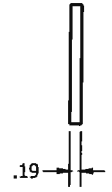


What You'll Need for the joint welds

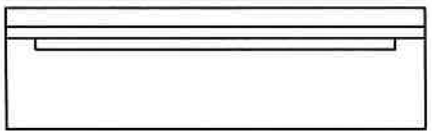
- 2 or 3 pcs of 2"x7" Mild steel plate

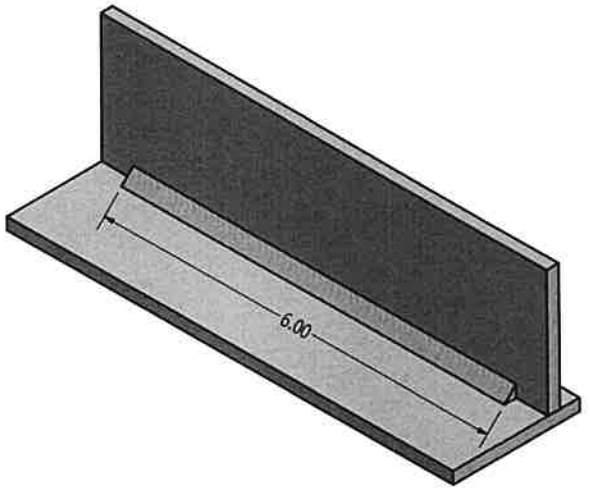






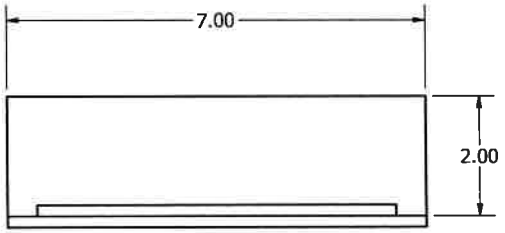
T Fillet

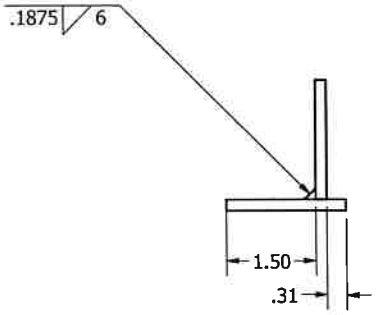




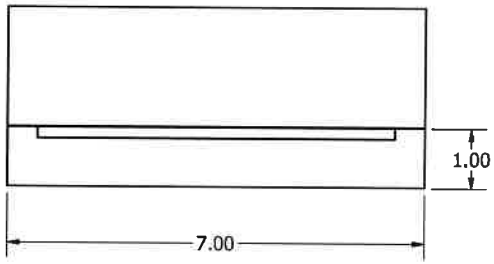
Notes:

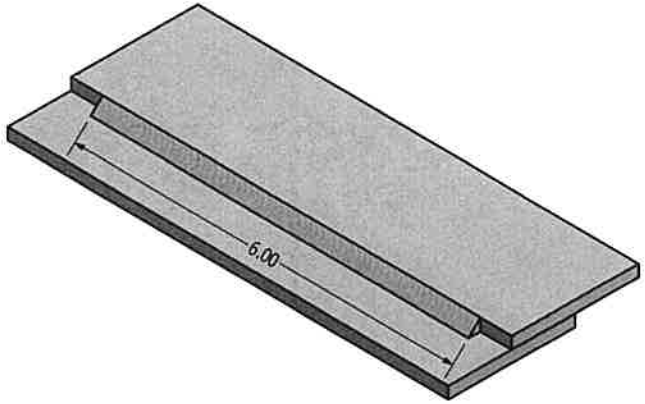
- All tacks on the back of the part
- One 6" weld centered on part.
- Leave .500" on each end of weld.





Lap Joint





Notes:

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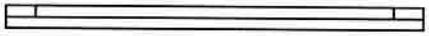
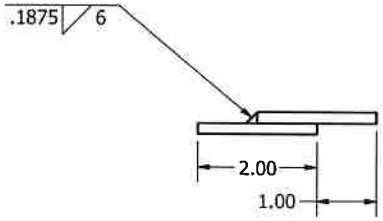
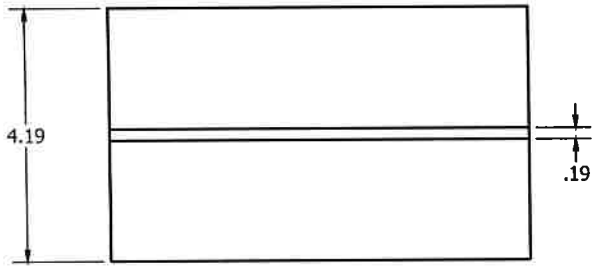
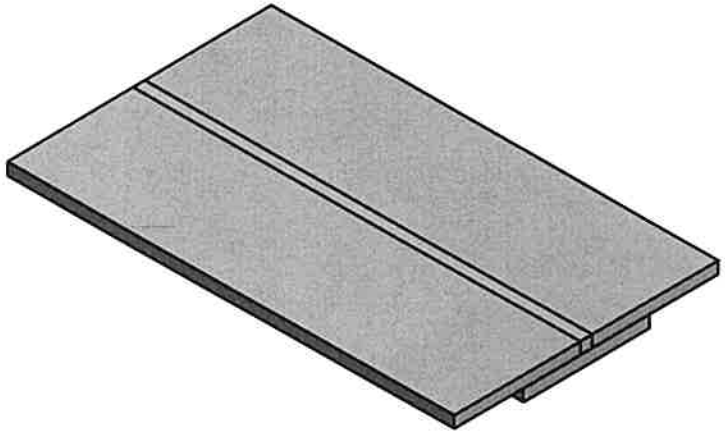




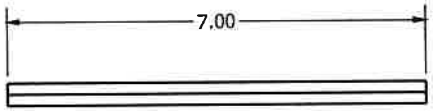
Butt Weld

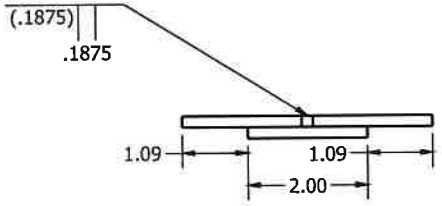




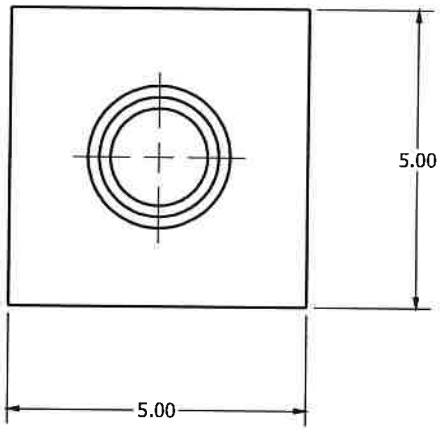
Notes:

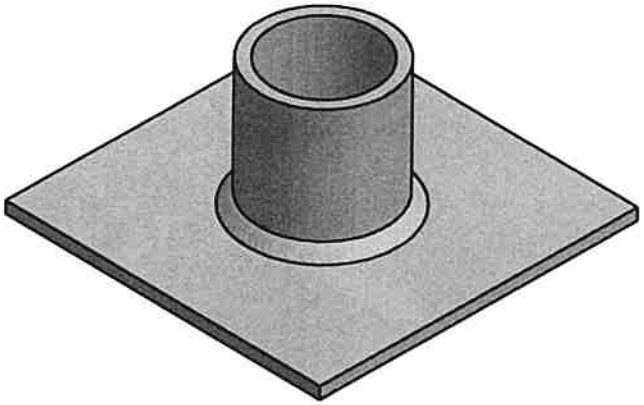
- All tacks on the back of the part
- Be sure to start with a .1875" gap
- Weld gap full to each end
- This part requires 3 pcs of plate.
- Use the third as a backing plate





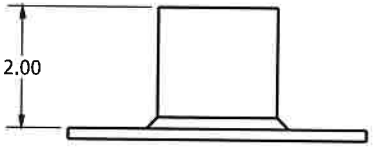
Pipe to Plate

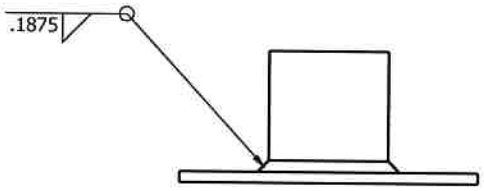




What You'll Need for this weld

- 1pc of 5"x5" Mild steel plate
- 1pc of 2" sch40 pipe 2" long

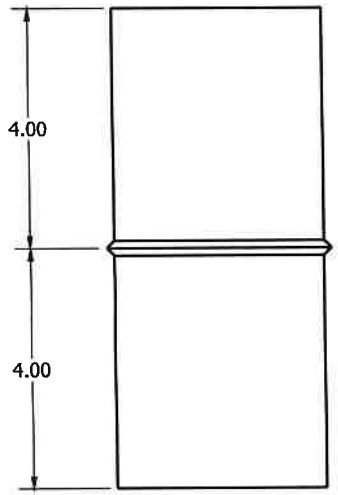


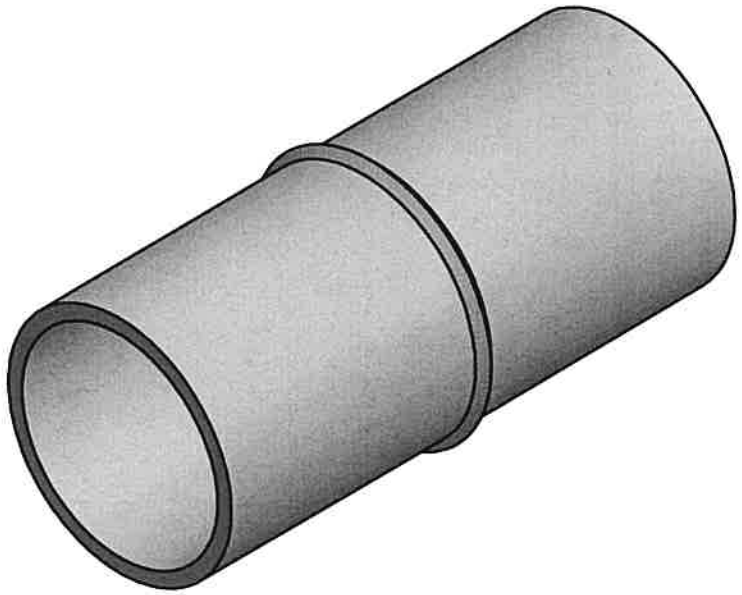


Notes:

- Center pipe on blank
- Weld continous all the way around

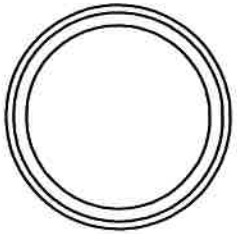
Pipe to Pipe





What You'll Need for the pipe to pipe weld

- 2 pcs of 3"sch 40 pipe 4" long



Notes:

- Grind bevel on pipe before welding
- Weld continous all the way around