

WELDING SYMBOLS



TEST YOUR KNOWLEDGE

Welding symbols are used to communicate vital information about welding requirements. Many different people across an organization must be able to write and/or interpret welding symbols. Unfortunately, even in manufacturing facilities where welding is the primary industrial process there is a lack of understanding about welding symbols.

Do you deal with welding symbols? Are you well versed in this universal language? Then take this entry level test and see how well you can do.

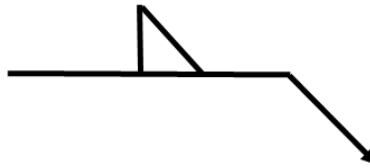
There is a link in the last page of the test that will take you to the answer key. No cheating now! Once you complete the test and check your answers please leave us your score and any comments in the comments section below the key.

Enjoy!

1. **The tail of a welding symbol can be used for:**
- a. Specifying the welding process
 - b. Referencing an additional drawing
 - c. Specifying a welding procedure specification to be used
 - d. All of the above

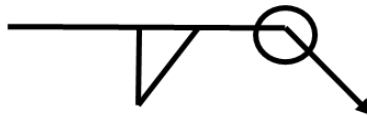
2. **A welding symbol must consists of at least:**
- a. A reference line
 - b. An arrow
 - c. An arrow and reference line
 - d. An arrow, a reference line and a weld symbol

3. **What size weld is required based on the welding symbol below?**



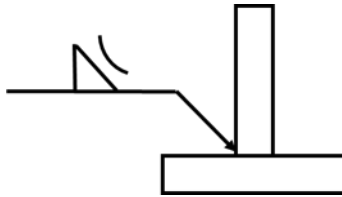
- a. Any size is acceptable
- b. Not specified, cannot be determined from the welding symbol
- c. Defaults to the welding code being used
- d. None of the above

4. **This following welding symbol specifies what?**



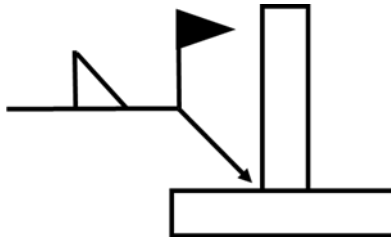
- a. A field weld
- b. An all-the way around weld
- c. A roundabout weld
- d. A staggered intermittent weld

5. What does the arc above the welding below signify?



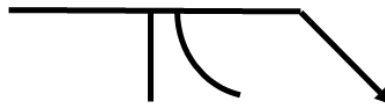
- a. Flare-bevel groove weld reinforced by a fillet weld
- b. Concave contour finish
- c. Convex contour finish
- d. The size of the fillet weld is optional

6. What does the symbol below indicate?



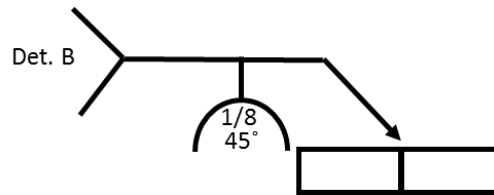
- a. The weld requires inspection
- b. The weld must be done in the field
- c. The weld can be done on either side of the joint
- d. The weld is optional

7. What type of weld does the symbol below correspond to?



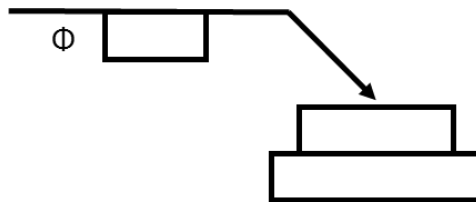
- a. Flare-bevel groove weld
- b. Flare-V groove weld
- c. Bevel-groove weld
- d. Square groove weld with concave finish

8. What type of weld does the symbol below correspond to?



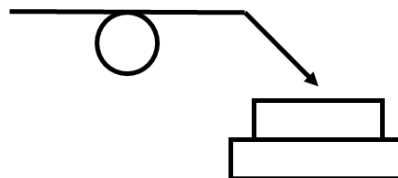
- a. Flare-bevel groove weld
- b. J-groove weld
- c. U-groove weld
- d. Need to see Detail B (Det. B) to determine weld type

9. What type of weld does the symbol below correspond to?



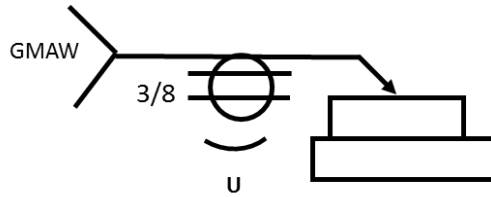
- a. Plug weld
- b. Slot weld
- c. Spot weld
- d. Seam weld

10. What type of weld does the symbol below correspond to?



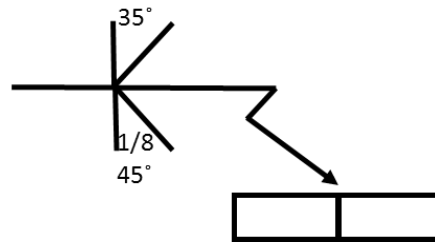
- a. Plug weld
- b. Slot weld
- c. Spot weld
- d. Seam weld

11. What type of weld does the symbol below correspond to?



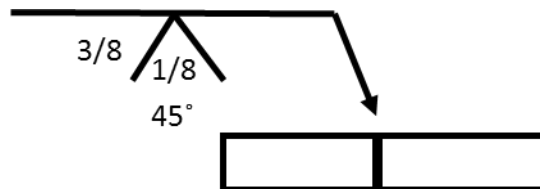
- a. Plug weld
- b. Slot weld
- c. Mig weld
- d. Seam weld

12. What is the broken arrow shown on the following welding symbol used for?



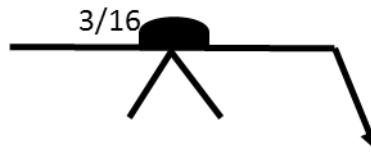
- a. To indicate the part must be beveled
- b. To indicate which of the members being joined must be beveled
- c. To indicated that either member may be beveled
- d. The broken arrow has no significance

13. What does the $1/8$ value in the symbol below tell us about the joint to be welded?



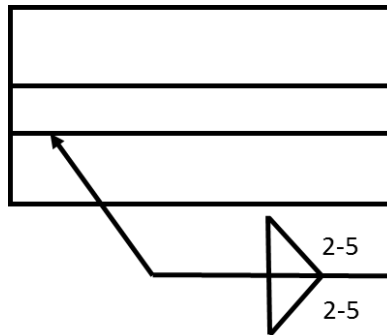
- a. The root face
- b. The root opening
- c. The depth of bevel preparation
- d. The required penetration

14. What is the meaning of the black semi-circle above the reference line?



- a. Backing weld
- b. Back weld
- c. Burn-through
- d. Melt-through

15. What type of weld is being called for by the welding symbol below?

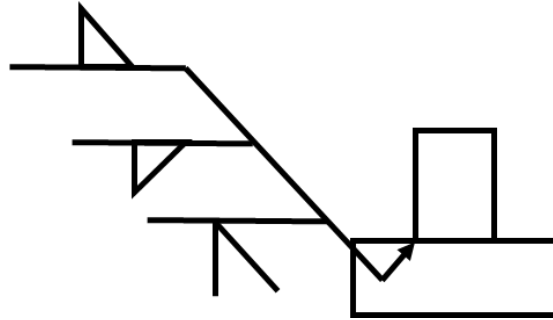


- a. Fillet weld
- b. Double-sided fillet weld
- c. Intermittent fillet welds
- d. Staggered intermittent fillet welds

16. What does the "5" indicate in the welding symbol from Question 15?

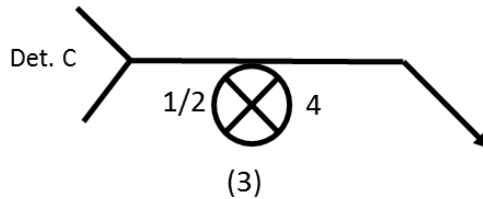
- a. The length of the weld
- b. The number of welds
- c. The pitch
- d. The size

17. Multiple reference lines indicate that more than one weld must be made. Which weld must be made first?



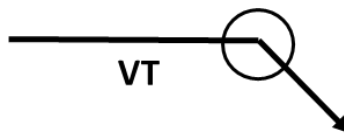
- a. Fillet weld arrow side
- b. Fillet weld other side
- c. Bevel-groove weld
- d. Square groove weld

18. What type of weld does the symbol below correspond to?



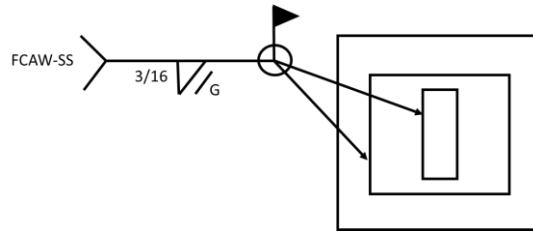
- a. Plug weld
- b. Stud weld
- c. Spot weld
- d. Resistance weld

19. Which of the following statements best describes what the welding symbol is calling for?



- a. Filed weld inspection
- b. Weld inspection all the way around the joint
- c. Visual inspection all the way around the joint
- d. Vickers hardness testing all the way around the joint

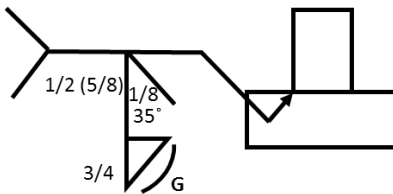
20. What does the “G” in the welding symbol below indicate?



- a. The finish contour
- b. The finish method
- c. General requirements
- d. The FCAW process requires gas shielding

EXTRA CREDIT

21. Which statement best describes the requirements of the welding symbol below?



- a. 35-degree bevel-groove weld preparing the vertical member, 1/8 root opening having depth of bevel preparation of 1/2 and weld size of 5/8 reinforced by a 3/4 fillet weld finished convex by grinding.
- b. 35-degree bevel-groove weld preparing the horizontal member, 1/8 root opening having depth of bevel preparation of 1/2 and weld size of 5/8 reinforced by a 3/4 fillet weld finished convex by grinding.
- c. 35-degree bevel-groove weld preparing the vertical member, 1/8 root opening having depth of bevel preparation of 5/8 and weld size of 1/2 reinforced by a 3/4 fillet weld finished convex by grinding.
- d. 35-degree bevel-groove weld preparing the vertical member, 1/8 root opening having depth of bevel preparation of 1/2 and weld size of 5/8 reinforced by a 3/4 fillet weld finished concave by grinding.

Thanks for taking the test. Now score your test. The answer key can be found by [CLICKING HERE](#).