

WLD 111 Welding Process I

1-6 Credits

Course Competencies

General

1. Perform safety inspection of equipment and accessories
2. Make minor repairs to equipment and accessories
3. Set up a shielded metal arc welding operation on plain carbon steel

Students may earn credits upon completing the following competencies:

Part 1, Steps 4-12 SMAW Carbon Steel Flat Position 1F & 1G

= 1 Credit

4. Make **stringer beads** with **E-6010** in the flat position
5. Make **stringer beads** with **E-7018** in the flat position
6. Make **pad of stringer** beads with **E-6010** flat position
7. Make **pad of stringer** beads with **E-7018** flat position
8. Make single pass $\frac{1}{4}$ " fillet weld passing visual inspection and fillet break test using **E-6010** in the **1F** position
9. Make single pass $\frac{1}{4}$ " fillet weld passing visual inspection and fillet break test using **E-7018** in the **1F** position
10. Make multi pass $\frac{1}{2}$ " fillet weld passing visual inspection using **E-6010** in the **1F** position
11. Make multi pass $\frac{1}{2}$ " fillet weld passing visual inspection using **E-7018** in the **1F** position
12. Make 1G groove weld with backing using E-6010 & E-7018 passing visual inspection and guided bend test (Use $\frac{3}{8}$ " to 1" plate)

Part 2, Steps 13-21 SMAW Carbon Steel Horizontal Position 2F & 2G

= 1 Credit

12. Make stringer beads with **E-6010** in the horizontal position
13. Make stringer beads with **E-7018** in the horizontal position
14. Make pad of stringer beads with **E-6010** horizontal position
15. Make pad of stringer beads with **E-7018** horizontal position
16. Make single pass $\frac{1}{4}$ " fillet weld passing visual inspection and fillet break test using **E-6010** in the **2F** position
17. Make single pass $\frac{1}{4}$ " fillet weld passing visual inspection and fillet break test using **E-7018** in the **2F** position
18. Make multi pass $\frac{1}{2}$ " fillet weld passing visual inspection using **E-6010** in the **2F** position
19. Make multi pass $\frac{1}{2}$ " fillet weld passing visual inspection using **E-7018** in the **2F** position
20. Make **2G** groove weld with backing using **E-6010** & **E-7018** passing visual inspection and guided bend test
21. (Use $\frac{3}{8}$ " to 1" plate)

Part 3, Steps 22-30 SMAW Carbon Steel Vertical Position 3F & 3G

= 2 Credits

22. Make stringer beads with **E-6010** in the vertical position
23. Make stringer beads with **E-7018** in the vertical position
24. Make pad of stringer beads with **E-6010** vertical position
25. Make pad of stringer beads with **E-7018** vertical position
26. Make single pass $\frac{1}{4}$ " fillet weld passing visual inspection and fillet break test using **E-6010** in the **3F** position
27. Make single pass $\frac{1}{4}$ " fillet weld passing visual inspection and fillet break test using **E-7018** in the **3F** position
28. Make multi pass $\frac{1}{2}$ " fillet weld passing visual inspection using **E-6010** in the **3F** position
29. Make multi pass $\frac{1}{2}$ " fillet weld passing visual inspection using **E-7018** in the **3F** position
30. Make **3G** groove weld with backing using **E-6010** & **E-7018** passing visual inspection and guided bend test (Use $\frac{3}{8}$ " to 1" plate)

Part 4, Steps 31-39, SMAW Carbon Steel Overhead Position 4F & 4G

= 2 Credits

31. Make stringer beads with E-6010 in the overhead position
32. Make stringer beads with E-7018 in the overhead position
33. Make pad of stringer beads with E-6010 overhead position
34. Make pad of stringer beads with E-7018 overhead position
35. Make single pass $\frac{1}{4}$ " fillet weld passing visual inspection and fillet break test using E-6010 in the 4F position
36. Make single pass $\frac{1}{4}$ " fillet weld passing visual inspection and fillet break test using E-7018 in the 4F position
37. Make multi pass $\frac{1}{2}$ " fillet weld passing visual inspection using E-6010 in the 4F position
38. Make multi pass $\frac{1}{2}$ " fillet weld passing visual inspection using E-7018 in the 4F position
39. Make 4G groove weld with backing using E-6010 & E-7018 passing visual inspection and guided bend test (Use $\frac{3}{8}$ " to 1" plate)