

SMAW Out of Position Syllabus

Time: 40 hours

Maximum Class Size: 8

Prerequisites:

- Oxyfuel Cutting (16 hours)
- Introduction to Arc Welding (24 hours)

Course Description: The participant will use the skills introduced in this course to make sound weld beads in the five welding positions: flat, vertical up, vertical down, horizontal, and overhead. Ample time will be given for hands-on practice. In addition, all safety procedures and health hazards will be reviewed as well as the proper PPE for welding practices.

Goals/Objectives/Student Learning Outcomes:

- Demonstrate the safe and proper use of Welding Personal Protective Equipment (PPE).
- Demonstrate proper safety in the inspection, set-up and use of Welding Tools and Electrical Welding Equipment during SMAW Electrical Arc Welding.
- Identify steps to avoid accidents and injuries in the welding setting.
- Demonstrate the safe practices of fire prevention during welding operations.
- Demonstrate sound weld beads in the five welding positions (flat, vertical up, vertical down, horizontal and overhead).
- Complete a 25-question multiple choice written Exit Exam with a score of 80% or higher.

Standards

- OSHA Standard 29 CFR 1926.351 for Arc Welding
- OSHA Standard 29 CFR 1926.353 for Ventilation.

Classroom Rules and Procedures

- All classes begin at 6:30 am and end at 3:00 pm
- Upon entering classroom, all participants must sign in and be seated by 6:30 am
- Class will consist of a combination of lecture, video, demonstration, coached group exercises, individual exercises and assessment.
- Students are required to report to class ready to work and maintain the provided PPE

SMAW Out of Position Syllabus

Textbooks/Readings/Materials:

- *Arcs to Sparks*- Ohio State University extension
- Arc Welding and Cutting Safety-Airgas
- Arc Welding I DVD
- Arc Welding II DVD
- Welding Symbol Handout

Personal Protective Equipment

- 10 pairs of leather cutting gloves
- 10 pairs of safety glasses
- 20 pairs of earplugs
- 10 hard hats
- 10 leather chaps
- 10 leather jackets
- 10 number 8 face shields

Course Requirements

To receive credit for the course, participants must:

- Be present for full 40 hours
- Participate in all classroom exercises
- Pass a written exam
- Pass a hands-on exam

Course Policies

- Participants must be on-time and ready to work.
- Participants must return from breaks on-time.
- Participants must participate in each exercise and assignment
- Participants who are on “light duty” are not allowed to take this course due to the physically demanding requirements.

Assessment and Grading

Participants will be assessed on the following:

- All written exams must be passed with a score of 80% or above.

SMAW Out of Position Syllabus

- All hands-on exercises are graded on performance and participation. They are pass/fail and must be passed with a score of 80% or above.

Safety

Failure to maintain and use PPE may result in dismissal from the course.