Alexandria Technical and Community College

WELD 1601: Shielded Metal Arc I

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 1
Lab Hours/Week: 3
OJT Hours/Week: *
Prerequisites:
WELD 1600 - Introduction: Safety and Codes (Number of Years Valid: 5)
Corequisites: None
MnTC Goals: None

Students learn equipment setup, safety, electrode selection, and operating factors necessary for producing quality welds in the flat position. The basics of setting up and operating shielded metal arc welding equipment are covered. After learning and understanding the equipment controls, the goal is to perform welds in the flat position to an industry acceptable level of quality. Corequisite: WELD1600.

B. COURSE EFFECTIVE DATES: 12/30/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Understand SMAW process.
2. Understand electrical theory.
3. Display knowledge of SMAW safety.
4. Identify SMAW equipment.
5. Identify electrode types.
6. Understand SMAW machine settings.
7. Understand proper electrode selection.
8. Display SMAW factors of control.
9. Identify fine basic joint designs.
10. Demonstrate AWS guided bond test.
11. Complete 1G SMAW certification.

D. LEARNING OUTCOMES (General)

1. The learner will demonstrate knowledge of safe process setup.
2. The learner will demonstrate advanced skills in flat position welding.
3. The learner will demonstrate knowledge, correct setup, and operation of the process.
4. The learner will demonstrate skills in producing welds to industry standards.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted