

# Advanced SMAW (Arc) Procedures 40S

## Student Course Outline

Swan Valley Regional Secondary School

Instructor- Mr. Hicks

### Course Objective:

Upon Completion, the student should be able to identify the various use and handling of Hand tools and Power tools, processes used in welding and describe the safe operation of Shielded Metal Arc Welding (SMAW). The course will also include class time as well as in shop experience. The course is 30% Theory and 70% Practical.

### Course Requirements

*P.P.E.* – Safety Glasses, C.S.A Approved Steel toe boots and hearing protection must be worn at all times in the shop. **No exceptions.**

### Cell Phone Policy

If a cell phone is visible or audible during class, it will be placed in the lockbox at the front of the room until the end of the period. If this issue persists, the student will be required to either store their phone in their locker or submit it at the beginning of each class.

## Shop Rules and Policies

Students Not following the safe work practices outlined in the school and division policies could result in removal from the course/program.

## Outline

- A. Review of safe work practices, W.H.M.I.S, fire safety
- B. Measuring devices – Examples: Dial indicators, Micrometers, Bore Gauges and measuring tapes.
- C. Measuring Techniques
- D. Grinding techniques
- E. Reading of Blueprints
- F. SMAW Metal machine maintenance
- G. Recondition tools and Techniques
- H. Welding Rods and their uses.
- I. SMAW in Flat and Fillets welds
- J. SMAW on Groove welds in Flat, Horizontal, and vertical coupons.
- K. 6010 roots and 7018 fill and cap will be covered.
- L. CWB procedures will be practiced.
- M. Welding wires for each process
- N. Metal Forming Equipment
- O. SMAW with E6010
- P. SMAW with E7018
- Q. SMAW with assorted rods E6011, E6013, and E7024
- R. Cast iron welding techniques will be discussed.
- S. Destructive bend test will be done on all welds.
- T. Cleaning of work areas.

Attention will be given for attendance and punctuality

### Grading outline

#### **Course Assessment-Marking Scale**

- Assignments are required to be handed in on time
- Students who are not excused from exams, tests and quizzes must consult with teacher immediately to arrange an alternate date to complete missed test/quiz or a zero or incomplete may be given.
- Rubric marking scales will be used in practical and project assessment process.

Classwork	20%
Demonstrations	30%
Tests	30%
Projects	20%
Total	100%

\*\*\*Length and time of coverage per subject category may change without notice due to availability of time and resources\*\*\*