

Source Unit
in
Arc Welding

Developed by
Tom Ball
Graduate Student
Colorado State University

In Cooperation with
Colorado State University
Department of Vocational Education
Agricultural Education Section

and

The Colorado State Board of Community Colleges and Occupational Education

1970

The following source unit in arc welding was prepared as a guide for vocational agriculture teachers in Colorado.

Suggested objectives, motivation techniques, study guides, and plans of action are presented in the following source unit for use in teaching a unit in arc welding to vocational agriculture students.

The purpose of this guide is to help teachers of vocational agriculture analyze the area of arc welding and to organize lesson units for instruction. It is not intended that this guide will be used either as a course of study or as an outline for instruction in any local vocational agriculture department. Strictly speaking, this guide is intended to serve as a source unit for course construction and instructional planning. It is considered sound that course outlines and instructional plans will be based on local conditions and needs. The thought that a course outline in vocational agriculture for a local community should be planned by any person not familiar with the local community has never been accepted in the past and is not accepted in the present-day thinking.

This source unit was prepared in cooperation with Dr. Irving C. Cross, Dr. Harold Anderson, and Dr. Ramsey Groves of Colorado State University.

The following references were used in preparing this unit on arc welding:

1. Farm Mechanics Text and Handbook; Phipps, Cook, Scranton and McColly
2. Shopwork on the Farm; Jones
3. Arc Welding Lessons for School and Farm Shop; Kugler
4. Basic Welding Principles; Stieri
5. Demonstrations for Farm Mechanics; O'Brien
6. Basic Arc Welding; Griffin and Roden
7. Forging and Welding; Smith
8. Forney Arc Welding; Forney Industries

Area: ARC WELDING

- Jobs:**
1. Selecting a welder and accessories
 2. Selecting Electrodes
 3. Striking an Arc
 4. Running a flat bead
 5. Running a horizontal bead
 6. Running a vertical-up bead
 7. Running a vertical-down bead
 8. Running an overhead bead
 9. Controlling distortion
 10. Making a butt weld
 11. Making a lap weld
 12. Making a fillet weld
 13. Brazing with the carbon arc torch
 14. Welding cast iron
 15. Hard Surfacing
 16. Cutting with mild steel electrodes