GTAW CARBON STEEL PIPE
Course Syllabus

Course Number: GTPW-0082
OHLAP Credit: No
OCAS Code: None
Course Length: 90 Hours
Career Cluster: Manufacturing
Career Pathway: Welding and Metal Fabrication
Career Major(s): Combination Welder

Pre-requisite(s):

Course Description: This course is an introduction in how to set up GTAW equipment, procedures and techniques used to make V-groove pipe welds with GTAW in the 1G-ROTATED, 2G, 5G and 6G positions.

Textbooks/Materials:
Modern Welding, GoodHeart- Willcox (2004)
Math for Welders, Marion and Nino, GoodHeart- Willcox (2001)

Course Objectives:

A. Sets up for GTAW Operations on Carbon Steel Pipe.  
B. Demonstrate an Understanding of GTAW – Pipe Welding
   1. Operate GTAW equipment on carbon steel.  
   2. Build a pad in the flat position with stringer beads using GTAW and carbon steel filler metal.  
   5. Make multipass open V-groove welds on carbon steel plate in the 3G (vertical) position using GTAW and carbon steel filler metal.  
   7. Makes fillet welds in all positions on carbon steel.  
   8. Makes groove welds in all positions on carbon steel.  
C. Passes GTAW Welder Performance Qualification Test in Carbon Steel.

1. Welding Skills, GTAW Plate, National Center for Construction Education and Research (NCCER)
2. Level I, Entry Level Welder, Module 7, American Welding Society (AWS)
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Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit: The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.