

WELD 145 : Aluminum Welding

Credits 8

Quarter Offered Summer

Learn gas metal arch welding (GMAW) and gas tungsten arch welding (GTAW) in aluminum welding design, safety, metal preparation, welding codes and standards for aluminum welding and control of aluminum weld quality. Class emphasizes marine welding and prepares students for the American Welding Society (AWS D1.2) aluminum welding certification exam. This class may include students from multiple sections.

This class has a \$200 welding lab supplies course fee and a \$250 welding certification course fee.

Prerequisites

Completion of [WELD 110](#) or above or instructor permission

Course Outcomes

- Use of safety equipment and demonstrate lab safety practices.
- Assemble and skip weld plates, stiffeners, girders, and prefabricated parts into panels.
- Use hand tools, power tools, and various welding equipment for assembly, handling, welding and fabricating parts, and subassemblies.
- Grind, air arc, bevel, or otherwise prepare joints for welding.
- Grind seams and edges to a specified standard.
- Test and repair of bulkheads, tanks, and pipes.
- Describe American Bureau of Shipping/Non-Destructive Testing (ABS/NDT) standards.
- Weld aluminum fillets in multiple positions with wire feeder.
- Weld aluminum butt joints in multiple positions with stick or wire feeder using weld symbols and in accordance with specified Welding Standards.
- Use TIG and MIG weld for general pipe applications.
- Apply certification standards for the aluminum processes.