Level 2 General Welder (Arc Processes) Apprenticeship Standard

Course Name	Start Date	End Date	Site	Total Fees
General Welder (Arc Processes) L2 Standard (JC)			Off Site	450.00

Subject Area

Engineering

Course Description

General Welder (Arc Processes)

General Welders are fully competent in manual welding using at least one arc process. General Welders are required in a number of sectors for example, the steelwork construction sector.

Welding is a way to make high strength joints between two or more parts. General Welders use high electrical energy to form an arc. Manual dexterity is essential in controlling the arc, which is used to melt metals, allowing them to fuse together to form a structurally sound weld.

Welding is used extensively and in almost every sector of industry. There is a high demand for skilled General Welders in areas such as: automotive, marine, transport, general fabrication, construction and many more. General Welders produce items like components for cars; ships; rail vehicles; simple metallic containers; and steelwork for bridges, buildings and gantries. Welding is a safety critical occupation and every welder takes responsibility for the quality and accuracy of their work. General Welders are required to produce joints that satisfy basic quality standards in order to ensure that the finished products function correctly, contributing to the safety of all and the global quality of life.

Skilled, qualified, professionally certified General Welders can work anywhere in the world and provide services in harshest of environments. For these accomplished professionals, the monetary rewards can be significant.

There is a highly complex range of welding skills: the different arc welding processes require different levels of manual dexterity, knowledge and skill to avoid making defective welds. There are a wide range of metallic materials that can be welded, each with different properties and behaviours.

Course Content

General Welders will have the skill to:
Produce good quality welds using two welding process/material type combinations (TIG, MMA, MIG/MAG, FCAW) and (Carbon and Low Alloy steel, High Alloy Ferritic/Martensitic Steel, Austenitic Stainless Steel, Nickel and Nickel Alloys, Aluminium and Aluminium Alloys) in two welding positions (Downhand, Horizontal, Vertical, Overhead). Attain a qualification in accordance with one of the following standards: ISO 9606 / ASME IX / BS4872 / AWS D1.1, determined by the employer. N.B. These qualifications are regarded as licences to practice in welding.

Achieve a quality of work to meet international standards for dimensional and surface inspection (Visual, Magnetic Particle Inspection and Dye Penetrant Inspection).
Position, prepare and check the welding equipment.
Receive, handle and maintain consumables
Prepare, check and protect materials and work area ready for welding.
Complete and check the finished weld ready for inspection and report into the production control system.
Ensure that health and safety requirements are fully accounted for in all the above.

General Welders will have the knowledge to:
Be aware of the basic mechanical properties and weldability of welded materials.
Understand the common arc welding processes, joint types (fillet, lap, butt, etc.) and positions.
Understand the major components of welding equipment and the essential parameters for welding.
Understand the terminology, operation and controls for the selected arc welding processes, joint types and welding positions.
Identify and understand the causes of typical welding defects and how their occurrence can be reduced, for the materials and welding processes selected.
Understand the functions of welding consumables and the requirements for correct storage and handling.
Be able to identify and select correct welding consumables for each application.
Understand and identify hazards and basic health, safety and quality requirements when welding.
Know how to interpret and work to a welding procedure specification.
Know the basics of welding quality documents and reporting systems.

General Welders will display the following behaviours
A questioning attitude, to understand the processes and associated industrial applications. Maintaining competence with a commitment to Continuing Professional Development.
Planning and preparation to ensure production and Continuing Professional Development goals are achieved.
Intervention, to challenge poor practices and channel feedback to the appropriate authorities to implement change.
Reliability and dependability to consistently deliver expectations in production, quality, work ethics and self-development.
Accountability, to follow the specified procedures and controls and be personally responsible for their production work and personal development.

Assessment Methods

All apprentices must undertake an independent endpoint assessment which is an assessment of the knowledge, skills and behaviours which have been developed throughout the apprenticeship. The purpose of the assessment is to make sure the apprentice meets the standard set by employers and are fully competent in the occupation.

Duration

Typically, this apprenticeship will take 18-24 months to complete

Entry Requirements

Practical skills are considered as important as academic ability and the employer will set their own specific selection criteria. However, the candidate will be required to successfully achieve qualifications at level 1 in English and Mathematics and also to have taken examinations at level 2, for both subjects, within the period of apprenticeship if not already achieved.

Course Fees

There is no charge to the apprentice
£9,000 – employer apprenticeship Levy payers will pay the full cost from their levy: employers with 49 or less staff with an apprentice ages 16-18 years will pay no fees; all other employers will pay 5%. Prices are subject to discussion and agreement based on circumstances.

Progression Options

There are numerous pathways for General Welders who may wish to pursue higher level careers in welding. These include progression to Multi-Positional Welder, High Integrity Welder or Welding Instruction and Teaching, Welding Inspection and Managing and Supervising Welding Operations.