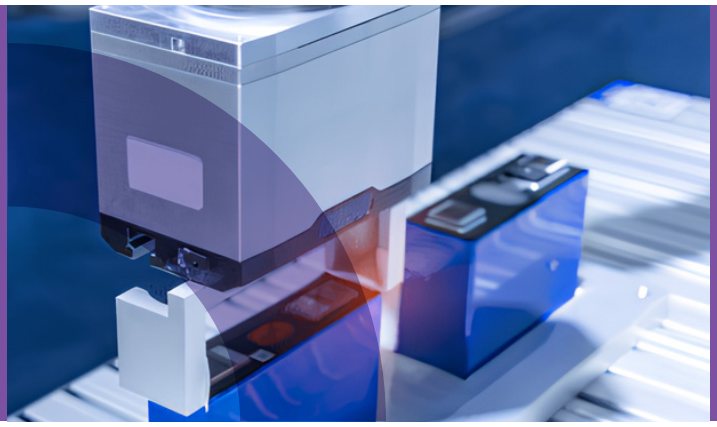
ST1338 | ST1338 | Battery Manufacturing Technician

General Overview

- ✓ Typical on-programme learning: 36 months
- ✓ EPA duration: 3 months
- ✓ Maximum funding: £24,000
- ✓ Level 3



Battery manufacturing technicians are found in the process manufacturing sector, producing cells and batteries.

Cells and batteries store chemical energy and convert it to electrical energy. A cell is a single unit, whereas two or more cells is a battery. They are used in transport - micro-mobility such as scooters and bikes, cars, vans, lorries, buses, trains, planes, and ships. Domestic applications such as power walls. Power industry grid balancing facilities. Mobile phones and laptops and many more. Batteries play a key role in the environmental agenda, providing storage for renewable energy generation and power to electric vehicles.

This is a core and options apprenticeship. You must be trained and assessed on the core and one option relevant to your role. The options are:

- Option 1. Electrode technician
- Option 2. Cell assembly technician
- Option 3. Ageing, formation and testing technician
- Option 4. Module and pack technician

Battery manufacturing technicians prepare for and conduct processes in one stage of cell or battery manufacture. Electrode technicians produce the component that goes in battery cells. They perform processes such as mixing, coating, drying, calendering, and electrode slitting. Cell assembly technicians make individual cells performing processes such as winding, stacking, filling, and sealing. Formation technicians perform formation, ageing and testing processes and final inspection of cells, ensuring cells are charged and working. Module and pack technicians combine individual cells to make battery modules and packs, and conduct end of line testing and cell finishing. In relation to the stage that they work in, technicians conduct quality assurance and maintain process records. Maintaining workplace health, safety and environment is also key. Technicians also support other activities including continuous improvement, inventory control, and maintenance.

In their daily work, they interact with other members of the manufacturing team. They also have contact with other teams for example, process engineers, maintenance engineers, supply chain staff and warehouse staff.

They are responsible for complying with health, safety, environmental and sustainability regulations, standards, and guidance. This may include wearing specialist personal protective equipment for working in clean and dry facilities, and with high voltage and hazardous materials such as electrolyte. They must ensure that products meet quality specifications and manufacturing guidelines and are produced to schedule and cost. They may work as part of a small or large manufacturing team.

They typically report to a production manager.

Entry Requirements

Employers will set their own entry requirements. An employer may require applicants to have a health screening to ensure suitability for working in a clean room.

On-Programme Competence Evaluation

The apprentice will complete on and off-the-job training, developing their knowledge, skills and behaviours as stipulated within the apprenticeship standard.

Gateway Requirements

The employer, supported by the training provider, must confirm that the apprentice is ready for EPA, before the EPA process can begin.

The employer, supported by the training provider must sign a declaration to agree the apprentice has met the required criteria as set out in the Battery Manufacturing Technician standard.

As part of the SIAS EPA service, we will check that all gateway evidence has been met before we begin the process of EPA.

End Point Assessment (EPA)

The assessment plan defines the following methods of assessment for the Battery Manufacturing Technician standard.

1 Observation with Questions

- The purpose of the observation is to validate the apprentices' competence by observing them carrying out their job role in a normal working environment under normal conditions.
- The purpose of the questioning is to assess underpinning knowledge and behaviours with a minimum of 4 questions. Questions must be asked during natural stops between tasks and after completion of work rather than disrupting the flow of the apprentice.
- Duration: 3 hours.

2 Interview Underpinned by a Portfolio of Evidence

- The purpose of this assessment is it allows the apprentice to be assessed against KSBs which may not naturally occur during the observation.
- It is supported by a portfolio of evidence, enabling the apprentice to demonstrate the application of skills and behaviours as well as knowledge.
- A minimum of 8 questions.
- Duration 1 hour.

3 Multiple-Choice Test

- The purpose of this assessment is it allows for the efficient testing of knowledge where there is a right or wrong answer.
- 40 multiple-choice questions
- Duration: 1 hour.

Assessment Marking & Grading

Results for each individual assessment method will be available within 15 working days from the assessment date.

The SIAS End Point Assessor will combine the results of each individual assessment method and provide an overall assessment grade of Fail, Pass, Merit or Distinction.

Apprenticeship Certification

Your apprentice will receive a Certificate of Apprenticeship on successful completion of all individual assessment methods.

Guidance & Support

SIAS provide a range of resources which offer EPA guidance and support for the apprentice, the employer, and the college/training provider.

We aim to help employers and colleges/training providers to support the on-going competence evaluation of the apprentices' knowledge, skills, and behaviours to ensure that your apprentice is confident for their EPA. All of our resources are comprehensively mapped to this apprenticeship standard.