



Alliance for Batteries Technology, Training and Skills

2019-2023

Maintenance Technician in Battery Industry



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Maintenance Technician in Battery Industry

A battery maintenance technician is responsible for the maintenance and repair of the equipment used in the production of batteries. They work in battery manufacturing plants and are responsible for ensuring that the equipment is in good working order and is able to produce high-quality batteries. They need to have a strong understanding of mechanical, electrical, and control systems, as well as experience with maintenance and repair of manufacturing equipment.

ESCO Occupations - [ESCO - Occupations - European Commission \(europa.eu\)](http://europa.eu)

ID	NAME	Concept URI
7421.3	consumer electronics repair technician	http://data.europa.eu/esco/occupation/f8ab2e08-d14e-4938-a2cd-c04821556db7
7543.3	battery test technician	http://data.europa.eu/esco/occupation/43eb6228-8241-47d6-875e-7ccc214291d5
2149.9.2	energy systems engineer	http://data.europa.eu/esco/occupation/1ff61522-8947-4c95-b589-cb0e0539a62b
7312.2	instrument technician	http://data.europa.eu/esco/occupation/72f4abfe-5337-49be-b9b8-32096fc2ca1f

Context

Minimum EQF	4/5/6
Value Chain	Raw Materials and Processing Cells and Components Manufacturing Modules and Packs Production Battery Integration
Departments	Production and Maintenance Logistics Quality
Specialisations	Mechanical maintenance technician Electrical maintenance technician Instrument technician Cleaning Technician Service Technician

Cross-sectoral Specific Competence

Name	Type (S/K)	Description/Context	Level	ESCO
Inspect Quality of Product / Sampling	S	<ul style="list-style-type: none"> Analyse and inspect batteries out of the battery assembly process Use the relevant quality tools/systems to analyze data and deal with non-conformances Alert production management, machine operators, and supervisors about quality problem Performing lithium-ion battery fabrication according to a strict standard of procedures in order to produce batteries of consistent excellent quality Inspection of cells as specified in procedures 	Practitioner	inspect quality of product
Audits	S	<ul style="list-style-type: none"> execute product audits as part of the quality plan 	Practitioner	conduct workplace audits
(automated) Product Testing	S	<ul style="list-style-type: none"> Develop samples for reliability tests of energy systems and troubleshoots & tests the battery packs battery testing and lab maintenance. Devise test data capture protocols and document test results Perform product validation testing 	Practitioner	perform product testing
Equipment Maintenance	S	<ul style="list-style-type: none"> Coordinating and executing equipment maintenance and support per manufacturer's guidelines Install, maintain and repair faulty instrument devices Troubleshoot instrument issues using appropriate of testing devices Repair and replace faulty equipment Contribute in maintenance program optimization Train others in maintenance specific tasks Evaluation of needed spare parts of the equipment Perform preventive maintenance 	Expert	ensure equipment maintenance
Equipment and Tools Handling	S	<ul style="list-style-type: none"> Operating and maintaining tools and equipment Use the relevant quality tools/systems to analyze data and deal with non-conformances Uses and performs basic maintenance of equipment 	Practitioner	equipment and tools handling
Maintenance Processes (Repair,	K	<ul style="list-style-type: none"> Install, maintain and repair instrument devices Troubleshoot the instruments and arrange regular maintenance 	Expert/ Practitioner	maintenance and repair

Replace, Inspect)		- Coordinating and executing equipment maintenance per manufacturer's guidelines – electrical, pneumatic, or mechanical		
Safety Procedures	K	<ul style="list-style-type: none"> - Report all accidents, injuries, safety violations and unsafe working conditions - Perform all work in accordance with established safety procedures and adhere to all safety and environmental policies - Comply with safety requirements including PPE 	Practitioner	safety engineering
Operate Machines	S	<ul style="list-style-type: none"> - Operate the analysis instruments - Operation of machinery, equipment and electrical installations - Installation, commissioning and maintenance of electrical installations, machinery and equipment 	Practitioner	work safely with machines
Process Improvement (Engineering)	S	<ul style="list-style-type: none"> - Improve maintenance processes - Identify if improvements are necessary for equipment and tools 	Awareness	Identify process improvement
Analysis Methods	S	- Conduct work with root cause analyzes after stopping	Awareness	
Remove Defective Product	S	- Remove defective product throughout the manufacturing process	Practitioner	Remove defective product
Preventive or Predictive Maintenance	K	<ul style="list-style-type: none"> - improving the preventive maintenance of production equipment or technology areas - carry out work orders both remedial, preventive and improving, in your area - working with emergency services, troubleshooting, training of operators / fitters, preventive maintenance and start-up of new machines 	Practitioner	Predictive maintenance
Production Processes	K	- Knowledge of the battery production process and relevant machines/equipment/tools	Practitioner	production process

Sector Specific Competence

Name	Type (S/K)	Description/Context	Level	ESCO
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Soft Competence

Name	Type	Description/Context	Level	ESCO
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	(S/K)			
Communication	K	<ul style="list-style-type: none"> - Communicate with team members and other departments on production status and issues - Good communication and ability to work independently and in a team is necessary - Understand and communicate improvements that need to be done and has been done 	Practitioner	communication
Problem Solving/Troubleshooting	S	<ul style="list-style-type: none"> - Troubleshoot the instrument issues by using appropriate testing device and arrange regular maintenance - Report issues related to the process and/or the lab and help find the solution - Troubleshoot & test the battery packs - Alert production management, machine operators, and supervisors about quality problems 	Expert	problem solving & troubleshoot
Teamwork	K	<ul style="list-style-type: none"> - Ability to work in a team as well as individually - Arrange regular maintenance working with other team members 	Practitioner	teamwork principles

General Transversal Competence

Name	Type (S/K)	Description/Context	Level	ESCO
English	K	<ul style="list-style-type: none"> - Ability to work and communicate in a multicultural/international environment 	Practitioner	English
Reporting	S	<ul style="list-style-type: none"> - Reports deviations on assigned field - Complete all required paperwork and time records accurately - Report all accidents, injuries, safety violations and unsafe working conditions - Create analyses and report to management on quality issues and root causes of batteries - Report issues related to the process and/or the lab and help find the solution 	Expert	follow reporting procedures
Computer Literacy / Office	S	<ul style="list-style-type: none"> - Interfacing with computer systems to enter and retrieve data and analyse basic operational information 	Practitioner	have computer literacy
Documentation	S	<ul style="list-style-type: none"> - Operating production tools and equipment per training and documentation - Read technical diagrams, drawings, and blueprints 	Practitioner	use technical documentation; observe documents

		- Document sample preparation process and analysis results in an organized and timely manner		health and safety in the workplace
Health and Safety Standards	K	<ul style="list-style-type: none"> - Work safely in accordance with company and/or customer safety policies procedures - Report all accidents, injuries, safety violations and unsafe working conditions immediately - Follow all company policies and procedures; such as, OSHA, DOT Hazmat, warranty, safety, and environmental 	Practitioner	

Academic Competence (can be taken from University programme)

Name	Type (S/K)	Description/Context	Level	ESCO
Mechanical Engineering	K	-	Practitioner	Mechanical engineering
Electrical Engineering	K	-	Practitioner	Electrical engineering