



*Alliance for Batteries Technology, Training and Skills*

*2019-2023*

# **Maintenance Technician in Battery Industry**



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Erasmus+ Programme  
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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	<a href="http://data.europa.eu/esco/occupation/f8ab2e08-d14e-4938-a2cd-c04821556db7">http://data.europa.eu/esco/occupation/f8ab2e08-d14e-4938-a2cd-c04821556db7</a>
7543.3	battery test technician	<a href="http://data.europa.eu/esco/occupation/43eb6228-8241-47d6-875e-7ccc214291d5">http://data.europa.eu/esco/occupation/43eb6228-8241-47d6-875e-7ccc214291d5</a>
2149.9.2	energy systems engineer	<a href="http://data.europa.eu/esco/occupation/1ff61522-8947-4c95-b589-cb0e0539a62b">http://data.europa.eu/esco/occupation/1ff61522-8947-4c95-b589-cb0e0539a62b</a>
7312.2	instrument technician	<a href="http://data.europa.eu/esco/occupation/72f4abfe-5337-49be-b9b8-32096fc2ca1f">http://data.europa.eu/esco/occupation/72f4abfe-5337-49be-b9b8-32096fc2ca1f</a>

### Context

<b>Minimum EQF</b>	4/5/6
<b>Value Chain</b>	Raw Materials and Processing Cells and Components Manufacturing Modules and Packs Production Battery Integration
<b>Departments</b>	Production and Maintenance Logistics Quality
<b>Specialisations</b>	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"> <li>- Analyze batteries out of the battery assembly process</li> <li>- Use the relevant quality tools/systems to analyze data and deal with non-conformances</li> <li>- Alert production management, machine operators, and supervisors about quality problem</li> <li>- Performing lithium-ion battery fabrication according to a strict standard of procedures in order to produce batteries of consistent excellent quality</li> <li>- Inspection of cells as specified in procedures</li> </ul>	Practitioner	inspect quality of product
Audits	S	<ul style="list-style-type: none"> <li>- execute product audits as part of the quality plan</li> </ul>	Practitioner	conduct workplace audits
(automated) Product Testing	S	<ul style="list-style-type: none"> <li>- Develop samples for reliability tests of energy systems and troubleshoots &amp; tests the battery packs</li> <li>- battery testing and lab maintenance.</li> <li>- Devise test data capture protocols and document test results</li> </ul>	Practitioner	perform product testing
Equipment Maintenance	S	<ul style="list-style-type: none"> <li>- Coordinating and executing equipment maintenance and support per manufacturer's guidelines</li> <li>- Install, maintain and repair instrument devices</li> <li>- Troubleshoot instrument issues using appropriate of testing devices</li> <li>- Repair and replace equipment</li> <li>- Contribute in maintenance program optimization</li> <li>- Train others in maintenance specific tasks</li> <li>- Evaluation of needed spare parts of the equipment</li> <li>- Perform preventive maintenance</li> </ul>	Expert	ensure equipment maintenance
Equipment and Tools Handling	S	<ul style="list-style-type: none"> <li>- Operating tools and equipment</li> <li>- Use the relevant quality tools/systems to analyze data and deal with non-conformances</li> <li>- Uses and performs basic maintenance of equipment</li> </ul>	Practitioner	equipment and tools handling
Maintenance Processes (Repair, Replace, Inspect)	K	<ul style="list-style-type: none"> <li>- Install, maintain and repair instrument devices</li> <li>- Troubleshoot the instruments and arrange regular maintenance</li> <li>- Coordinating and executing equipment maintenance per manufacturer's guidelines</li> </ul>	Expert/ Practician	maintenance and repair
Safety	K	<ul style="list-style-type: none"> <li>- Report all accidents, injuries, safety violations and unsafe</li> </ul>	Practician	safety engineering

Procedures		<ul style="list-style-type: none"> <li>working conditions</li> <li>- Perform all work in accordance with established safety procedures and adhere to all safety and environmental policies</li> <li>- Comply with safety requirements including PPE</li> </ul>		
Operate Machines	S	<ul style="list-style-type: none"> <li>- Operate the analysis instruments</li> <li>- Operation of machinery, equipment and electrical installations</li> <li>- Installation, commissioning and maintenance of electrical installations, machinery and equipment</li> </ul>	Practitioner	work safely with machines
Process Improvement (Engineering)	S	<ul style="list-style-type: none"> <li>- Improve maintenance processes</li> </ul>	Awareness	Identify process improvement
Analysis Methods	S	<ul style="list-style-type: none"> <li>- Conduct work with root cause analyzes after stopping</li> </ul>	Awareness	
Remove Defective Product	S	<ul style="list-style-type: none"> <li>- Remove defective product throughout the manufacturing process</li> </ul>	Practitioner	Remove defective product
Preventive or Predictive Maintenance		<ul style="list-style-type: none"> <li>- improving the preventive maintenance of production equipment or technology areas</li> <li>- carry out work orders both remedial, preventive and improving, in your area</li> <li>- working with emergency services, troubleshooting, training of operators / fitters, preventive maintenance and start-up of new machines</li> </ul>	Practitioner	Predictive maintenance

### Sector Specific Competence

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

Name	Type (S/K)	Description/Context	Level	ESCO
Communication	K	<ul style="list-style-type: none"> <li>- Communicate with team members and other departments on production status and issues</li> <li>- Good communication and ability to work independently and in a team is necessary</li> <li>- Understand and communicate improvements</li> </ul>	Practitioner	communication

		that need to be done and has been done		
Problem Solving/Troubleshooting	S	<ul style="list-style-type: none"> <li>- Troubleshoot the instrument issues by using appropriate testing device and arrange regular maintenance</li> <li>- Report issues related to the process and/or the lab and help find the solution</li> <li>- Troubleshoot &amp; test the battery packs</li> <li>- Alert production management, machine operators, and supervisors about quality problems</li> </ul>	Expert	problem solving & troubleshoot
Teamwork	K	<ul style="list-style-type: none"> <li>- Ability to work in a team as well as individually</li> <li>- Arrange regular maintenance working with other team members</li> </ul>	Expert / practitioner	teamwork principles

### General Transversal Competence

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

		- Follow all company policies and procedures; such as, OSHA, DOT Hazmat, warranty, safety, and environmental		
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### 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

