albatts

Alliance for Batteries Technology, Training and Skills

2019-2023

Machine Operator in Upstream

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Machine Operator in Upstream

A battery upstream operator is responsible for the operation of equipment and processes that happen before the actual manufacturing of batteries, such as mixing and preparing the materials needed to produce batteries. They work in battery manufacturing plants and are responsible for ensuring that the materials needed for the production of batteries are prepared and available in a timely manner. They need to have a strong understanding of chemical engineering and material science, as well as experience with operating and maintaining equipment used in the production of battery materials.

ESCO Occupations - ESCO - Occupations - European Commission (europa.eu)

ID	NAME	Concept URI
C8	Plant and machine operators and assemblers	http://data.europa.eu/esco/isco/C8

Context

Minimum EQF	3/4/5
Value Chain	Raw Materials and Processing Cell and Components Manufacturing
Departments	Production and Maintenance Logistics Quality RnD
Specialisations	Laboratory and validation laboratory operators Production Assembly Operator Automation / Process Operator Process Operator - Upstream Machine Operator Operator

Cross-sectoral Specific Competence

Name	Type (S/K)	Description/Context	Level	ESCO
Equipment	S	- Use of hand tools, electric tools and machines	Practitioner	Equipment and Tools

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and Tools Handling		- Control the equipment used in production - use machines to fabricate components - responsible for some routine maintenance of the machines		Handling
Inspect Quality of Product / Sampling	S	- Makes visual quality checks - problem identification and minor troubleshooting - Conduct sampling to ensure material is not contaminated - Comply with all company policies, in particular those relating to safety, quality and performance	Practitioner	inspect quality of product
Analysis Methods	K	- Conducting root cause analysis on various issues issue permits according to routines - Analyse the situation and take proper actions when facing failures and deviations affecting the production - Analysis and estimation of workload	Expert	analysis methods
Hazardous Materials	K	- Controls the equipment and process materials used in production - Assure safe operations - Take proper actions when handling hazardous material	Expert	handling of dangerous goods
Material Operation & Handling	S	- Handling the materials	Practitioner	operate material handling equipment
Risk Mittigation	K	- Assure safe operations. Daily safety improvement work to reach in safety for example when doing repairs or inspections of equipment - Perform risk analysis - Actively partake in Safety, Quality, Environment and Improvement work	Expert	risk management
Operate Machines	S	- Operates and drives the machines - Maintenance procedures - Control the equipment and process materials used in production	Expert	work safely with machines
Production Processes	K	- Control the equipment and process materials used in production - Responsible for putting together many different parts	Practitioner	production process
Equipment Maintenance	S	- Perform visual inspections and equipment maintenance - Responsible for some routine maintenance of the machines	Practitioner	ensure equipment maintenance
Safety Procedures	K	- Complying with all company policies, in particular those relating to safety, quality and performance - Assure safe conditions through Lock Out Tag Out Try Out according to routines - Partake in Safety, Quality, Environment and Improvement work	Awareness	safety engineering

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		- Daily safety improvement work to reach world class in safety		
Parts Fitting	S	- Positioning and fitting parts in a specific relationship to each other - Bonding, clamping, screwing, joining, soldering or other similar activities in order to connect and secure assembled elements	Practitioner	

Sector Specific Competence

Name	Type (S/K)	Description/Context	Level	ESCO
Battery Material	K	- Active and raw material processing and refinement	Practitioner	
Battery chemistry	K	- Understand the chemical processes within the cells and chemical properties of battery cell components such as cathodes, anodes and electrolyte	Awareness	battery chemistry
Battery Industry	K	- Understands the importance of battery industry and overall value chain	Awareness	
Battery components	K	- Understands the different battery cells components and their functions within the cells, such as anode, cathode, electrolyte, separator	Awareness	

Soft Competence

Name	Type (S/K)	Description/Context	Level	ESCO
Communication	K	- Support managers and colleagues in creating a good working environment through inclusion, motivation, engagement, creativity, good communication and high ambitions - Report failures and deviations	Awareness	communication
problem solving & troubleshoot	S	- problem identification and minor troubleshooting - reporting any problems to supervisor	Awareness	problem solving & troubleshoot

General Transversal Competence

Name	Type (S/K)	Description/Context	Level	ESCO
English	K	- Follow written and verbal instructions in a	Awareness or	English

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			multicultural/international environment	practitioner depending on the environment	
Reporting	S	-	Report failures and deviations on equipment as well as conducting root cause analysis on various issues.	Practitioner	follow reporting procedures
Written	S	-	Perform risk analysis - Report failures and deviations on equipment orally or in written form	Practitioner	written skills
Health and Safety Standards	K	-	Assure safe operations. Daily safety improvement work to reach world class in safety for example when doing repairs or inspections of equipment - Perform risk analysis - Actively partake in Safety, Quality, Environment and Improvement work - A safe operation production line is a priority and will therefore be a crucial part of any task - Conduct sampling to ensure material is not contaminated	Expert	health and safety in the workplace

Academic Competence (can be taken from University programme)

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