EUROPEAN COMMISSION
HORIZON 2020 PROGRAMME - TOPIC H2020-LC-BAT-2020

Solutions for Large Batteries for Waterborne Transport

GRANT AGREEMENT No. 963560

D5.3 – Process Failure Mode and Effect Analysis and Control Plan

Report Details

Deliverable No.	SEABAT D5.3	
Deliverable Title	PFMEA and Control Plan	
Deliverable Date	2024-02-01	
Dissemination level	Confidential member only (CO)	
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Document History

Version	Date	Author	Remarks
V0.1	2024-01-15	Deniz Süzen	Draft
V1	2024-01-22	Deniz Süzen	First version for internal review
V2	2024-01.29	Deniz Süzen	Updated according to reviews
V2.1	2024-02-01	Can Gökce	Updated according to coordinator review
V2.2 final	2024-02-01	Cor van der Zweep	Final editing and ready for submission

Project Abstract

The goal of the SEABAT project is to develop a full-electric maritime hybrid battery concept that is based on:

- Modularly combining high-energy batteries and high-power batteries,
- Novel converter concepts and
- Production technology solutions derived from the automotive sector.

The modular approach will reduce component costs (battery cells, convertors) so that unique ship designs can profit from economies of scale by using standardized low-cost components. The concept will be suitable for ships requiring up to 1 MWh of storage or more.

Public Summary

In this report, as a scope of Task 5.3, focusing on 'De-risking the Assembly Process' for HESS Modules. The report outlines the de-risking methodology, PFMEA development steps, and Control Plan definition, all aligned with industry standards. The Appendices provide detailed insights into the Module Assembly Structure Tree, PFMEA, and Control Plan, offering essential guidance for executing assembly tasks in Task 5.4.

Overall, risk mitigation, and reliability in the assembly processes for HESS Modules. The document serves as a valuable resource for stakeholders, showcasing a robust methodology and adherence to industry standards for achieving precision and quality in every aspect of the manufacturing process.

8 Acknowledgements and disclaimer

The author(s) would like to thank the partners in the project for their valuable comments on previous drafts and for performing the review.

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1	FM	FLANDERS MAKE
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6	VARD	VARD ELECTRO AS
7	ABEE	AVESTA BATTERY & ENERGY ENGINEERING
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 963560. The information and views set out in this publication does not necessarily reflect the official opinion of the European Commission. Neither the European Union institutions and bodies nor any person acting on their behalf, may be held responsible for the use which may be made of the information contained therein.

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