



# MERSEN : A GLOBAL EXPERT IN ELECTRICAL POWER

## KEY FIGURES



Sales

**€1,2B**



R&D CENTERS

**18**



COUNTRIES

**33**



EMPLOYEES

**7,500**



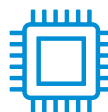
**SUPPORTING**

the transition to  
renewable energies



**CONTRIBUTING**

to power conversion  
& transmission



**IMPROVING**

power conversion  
efficiency with  
silicon carbide  
semi-conductors



**PARTICIPATING**

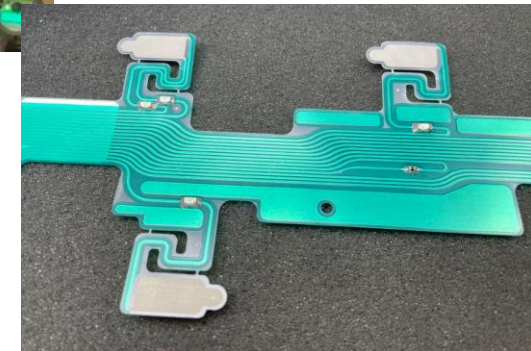
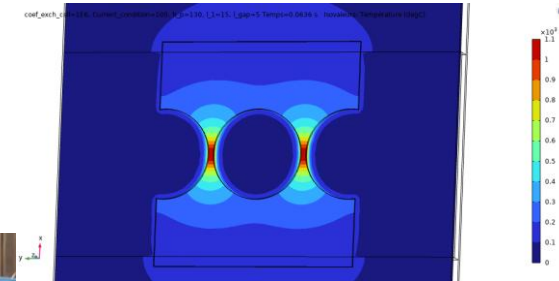
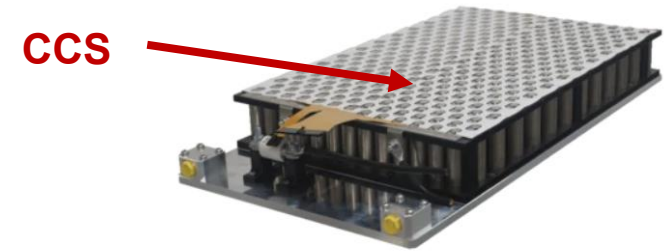
in the development  
of electric vehicles

# IMPROVE SAFETY INTO BATTERIES

Building on previous experience with Horizon Europe in the field of batteries and power conversion, Mersen is looking for a consortium to address **cell interconnexion new challenges**

## Objective 1 : Increase reliability and safety through safety devices and monitoring

- Improve safety management in batteries, at pack, module and cells level:
  - Development of smart breakers
  - Integration of fuse function at cell level, inside the CCS
- Integrate fire-resistant materials inside CCS to reduce thermal runaway propagation
- Improve reliability and reduce cost of monitoring function
  - Investigate new and innovative way to do monitoring function at the lowest cost
  - Work on stronger/smarter integration of monitoring into CCS

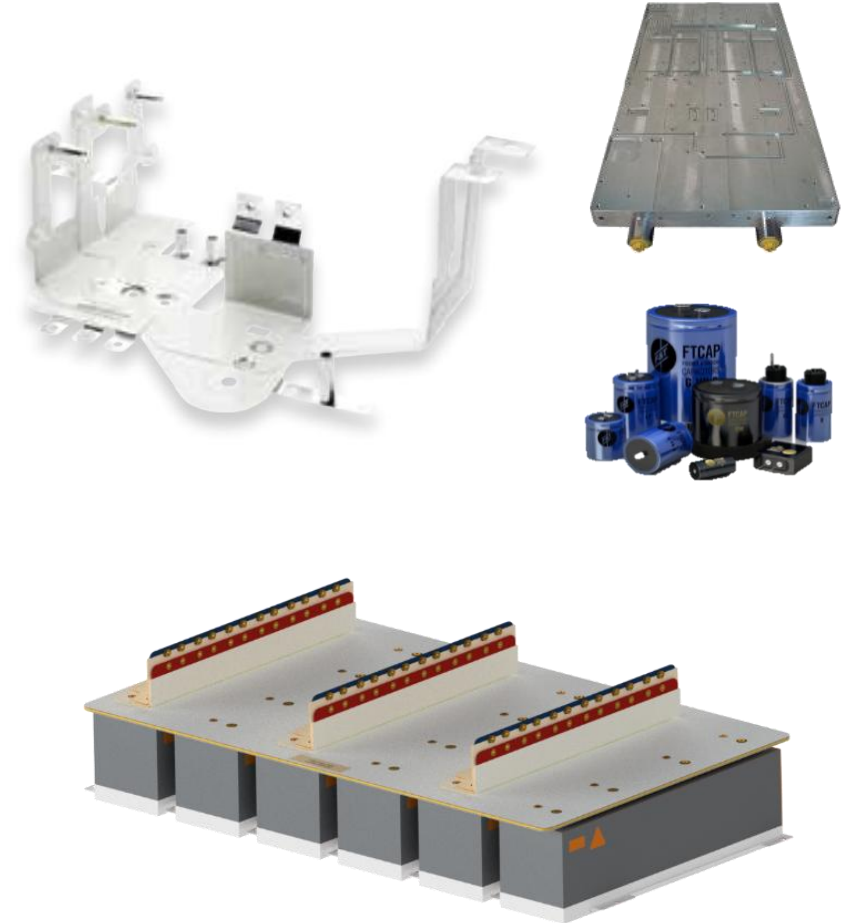


# BUSBARS : REDUCE COST AND ENVIRONMENTAL IMPACT

Mersen develops all solutions for power distribution and conversion, for all type of market (rail, aeronautic, EV, marine, renewable energies, ...).

**Objective 2 : Reduce weight, cost and environmental impact of power distribution and conversion**

- Develop new design strategies and technologies to optimize use of conductive materials and limit overheating
- Adopt new cost-effective materials (example: aluminium) :
- Reduce environmental impact by optimization of materials, design and processes



# CALLS OF INTEREST (CLUSTER 5)

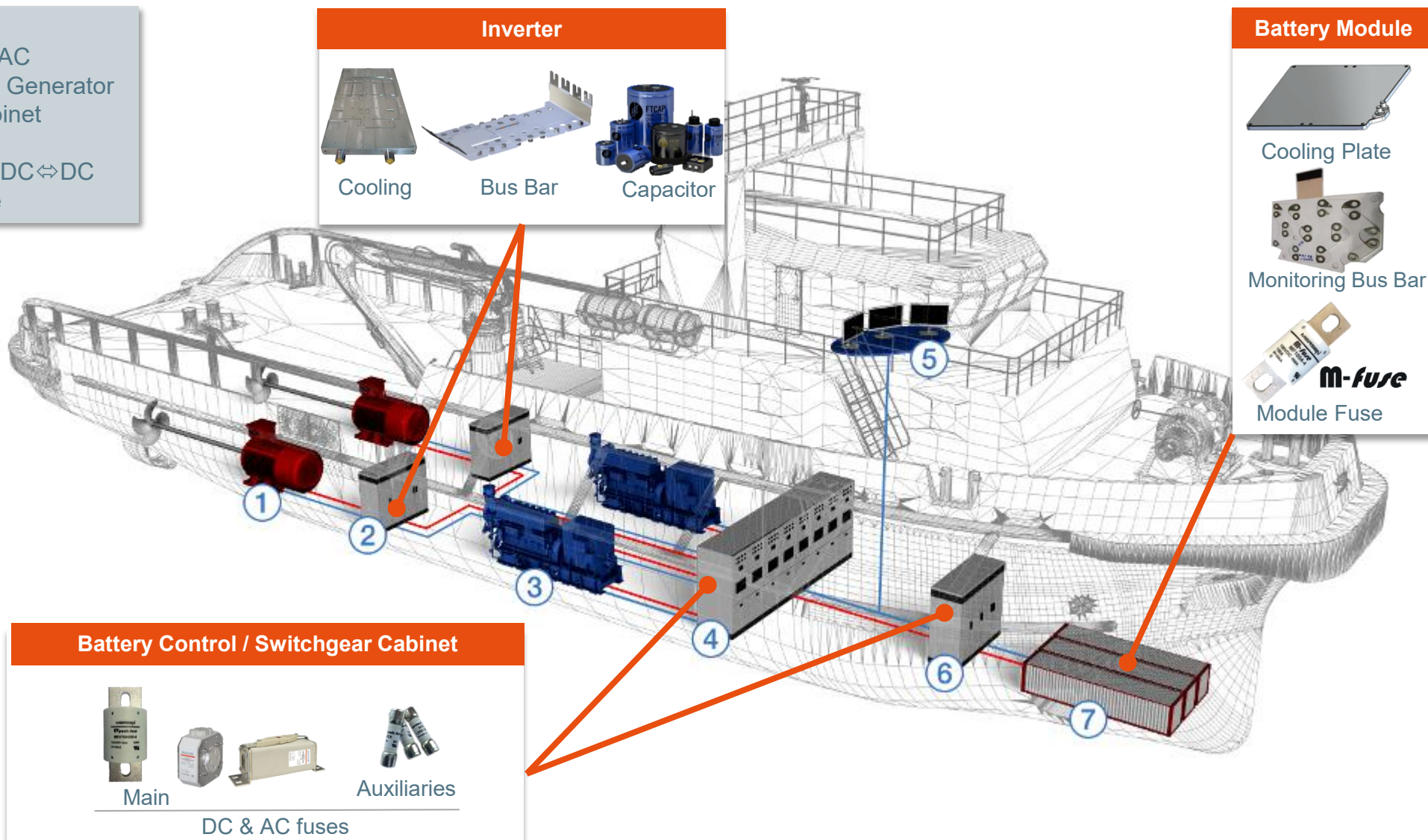
*Not exhaustive*

|                      |  |  |
|----------------------|--|--|
| <b>Destination 2</b> | <b>HORIZON-CL5-2026-10-D2-03</b>           | Integrated Production and Product Development for Next-Generation Lithium-based Batteries for Mobility (BATT4EU and Made in Europe Partnerships) |
| <b>Destination 3</b> | <b>HORIZON-CL5-2026-03-D3-01</b>           | Targeting key value chain components for increasing the competitiveness of renewable energy technologies in Europe                               |
|                      | <b>HORIZON-CL5-2026-03-D3-20</b>           | Affordable and sustainable primary equipment for Future-Ready multi-terminal HVDC Systems  |
|                      | <b>HORIZON-CL5-2027-07-D3-28</b>           | Integrated Approaches for Retrofitting Infrastructures with Innovative Energy Storage Technologies   |
| <b>Destination 5</b> | <b>HORIZON-CL5-2026-05-D5-01</b>           | Large-scale demonstration of Heavy-Duty Battery Electric Vehicles (HD BEV) towards long-haul logistics operations (2ZERO Partnership)            |
|                      | <b>HORIZON-CL5-2027-03-D5-05</b>           | Higher Voltage, Megawatt Charging System compatible, modular powertrain for Heavy Duty Vehicles (HDV) (2ZERO Partnership)                        |
|                      | <b>HORIZON-CL5-2026-06-Two-Stage-D5-10</b> | Disruptive Technologies and Innovative Concepts for Energy Saving Onboard of long-distance ships (ZEWT Partnership)                              |
|                      | <b>HORIZON-CL5-2027-03-D5-18</b>           | Enhanced electric operation and battery durability (ZEWT Partnership)  |




# MERSEN SOLUTIONS IN MARINE APPLICATIONS

1. Electric Motor
2. Inverter DC → AC
3. Diesel Engine / Generator
4. Switchgear cabinet
5. Control Desk
6. Battery control DC⇔DC
7. Battery storage




# MERSEN SOLUTIONS IN WIND APPLICATIONS

On board converter



Cooling plates, laminated Bus Bar, capacitors and fuses

Power generation



Power & grounding carbon brushes | Brush-holders | Slip ring assemblies

Surge & lighting protection

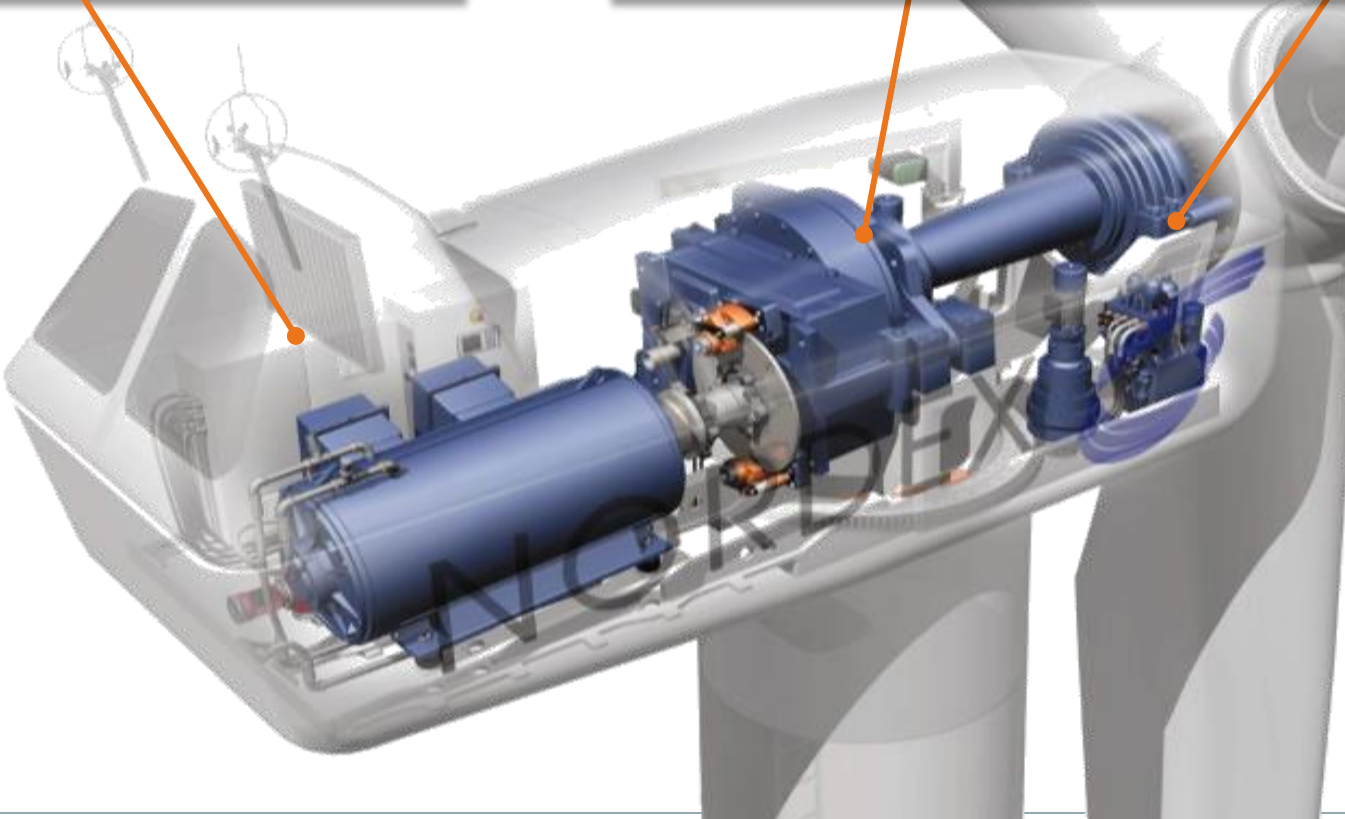


Carbon brushes | Surge Protective Devices (SPD)

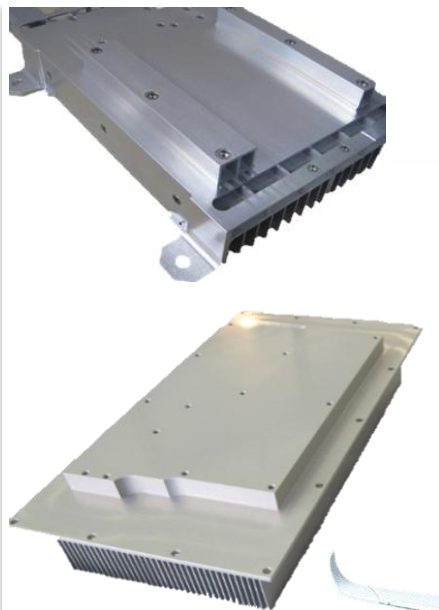
Pitch control



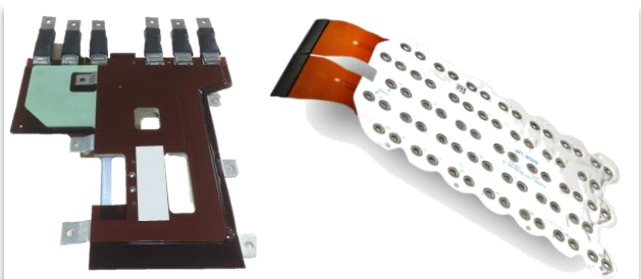
Carbon brushes / Brush-holders  
Brush-rocker assemblies for pitch motors



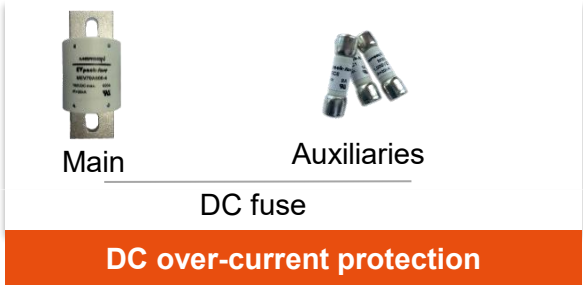
# MERSEN SOLUTIONS IN AERONAUTICS



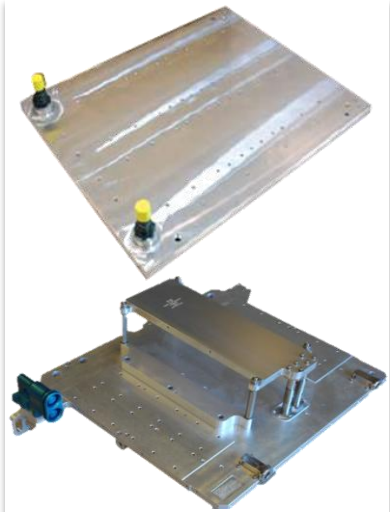
Air cooled heat sink



Laminated Bus Bar for inverter and battery



DC over-current protection



Liquid cold plate and chassis



Power Capacitors



Illustration courtesy of Thales



# MERSEN SOLUTIONS IN EV/HEV APPLICATIONS

BDU: Battery Disconnect Unit  
BMS: Battery Management System

PDU: Power Distribution Unit  
OBC: On-Board Charger

