

# **AS/NZS 3004.2:2014 – Section 2.9.3 Summary**

## **Marine Lithium Battery System Requirements (MECO Summary)**

Section 2.9.3 of AS/NZS 3004.2:2014 covers the additional safety requirements for lithium-ion battery installations on boats. It reinforces that lithium systems cannot simply replace lead-acid without proper protection, monitoring, and warning systems.

### **Key Points:**

- 1 Location & Temperature – Batteries must be mounted within manufacturer-specified temperature limits and appropriate IP ratings for their environment.
- 2 Mandatory Battery Management System (BMS) – A BMS must continuously monitor each cell's voltage and temperature to ensure safe operation.
- 3 Automatic Disconnect of Charging Sources – The BMS must disconnect all charging sources if cell voltage exceeds the manufacturer's limit.
- 4 Automatic Disconnect of Loads – The BMS must disconnect loads when voltage drops below the manufacturer's minimum threshold.
- 5 Temperature Overlimit Shutdown – The BMS must disconnect both charging and loads if temperature exceeds safe limits.
- 6 Warning System – An audible and visual alarm must be provided at the normal operating position before any automatic disconnection occurs.
- 7 Ventilation – Ventilation must comply with the battery manufacturer's recommendations or, if not provided, the general ventilation requirements of the standard.

Summary: Section 2.9.3 highlights that lithium battery systems on marine vessels require active management and protection to prevent overvoltage, undervoltage, and overheating events. Proper integration of alarms, disconnects, and ventilation is mandatory for compliance under AS/NZS 3004.2:2014.