

## Transportation of Power Sonic batteries by sea Non Dangerous Goods

The **CLASSIFICATION** for this type of battery is **UN2800 BATTERIES WET, NON-SPILLABLE, ELECTRIC STORAGE.**

**POWER SONIC BATTERIES COMPLY IN FULL WITH IMDG SPECIAL PROVISIONS SP238.1 and 238.2 (CHAPTER 3.3) which apply to this classification:**

**Special Provision 238.1** Batteries can be considered as **non-spillable** provided that they are capable of withstanding the vibration and pressure differential tests given below, without leakage of battery fluid:

- *Vibration test: The battery is rigidly clamped to the platform of a vibration machine and a simple harmonic motion having an amplitude of 0.8 mm (1.6 mm maximum total excursion) is applied. The frequency is varied at the rate of 1 Hz/min between the limits of 10 Hz and 55 Hz. The entire range of frequencies and return is traversed in  $95 \pm 5$  minutes for each mounting position (direction of vibration) of the battery. The battery is tested in three mutually perpendicular positions (to include testing with fill openings and vents, if any, in an inverted position) for equal time periods.*
- *Pressure differential test: Following the vibration test, the battery is stored for six hours at  $24^{\circ}\text{C} \pm 4^{\circ}\text{C}$  while subjected to a pressure differential of at least 88 kPa. The battery is tested in three mutually perpendicular positions (to include testing with fill openings and vents, if any, in an inverted position) for at least six hours in each position.*
- *Non-spillable type batteries which are an integral part of and necessary for the operation of mechanical or electronic equipment shall be securely fastened in the battery holder on the equipment and protected in such a manner as to prevent damage and short circuits.*

**Special Provision 238.2** Non-spillable batteries are **not subject to the provisions of this Code** if, at a temperature of  $55^{\circ}\text{C}$ , the electrolyte will not flow from a ruptured or cracked case and there is no free liquid to flow and if, when packaged for transport, the terminals are protected from short circuit.

