



EXTRA LOW VOLTAGE (ELV) BILGE PUMPS

This solution is approved by the National Regulator for the purposes of section 1.6(1) of Part B (General requirements) of the National Standard for Commercial Vessels (NSCV Part B).

Application

This generic equivalent solution (GES) applies to vessels less than or equal to 13 metres in measured length with outboards, or with inboard machinery not exceeding 120kw, that is subject to NSCV Part C 5A (Machinery).

Current Requirement

NSCV Part C5A establishes the requirements for the design, construction and installation of machinery in vessels. Clause 5.6 states:

5.6 RELIABILITY

Seawater and bilge systems essential to the safety of the vessel must provide a reliable means for fulfilling their specific functions.

For which the deemed to satisfy solution is:

5.8.3.2 Bilge pumping arrangements—general

The following bilge pumping arrangements apply to vessels fitted with pumps in accordance with Clause 5.8.3.2:

- c) A powered bilge pump shall be driven by a main engine, an auxiliary engine or a low or medium-voltage electric motor.

Equivalence

For a vessel less than or equal to 13 metres in measured length with outboards, or with inboard machinery not exceeding 120kw, powered bilge pumps driven with extra low voltage electric motors complying with ISO 8849:2003 is an approved equivalent means of complying with the requirements of NSCV C5A clause 5.6, if:

- the capacity of the powered bilge pump(s) is/are no less than that specified in 5.8.3.1
- the pump circuit does not include an automatic float switch
- the high water bilge alarm is contained on a separate circuit
- batteries are sealed valve regulated (SVR) type with sufficient reserve capacity for operation of the pump and other emergency electrical systems for the time specified for emergency electrical systems in NSCV C5B - Table 1
- lead acid batteries can be substituted for SVR type provided the batteries are positioned above the loaded waterline in acid proof battery boxes fitted with secured lids. Sufficient reserve capacity for operation of the pump and other emergency electrical systems as specified in NSCV C5B - Table 1
- the installation of the ELV pump and wiring meet IP67 wiring rules
- the battery supply is fitted with volt meters
- piping for the suction and discharge connected to the ELV pump is ISO 7840 type A2, discharge point a minimum of 250mm above the loaded waterline with a heavy duty non return valve fitted in a position that prevents back flooding; and
- ELV pump(s) are located in the low point of the vessel for operation in both heel and trim.