

Section 1.0

G E N E R A L

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1.0 Introduction

- 1.1.1 The *Construction Standards for Small Vessels* – TP1332, 2004 Edition, has been developed for every small vessel that operates as a pleasure craft or non-pleasure craft, intended to operate in Canadian waters, and supersedes the *Construction Standards for Small Vessels* – TP1332, 2002 Edition.
- 1.1.2 The responsibility for the application of this Standard with respect to both pleasure craft and non-pleasure craft lies with Transport Canada Marine Safety.
- 1.1.3 This Standard derives its authority from the *Small Vessel Regulations* made under the *Canada Shipping Act*, as amended from time to time, either in whole or in part.
- 1.1.4 It is the responsibility of a small vessel designer, manufacturer, constructor or owner to carefully consider the intended operation of the vessel when determining its construction, watertight integrity, and stability. When selecting materials and equipment, the responsible person shall ensure that such items meet the working and environmental conditions the vessel may encounter.
- 1.1.5 Criteria are derived from good boat building practices and awareness of the need for the safety of boaters and the protection of the marine environment. In this regard, it is the intention of this Standard to meet the practical needs of the industry.
- 1.1.6 The long-term goal is the harmonization of this Standard with the standards of both ABYC (American Boat & Yacht Council), whose assistance in drafting referenced sections is acknowledged, and ISO (International Organisation for Standardisation), as appropriate. Where standards from other organizations are referenced, they may be obtained from the addresses listed (see “Referenced Organizations”).
- 1.1.7 The application of the various sections of this Standard with respect to non-pleasure craft versus pleasure craft are identified at the beginning of each section. Each part of this Standard is to be considered separate.
- 1.1.8 The conversions shown in this Standard have been done using a “soft” conversion method or rounded to nearest millimetre. The conversions shown are only for numbers that have been incorporated into the Standard as imperial. Numbers and measures incorporated in metric have not been converted.

1.2 Definitions

- 1.2.1 In this Standard:
- “**Act**” means the *Canada Shipping Act*;
- “**Accessible**” means capable of being reached for inspection, maintenance, or usage under emergency conditions without the use of tools or removal of permanent craft structure;

“**Bilge**”, in respect of flotation material, means that area of the small vessel below a height of 100 mm (4 in) measured from the lowest point in the vessel, except for engine rooms, where liquid can collect when the vessel is in the static floating position;

“**Bow Reference Area**”, for the purpose of the level flotation and stability requirements for outboard power-driven small vessels, not over six (6) metres, means the area 0.6 m (2 ft) aft of the stem of the vessel, measured at the top deck or gunwale level;

“**Calculation Length**”, for power-driven small vessels, means the length, measured parallel to the static float plane (SFP), between two vertical planes normal to the centre line of the craft, erected from the foremost integral part of the hull, and erected aft through a point located on the transom at the midpoint between the SFP and the hull bottom (see Figure 4–1);

“**Connected compartments**” means two compartments connected in a manner that allows a flow of water in excess of 7.5 mL/h ($1/4$ U.S. fl oz/hr) from one compartment to the other compartment;

“**Designated Occupant Position**” means a specific location for a person within a small vessel, being either a seat or a location for standing with handholds;

“**Engine Power**” means the engine power, in kilowatts, calculated in accordance with ISO 8665, *Marine Propulsion Engines and Systems – Power Measurements and Declarations*;

“**Engine Space**” means any compartment that contains a permanently installed engine, or engines, including connected compartments;

“**Engine Space Bilge**”, in respect of flotation material, means that area in the engine room or a connected compartment below a height of 305 mm (12 in), measured from the lowest point in those compartments where liquid can collect when the vessel is in a static floating position;

“**Gross Load**” is a numerical value as calculated for each hull type as listed below:

- (a) for Monohull small vessels, see calculation subsection 4.2.3.1;
- (b) for Multihull small vessels, see calculation subsection 4.3.2.1;
- (c) for Inflatable small vessels, see calculation subsection 4.4.2.1;

“**Grounded Conductor**” means a current carrying conductor that is connected to one side of the power source that is intentionally maintained at ground potential;

“**Grounding Conductor**” (green or green with yellow stripe) means a non-current carrying conductor employed to connect the metallic non-current carrying parts of electrical equipment to the DC system or engine negative terminal;

“**Ground**” means the potential of the earth’s surface in which the vessels ground is established by a connection with earth including the conductive part of the wetted hull’s surface;

“**Ignition Protection**” means the design and construction of a device such that under design operating conditions it will not ignite a flammable hydrocarbon mixture surrounding the device when an ignition source causes an internal explosion, or it is incapable of releasing sufficient electrical or thermal energy to ignite a hydrocarbon, or the source of ignition is hermetically sealed;

“**ISO 11812**” means ISO Standard 11812, *Small Craft – Watertight Cockpits and Quick Draining Cockpits*;

“**ISO 12216**” means ISO Standard 12216, *Small Craft Windows, Port Lights, Hatches, Deadlights and Doors – Strength and Tightness Requirements*;

“**ISO 12217-1**” means ISO Standard 12217-1 *Small Craft – Stability and Buoyancy Assessment and Categorization, Part 1 – “Non-Sailing Vessels of Hull Length Greater Than or Equal to 6 Metres”*;

“**Length**” (L_H) means the distance measured from the forward end of the foremost outside surface of the hull shell to the aft end of the aftermost outside surface of the hull shell (see Figure 1–1);

“**Live Load**”, for the purpose of the requirements of monohull vessel minimum flotation test, means that part of the maximum load that is taken up by persons that may be carried in a given hull, considered to be 60% of that weight which when placed along the outer edge of either side of the person-carrying area would heel the vessel to the maximum angle without taking water on board, resulting in down-flooding;

“**Maximum Load**”, for the purpose of the requirements of monohull vessel minimum flotation test, means the sum of all weights in kilograms that may be carried in a given hull, including persons, equipment, engine, controls, and fuel, and for the purpose of this Standard, is considered to be 20% of the displacement to the static float plane;

“**Midship Deadrise Angle**” is the angle, taken at midship, at which the hull slopes up from the horizontal (e.g., A flat bottom vessel has a deadrise angle of zero degrees; a high midship deadrise angle value indicates a deep V-hull);

“**Non-Pleasure Craft**” means a small vessel, as defined in the *Small Vessel Regulations*, that is not a pleasure craft or fishing vessel as defined in the *Small Fishing Vessel Inspection Regulations*;

“**Overcurrent Device**” means a device that is designed to interrupt the circuit when the current exceeds a predetermined value (e.g., circuit breakers or fuses);

“**Panelboard**” means an enclosure or assembly that contains devices such as circuit breakers, fuses, switches, and instruments designed to distribute or protect the distribution of power in the vessel;

“**Permanently Installed**” means securely fastened so that tools need to be used for removal;

“**Personal Watercraft**” means a vessel as defined in the *Small Vessel Regulation*;

“**Pleasure Craft**”, as defined in the *Canada Shipping Act*, means a vessel used by an individual for pleasure and not for a commercial purpose;

“**Power Rating**” is the maximum engine power rated in kilowatts (and horsepower) based on Section 4 of this Standard;

“**Recommended Safe Limit**” means calculated limits according to the formulae set out in this Standard as applied to maximum gross load (GL), number of adult persons, or safe engine power limits;

“**Remote control**”, for the purpose of the requirements of steering systems, means any steering arrangement other than an outboard motor fitted with a tiller or a rudder with tiller arrangements;

“**Sealed Compartment**”, for the purpose of the requirements of monohull vessel minimum flotation test, means an enclosure that can resist an exterior water level of 305 mm (12 in) without seepage of more than 7.5 mL/h ($\frac{1}{4}$ U.S. fl oz/hr);

“**Standard**” means the *Construction Standards for Small Vessels* – TP1332, unless another standard is specified;

“**Static Float Plane**” (SFP) means the plane located below all points of major leakage and the most forward point of the small vessel below which the maximum displacement of the vessel exists, see figure 4–1; alternatively, it may be defined as the plane passing below all points of major leakage at equal distances either above or below the intersections of the sheer with the stem and stern (transom) when the vessel is transversely level. The intersections are determined when the vessel is longitudinally level, by being supported on its keel at points that are 40% and 75% of the vessel’s overall length, aft of the bow, and are at points where a line that is 45 degrees to a level floor is tangent to the bow and stern of the vessel;

“**Static Floating Position**” means the attitude in which a small vessel floats in calm water with each fuel tank filled to its rated capacity, but with no person or item of portable equipment on board, with other tanks such as water and holding tanks empty, and permanently installed equipment supplied by the vessel builder in its proper place;

“**Stern Reference Area**”, for the purpose of the level flotation and stability requirements for outboard power-driven small vessels, not over six (6) metres, means that area 0.6 m (2 ft) forward of the transom or engine mount, measured at the top deck or gunwale level;

“**Switchboard**” means an enclosure so constructed to control and distribute electrical power to panelboards and other electrical equipment within the vessel, included in the enclosure are electrical devices such as circuit breakers, fuses, switches, indicating devices, meters, and instruments;

“**Trip-free Circuit Breaker**” means a resettable circuit breaker designed so that it is impossible to override the current interrupting mechanism;

“**Watertightness**”, as defined by ISO 12216, means the ability of an appliance, fitting, or surface to resist ingress of water into the vessel;

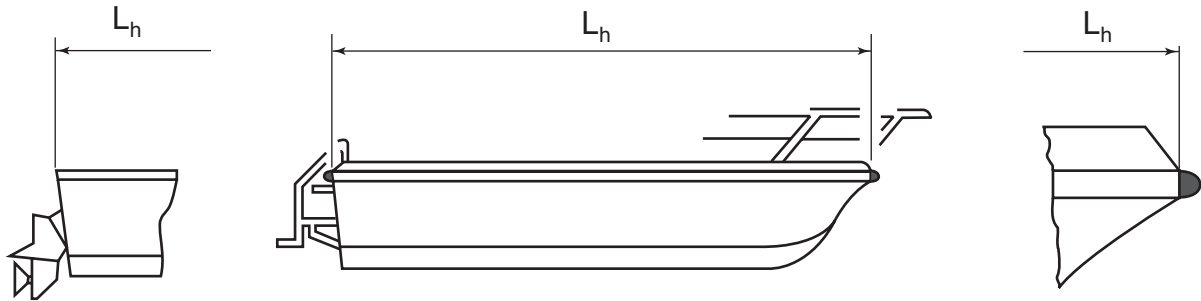
“**Watertight Enclosure**”, as it applies to Section 8, “Electrical Systems,” means an enclosure that prevents the ingress of water when tested by subjecting it to a solid stream of water from a 25mm (one inch) inside diameter nozzle, at a pressure of 103.4 kPa (15 psi) at the nozzle, with the nozzle 3m (10 feet) away and a water temperature of approximately 10°C (50°F), for a period of five minutes.

“**Weatherproof**” means that equipment is so constructed or protected that exposure to the weather, to falling moisture or to external splashing will not impair the effectiveness of the enclosed equipment.

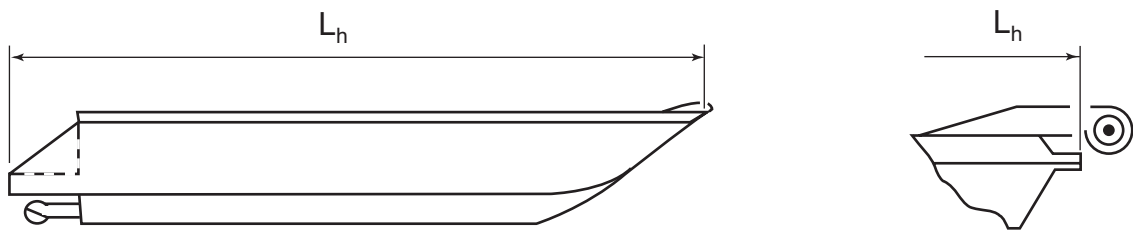
1.3 Application

- 1.3.1 All small vessels shall comply with this Standard as required by the *Small Vessel Regulations* made under the *Canada Shipping Act*.
- 1.3.2 Existing pleasure craft shall comply with this Standard insofar as it is reasonable and practicable to do so.
- 1.3.3 The application of the various sections of this Standard with respect to non-pleasure craft versus pleasure craft are identified at the beginning of each section under the subsection titled “Application.”

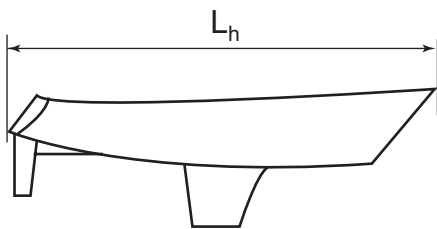
Figure 1-1 Determination of Vessel Length (L_h)



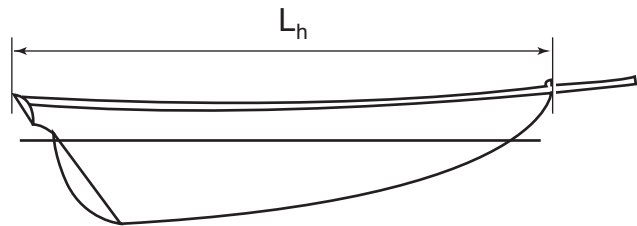
Monohull Powerboat with Add-on Swim Platform



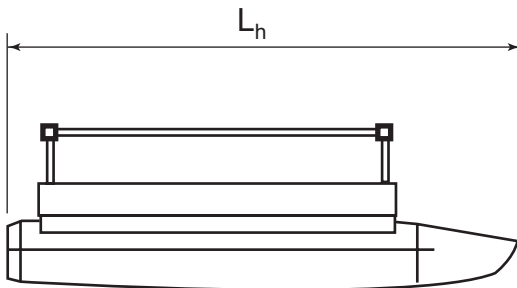
Monohull Powerboat with Built-in Swim Platform



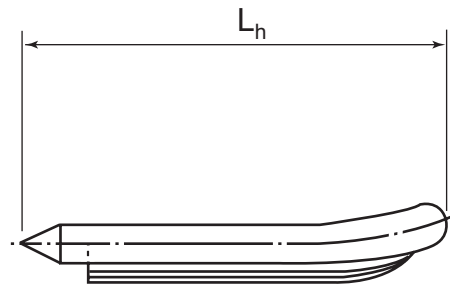
Fin Keel Sailboat



Full Keel Sailboat



Multihull/Pontoon



Inflatable/Rigid Inflatable