



Republic of the Philippines  
Department of Transportation  
**MARITIME INDUSTRY AUTHORITY**  
Bonifacio Drive cor. 20<sup>th</sup> Street, Port Area, Manila



**MEMORANDUM CIRCULAR NO. SR 2020- 03**  
**Series of 2020**

**TO : ALL SHIPBUILDERS/ BOATBUILDERS, SHIPOWNERS/ OPERATORS  
AND ALL OTHER CONCERNED**

**SUBJECT : RULES ON THE CONSTRUCTION AND CERTIFICATION OF VESSELS  
USING COMPOSITE MATERIALS**

Pursuant to Presidential Decree No. 474, Executive Order Nos. 125/125-A, Republic Act No. 9295 and its Revised Implementing Rules and Regulations, Philippine Merchant Marine Rules and Regulation (PMMRR) 1997, as amended and Presidential Decree No. 1059 and its IRR, the following rules are hereby adopted and prescribed:

**I. OBJECTIVES**

This Circular aims:

1. To provide rules on the construction and certification of vessels using composite materials in order to encourage the development of the boatbuilding industry;
2. To strengthen and support the expansion and modernization of the Philippine domestic merchant fleet and its strict adherence to safety standards which will ensure the seaworthiness of all sea-borne structures; and,
3. To ensure that all vessels constructed in the Philippines using composite materials are in accordance with the safety and environmental standards imposed by the Administration.

**II. COVERAGE**

This Circular shall apply to all vessels using composite materials, either imported or locally constructed, or to be constructed.

**III. DEFINITION OF TERMS**

1. **"Administration"** refers to the Maritime Industry Authority (MARINA).
2. **"Classification Rule Book"** refers to the book published by the classification society that contains the set of rules including technical requirements in relation to the design, construction and survey of ships which is maintained and updated on a regular basis.



3. **"Classification Society"** refers to a non-stock, non-profit organization that establishes and maintains technical standards for the construction and operation of ships.
4. **"Composite Material"** refers to a combination of two or more constituent materials with significantly different physical or chemical properties that, when combined, produce a material that is stronger, lighter or resistant to corrosion & electricity such as FRP, carbon fiber (graphite), Kevlar, quartz, polyester and other similar material.
5. **"Fiber Reinforced Plastic" (FRP)** refers to two (2) basic components: a glass filament or other material fiber reinforcement and a plastic, or resin, in which the reinforcing material is embedded.
6. **"International Association of Classification Societies (IACS)"** refers to a technically based non-governmental organization that currently consists of twelve (12) member-marine classification societies. More than 90% of the world's cargo-carrying ships' tonnage is covered by the classification standards set by member societies of IACS.
7. **"Local Classification Society" (LCS)** refers to an organization authorized by the Administration to conduct classification services for ships engaged in the domestic trade.
8. **"MARINA-Registered Boatbuilder"** refers to a boatbuilder authorized to perform construction, alteration, modification and conversion of vessels including vessels using composite material under MC 2015-09.
9. **"MARINA-Registered Shipbuilder"** refers to a shipbuilder authorized to perform construction, alteration, modification and conversion of vessels including vessels using composite material under MC 2018-02, as amended.
10. **"Mono-Hull Vessel"** refers to single hull vessel where the hull may be of displacement, semi-displacement or planing form subject to some support by hydrodynamic lift.



11. **"Multi-Hull Vessel"** refers to a vessel with more than one hull having less hull volume, higher displacement, and shallower draft (draught) than mono hull of comparable length. The multi-hulls combined often have a smaller hydrodynamic resistance than mono hull, requiring less propulsive power from either sails or motors.
12. **"Twin Hull or Catamaran"** refers to a multi-hull vessel featuring two parallel hulls of equal size.

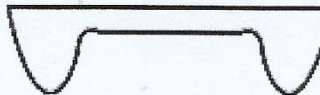
A handwritten signature in blue ink, located at the bottom right of the page.



- 12.1 **Twin Hull Form 1** refers to a vessel having two hulls connected only with structure that is **not** part of the vessel's buoyant hull envelope, such as structural tubing or beams.

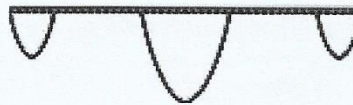


- 12.2 **Twin Hull Form 2** refers to a vessel having two hulls wherein the connecting structure is part of the buoyant hull envelope, the vessel as a whole is treated as if it were a single hull vessel.

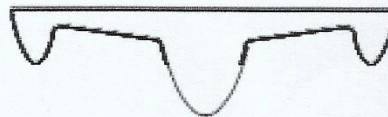


13. **"Tri-hull or Trimaran"** refers to a multi-hull vessel that comprises a main hull and two smaller hulls (or "floats") which are attached to the main hull with lateral beams.

- 13.1 **Tri-hull Form 1 (Trimaran)** refers to a vessel having three hulls connected only with structure that is **not** part of the vessel's buoyant hull envelope, such as structural tubing or beams.



- 13.2 **Tri-hull Form 2** refers to a vessel having three hulls wherein the connecting structure is a part of the buoyant hull envelope, the vessel as a whole is treated as if it were a single hull vessel.



14. **"Recognized Organization (RO)"** refers to an organization that has been assessed by the Administration and has complied with the RO code and has entered into a Memorandum of Agreement (MOA) with the Administration under MC 2018-01.

15. **"Shipbuilding or Boatbuilding Permit"** refers to the permit issued by the Administration to the ship/ boat to be constructed, modified, altered, converted or rebuilt in accordance with the Administration's approved vessel plans.<sup>1</sup>

16. **"Ship or Vessel"** refers to any craft or artificial contrivance capable of floating on water, designed to be used, or capable of being used as a

<sup>1</sup> Based on MC 2018-02 definition



means of water transportation in Philippine waters for the carriage of passengers or cargo, utilizing its own motive power or that of another.<sup>2</sup>

17. **"Ship Plans and Specifications"** refers to plans showing the detailed drawings of each specific plan of the ship.<sup>3</sup>

#### **IV. GENERAL PROVISIONS**

1. A shipbuilding/ boatbuilding permit from the Administration shall be required prior to construction, modification or conversion of the vessel.
2. The MARINA-Registered Shipbuilder/Boatbuilder shall be responsible for ensuring that the vessel is constructed, modified or converted based on the approved plans, specifications and all applicable standards, rules and regulations.
3. All ship plans and specifications for construction, modification or conversion submitted to the Administration shall be duly sealed and signed by a Registered Naval Architect. While electrical plans shall be signed and sealed by a Professional Electrical Engineer as per MC 2015-07.
4. The Administration, in performing its oversight and monitoring functions, shall supervise the conduct of survey during the stages of construction, modification or conversion of the vessel by its Local Classification Societies as per MC 165, as amended or Recognized Organizations as per MC 2018-01.
5. Vessels with hull constructed with wood and covered/ coated with FRP or of similar construction shall not be considered as vessels using composite material.
6. Composite materials shall not be allowed to be used for Fuel Tanks.
7. Commercial Passenger boats shall be designed either using mono-hull, twin hull form 2 or tri-hull form 2 sufficient enough to withstand adverse weather and sea conditions. The operational limitations of the vessels taking into consideration the area of navigation shall be reflected in the Authority to Operate.
8. The strength and construction of hull (whether mono-hull or multi-hull), superstructures, deckhouses, machinery casings, companion ways and any other structure and equipment shall be sufficient enough to withstand adverse weather and sea conditions.
9. Certificate of Class shall be submitted to the Administration prior to the issuance of Safety Certificates. The LCS or member of IACS shall identify

<sup>2</sup> Based on RA 9295 definition

<sup>3</sup> Based on MC 2015-07 definition



and reflect in the Certificate of Class the operational limitations of the vessels taking into consideration the area of navigation which will be approved by the Administration.

## **V. SPECIFIC PROVISIONS**

### **FOR VESSELS USING COMPOSITE MATERIAL UP TO 24 METERS IN LENGTH**

1. All vessels using composite material up to 24 meters in length covered under this Circular shall submit to the Administration all necessary ship plans and specifications prior to construction, modification or conversion in accordance with the approved classification rule books and applicable national standards of the Administration (such as ISO12215 or its equivalent Philippine National Standards (PNS)).
2. All vessels using composite material up to 24 meters in length covered under this Circular shall undergo periodic inspection/ survey by the Administration during construction, modification or conversion prior to registration and issuance of statutory certificates, if applicable.

### **FOR VESSELS USING COMPOSITE MATERIAL OF ABOVE 24 METERS IN LENGTH**

1. All vessels using composite material above 24 meters in length covered under this Circular shall be classed by a Local Classification Society or member of IACS. Plans, drawings and scantling calculations and any revisions relevant to the construction, modification or conversion of the vessel shall be reviewed and approved by LCS or member of IACS prior to submission to the Administration.
2. The Local Classification Society or member of IACS shall be responsible for ensuring that the vessel is constructed, modified or converted and properly maintained in accordance with the approved classification rule books by the Administration and applicable national standards of the Administration.
3. The Local Classification Society or member of IACS surveyor shall perform surveys during the construction and assembly of the hull, machinery and equipment.

## **VI. DOCUMENTARY REQUIREMENTS**

1. The following requirements shall be submitted to the Administration for the issuance of Shipbuilding/ Boatbuilding Permit prior construction, modification or conversion:
  - 1.1 Letter Request
  - 1.2 MOA between the owner and the shipbuilder



1.3 Project Cost Estimates

1.4 General Arrangement Plan

2. The plans, drawings and ship calculations shall be in three (3) sets of blue or white print and an electronic copy of the following:

- General Arrangement Plan
- Construction Plan
- Midship Plan and Watertight Bulkheads
- Lines Drawing
- Hydrostatic Curves
- Capacity Plan
- Lamination Schedule
- Scantling Calculation
- Piping Diagram
- Specification & Arrangement of Main Propulsion & Auxiliary Machineries
- Fuel Tank Arrangement & Specification
- Shafting and Propeller Arrangement & Specification
- Fire Fighting, Life Saving Appliance and Emergency Escape Plan

Additional Plans for Passenger Boats, as applicable

- Passenger Accommodation Plan
- Permissible Subdivision by Empirical Formula/Floodable Length Curves& Calculations
- Cross Curves of Stability

Additional Plans for ships with more than 4 KW Generators

- Deck Wiring Layout
- Schematic Wiring Diagram
- Schedule of Loads & Electrical Specifications

## VII. SAFETY RESPONSIBILITIES

1. The ship owner shall be responsible for maintaining and operating their ships in accordance with the applicable national standards, rules and regulations of the Administration.
2. The shipbuilder/ boatbuilder shall be responsible for constructing, modifying or converting the ship in accordance with the approved plans and specifications by the Administration or its LCSs or Member of IACS.
3. The Local Classification Societies/ Member of IACS shall be responsible for reviewing and approving the plans of the ship in accordance with the approved class rules and applicable national standards of the Administration.
4. The Registered Naval Architect and Professional Electrical Engineer shall be responsible for designing and drafting the plans and specifications of



the vessel in accordance with the principles of naval architecture and the applicable national standards of the Administration *and/or published and accepted design standard and practice as those issued by LCS or IACS.*

## VIII. FEES & CHARGES

1. Approval of ship's plans for construction, conversion or alteration, modification - P160.00 per section.
2. Issuance of Shipbuilding/ Boatbuilding Permit - P12,400.00 per project.
3. Periodical Survey for construction, conversion, alteration or modification of vessels using composite material and Supervision of Survey of LCS or member of IACS relative to construction, conversion, alteration or modification of vessels using composite material:

Fees (per Survey)	
Area Within Work Station	Additional Charges Outside Work Station
P1,000.00	P1,300 per day + amount of airfare ticket (economy class) per surveyor In case outside the country: DSA per day + amount of airfare ticket (economy class) per surveyor

## IX. FINES & PENALTIES

1. Constructing, modifying or converting a vessel without a Shipbuilding/ Boatbuilding Permit

	24 meters in length & below		Above 24 meters in length	
	1st Violation	2nd Violation	1st Violation	2nd Violation
Owner	Php 50,000.00	Suspension of Operation Plus 100% of first violation fines	Php 100,000.00	Suspension of Operation Plus 100% of first violation fines
Shipbuilder/ Boatbuilder	Php 100,000.00		Php 150,000.00	

2. Constructing, modifying or converting a vessel without approved plans

	24 meters in length & below		Above 24 meters in length	
	1st Violation	2nd Violation	1st Violation	2nd Violation
Owner	Php 50,000.00	Suspension of Operation Plus 100% of first violation fines	Php 100,000.00	Suspension of Operation Plus 100% of first violation fines
Class Society	-		Php 150,000.00	



<b>Shipbuilder/ Boatbuilder</b>	Php 100,000.00		Php 200,000.00	
-------------------------------------	----------------	--	----------------	--

Note: **3<sup>rd</sup> Violation: Closure after due process.** Cancellation of any authority accreditation/ recognition granted by the Administration may be imposed depending on the gravity of the offenses subject to due process.

3. Failure to maintain the safety responsibility as required under section VII, the Administration may, after due process and hearing, suspend/ cancel/ revoke relevant government licenses of the subject entity.

#### **X. REPEALING CLAUSE**

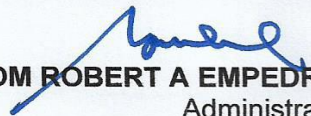
Provisions of MARINA Circular No. 2015-07 and other Circulars which are inconsistent herewith are hereby amended/repealed accordingly.

#### **XI. EFFECTIVITY CLAUSE**

This Memorandum Circular shall take effect fifteen (15) days after its publication once in a newspaper of general circulation or in the Official Gazette.

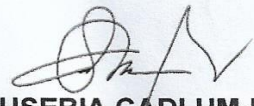
Done in the city of Manila, Philippines, this 18<sup>th</sup> day of June 2020.

BY AUTHORITY OF THE BOARD:

  
**VADM ROBERT A EMPEDRAD AFP (Ret)**  
Administrator

#### **SECRETARY'S CERTIFICATE**

This is to certify that Memorandum Circular No. SR-2020-03 has been approved during the 27<sup>th</sup> Regular Meeting of the MARINA Board of Director held on 18 June 2020.

  
**ATTY. EUSEBIA CADLUM-BOCO**  
Corporate Board Secretary

Date of Publication: 23 September 2020

Business Mirror

Date of Submission to ONAR: