



RINA **marine**

ships in service
design and construction

Certification: Materials & Products

materials & products | processes & personnel, laboratories, service suppliers





the Programme

RINA's Certification Programme guarantees the quality assessment as follows:

Materials and Products

- Manufacturer's approval
- Type approval
- Testing

Processes and Personnel

- Welding procedures/personnel
- ND Testing operators

Laboratories

- Performing tests in accordance to MED
- Performing specific tests (mechanical, tensile, etc.)

Service Suppliers

- Thickness measurements
- Surveys and maintenance of fire-extinguishing equipment
- In-water surveys

manufacturer's approval, type approval, testing

Certification is formal documentary evidence that a specific material or product complies with all specified requirements. **It attests to the quality of the product, and to the manufacturer's capability and reputation.**

Applicable Certification processes are:

- Manufacturer's approval + ■ Testing
- Type approval
- Type approval + ■ Testing
- Testing



MANUFACTURER'S APPROVAL

Manufacturer's approval is a **compulsory preliminary step in the certification process** for particular materials which need to be submitted to final acceptance tests.

products	procedures
<ul style="list-style-type: none"> ■ Steel and aluminium plates and sections ■ Steel casting and forging ■ Casting for propeller ■ Chain, cable, rope ■ Pressure vessels 	<ol style="list-style-type: none"> 1- Facilities' manufacturer assesment visit 2- Approval test attendance 3- APPROVAL AND RENEWAL CERTIFICATE Approved manufactures' list updating (www.rina.org)

Manufacturer's approval ensures the quality level of the product and confirms the manufacturers' capability to produce, with suitable manufacturing processes, products that comply with specified requirements and prescribed standards. Approval is carried out in accordance with the **RINA Rules for the Approval of Manufacturers of Materials**.

a long tradition in certification

RINA has a long tradition in the certification of products and services associated with safe and efficient maritime transportation and pollution prevention. It has attained a widely acknowledged level of expertise and skill, and a reputation for quality performance, in these specialist areas, and has developed a comprehensive, strategic international network of Offices and Survey Stations to provide prompt and specific responses to client requests.

RINA performs Certification services in accordance with national and international safety standards and with its own Rules for the Classification of Ships.

As a Notified Body, RINA also certifies marine equipment and pleasure craft in accordance with relevant European Community Directives (PPE, MED).

Certification: Materials & Products

manufacturer's approval, type approval, testing

TYPE APPROVAL (and MED Directive)

Type approval covers the process of verifying that a product, group of products or system complies with RINA Rules. **It is compulsory for certain products.**

products	procedures
<ul style="list-style-type: none">■ Classification purposes <i>(e.g. diesel engines, electric cables and electric motors)</i>■ Administration request <i>(e.g. marine products)</i>■ European Directive <i>(e.g. MED and PPE products)</i>■ Voluntary Customer request	<ol style="list-style-type: none">1- Examination of technical documentation2- Type test and production control3- APPROVAL AND RENEWAL CERTIFICATE <i>Approved products list updating (www.rina.org)</i>

MED approval is carried out in accordance with RINA Rules for the Certification of Marine Equipment in accordance with **European Directive 96/98/EC and subsequent amendments.**

RINA's high level of expertise and skill is essential for providing efficient and specific responses to the different clients' needs.



type-approved products to be tested

Are type-approved products also to be tested?

In general, further production control are required to assess conformity of production of approved types, by means of:

- **product verification or production quality assurance**
(mass-produces products)
- **individual certification or alternative inspection scheme**



Certification: Materials & Products

an alternative

Manufacturers who have a Quality System certified in accordance with ISO 9001 or equivalent standard and who supply type-approved products and/or have proven relevant experience may qualify for **RINA alternative inspection scheme, an efficient, practical and cost-effective method of certification.**

RINA Alternative Inspection Scheme

Applicable to:

- Mass-produced materials/products (e.g., plates, sections, pipes, fittings, valves, pressure vessels and pumps)
- Diesel engines, reduction gears, turbochargers, electrical motors, cables, switches

Procedure for admission:

- Document examination (system quality control plans), manufacturing and testing facilities assessment

Procedure for testing:

- Tests performed according to manufacturers' schedule without external overseeing by surveyor
- Identification of the product with RI stamp and issuance of approval certificate on RINA form
- RINA review and validation

manufacturer's approval, type approval, testing

TESTING

Testing is the final product acceptance step carried out at the manufacturer's facilities. Testing and certification are compulsory for products covering essential services to be fitted on board RINA-classed ships.

products	procedures
<p>Manufacturers:</p> <ul style="list-style-type: none"> ■ Steel plates and sections ■ Steel castings and forgings ■ Aluminium alloys ■ Casting for propeller ■ Chain cables, ropes <p>Type approval:</p> <ul style="list-style-type: none"> ■ PPE and MED products ■ Diesel engines ■ Electric cables and motors ■ Sensor, actuators <p>Testing:</p> <ul style="list-style-type: none"> ■ Pumps, Compressors, Valves 	<p>▶</p> <ol style="list-style-type: none"> 1- Examination of technical documentation 2- Single test witness 3- TEST CERTIFICATE

Details of products and testing requirements are found in **RINA Rules for Testing, Certification and Acceptance of Marine Materials and Equipment.**

RINA: 150 years of service

RINA is one of the oldest classification societies and certification companies in the world. Established in Genoa in 1861 to serve the marine industry, today it spans the globe as a multinational and multi-faceted company, sharing its knowledge and experience through a wide range of services which help industries and the community to improve their businesses and quality of life. RINA's services cover the environment, energy, transportation, logistics, safety, quality and social responsibility.



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