

Marine Product Inspection of CCS



VI. Kinds of Certificates

1. Approval Certificate

The approval of product by CCS shall be identified by the followings:

- ⊙ Certificate of Design Approval ⊙ Certificate of Mode B of Type Approval
- ⊙ Certificate of Mode A of Type Approval ⊙ Certificate of Works Approval

2. Products Certificate

(1) The classification products and statutory products after individual/batch inspection by CCS shall be recorded and identified by the followings:

⊙ Certificate of Marine Products

The surveyor shall issue the document to state:

- a. the products complying with the requirements of the rules;
- b. the inspected products having been surveyed and tested as required;
- c. the survey sample taking from the products;
- d. the test of product being carried out at the attendance of the surveyor or at special agreed circumstance.

⊙ Equivalent Certificate

The documents shall be issued by the manufacturer and stamped by CCS and endorsed by the surveyor to identify the followings:

- a. the products complying with the requirements of the rules;
- b. the inspected products having been surveyed and tested as required;
- c. the survey sample taking from the products;
- d. the test of product being carried out at the attendance of departments authorized by manufacturer;
- e. the result of inspection and test of products confirmed by the surveyor.

(2) For the products not covered in rules and statutory requirements, they shall, after individual/batch inspection, be recorded and identified by the followings:

⊙ Inspection Certificate

The surveyor shall issue the document to state:

- a. the products complying with the standards made by the applicant;
- b. the inspection and test witnessed by the surveyor and/or the test report reviewed by the surveyor;
- c. the test sample taking from the existing products.

⊙ Test Certificate

The surveyor shall issue the document to state:

- a. the products test being carried out at the attendance of the surveyor;
- b. the test sample taking from the existing products.



To download more service product files, please visit www.ccs.org.cn/en/spad.htm

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Marine Product Inspection of CCS

I. Brief Introduction of Marine Product Inspection

Materials and equipments are essential parts for a ship. The quality of products is the foundation and guarantee of ships with high quality. Therefore, marine product inspection plays a key role in the work of ship survey.

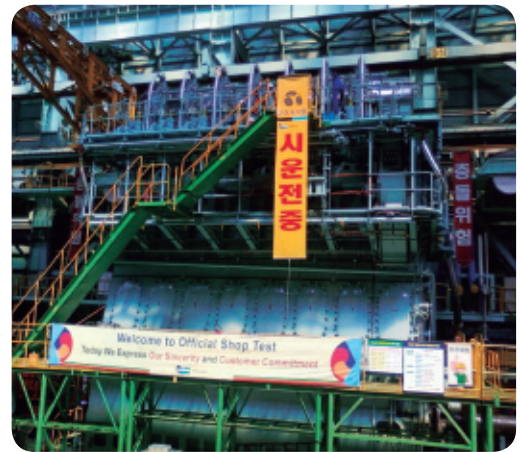
Nearly half a century has passed since China Classification Society (hereinafter abbreviated as CCS) started to carry out marine product inspection in 1960. With the years' development of the marine product inspection, the mode of inspection and process of work and operation have been perfected day by day. Today, the mature system of marine product inspection has come into being.

At present, CCS has owned a survey team with rich experiences for carrying out marine product inspection. With the help of effective control of all processes of the inspection including design, manufacture and test of marine product and quality management, which has impact on the product quality, the quality of marine product has been guaranteed to comply with the related conventions, regulations, rules and standards and a prerequisite has been provided for safeguarding the quality of ship and the safety of life at sea.

Periodically, CCS publishes "*List of Approved Marine Products*", making public the qualified marine products approved by CCS with an aim to supply information to shipowners, shipyards and ship design institutes for choosing satisfactory equipments, parts and materials during construction, repair and conversion of a ship.

CCS also performs inspection and approval of marine products for manufacturers worldwide spreading over Asia, Africa, Europe, America and Oceania. The products inspected cover the industries of metallurgy, machinery, electronics, oil, chemical and shipbuilding, etc.

Each year, CCS inspects more than 5 million tons of marine steel plates and nearly 30,000 diesel engines.



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II. Categories of Marine Product Inspection

- ⊙ Design approval
- ⊙ Type approval
- ⊙ Works approval
- ⊙ Product inspection
- ⊙ Approval of product test and inspection institutes
- ⊙ Approval of institute of life-craft inspection and maintenance

III. Scope of Marine Product for Inspection

The classification products required by CCS rules and statutory products required by international conventions and regulations of the flag state shall be inspected by CCS, which mainly include the followings:

- ⊙ Metal materials and products
- ⊙ Non-metal materials and products
- ⊙ Main engine and auxiliary machinery
- ⊙ Boiler and pressure vessels
- ⊙ Pollution-prevention equipment
- ⊙ Fire-fighting appliances
- ⊙ Fire-resistant material and fire-resistant structural members
- ⊙ Life-saving appliances
- ⊙ Crane and parts
- ⊙ Electrical equipment
- ⊙ Radio communication and navigation equipment
- ⊙ Fittings

IV. Modes of Marine Product Inspection

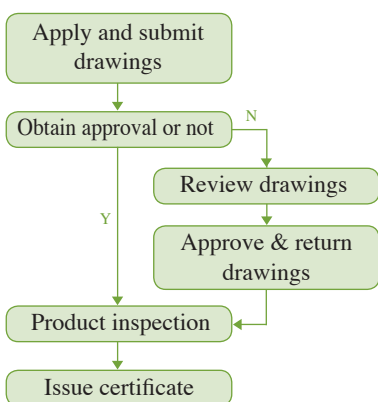
The product inspection is the basic mode of marine product inspection of CCS. Namely, after CCS verifies the products to comply with the requirements through review of technical documents (drawings and technical criteria) and type test of necessary items, CCS shall affix an inspection mark of CCS on the product and issue product certificate or equivalent document. In the course of survey, to avoid unnecessary repeated inspection of the same product or based on QA system of manufacturer, the field survey of the surveyor shall be replaced by Q.A to a certain extent. According to the categories of marine products, CCS shall provide various modes of approval for the manufacturer to choose when applying for the inspection of marine product. Currently, there are following approval modes for CCS products certification:

- ⊙ **Design approval:** to verify the products to comply with the requirements of IMO convention, CCS rules or applicable criteria by reviewing the drawings and technical documents and related survey and experiments.
- ⊙ **Type approval:** type approval can be divided into Mode A and Mode B.
Mode B of type approval refers to the approval granted by CCS for the design type and fitness for purpose of the product when CCS confirms that the products, the equipment of production and test of the manufacturer, and the system of basic quality control comply with the regulations of CCS rules after review of the product drawings and technical documents, verification of related technology, approval tests and field audit.
Mode A of type approval is the high-level approval to be granted to the manufacturer with high-quality, based on the Mode B of type approval. Mode A of type approval = Mode B of type approval + perfect Q.A. system of the manufacturer and reliable quality of the products. For the manufacturer which obtains the Mode A of type approval, CCS shall accept that the field inspection of the surveyor can be replaced partly or totally by the quality statements supplied by quality inspector (designated) of the manufacture.
- ⊙ **Works approval** refers to the approval of the manufacturer's conditions and capability for producing certain type of product, which is granted by CCS based on document review, approval test and field audit.

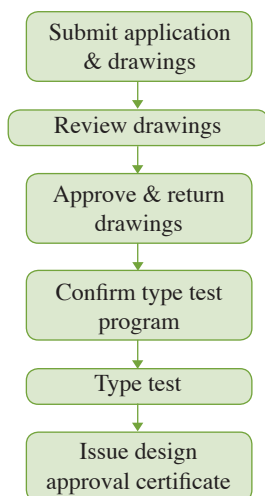


V. Flow Charts of Marine Product Inspection

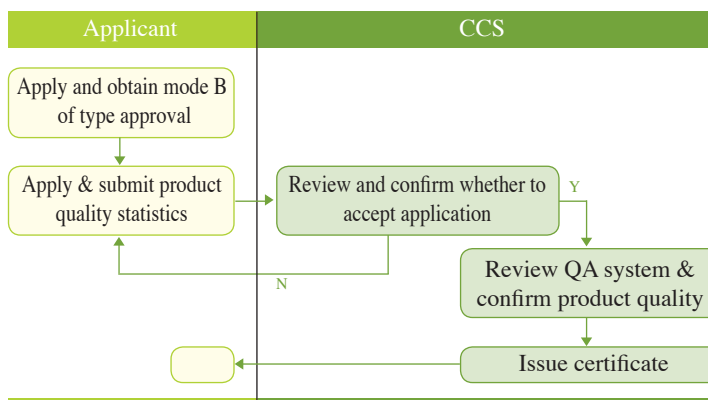
Flow Chart of Works Approval



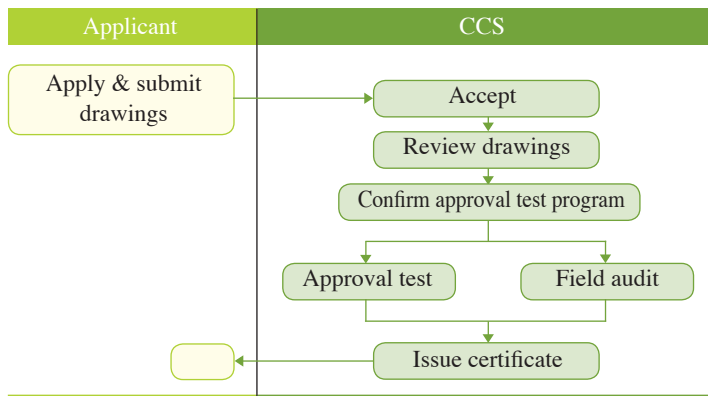
Flow Chart of Design Approval



Flow Chart of Mode A of Type Approval



Flow Chart of Mode B of Type Approval



Flow Chart of Works Approval

