

## भारत सरकार / GOVERNMENT OF INDIA पोत परिवहन मंत्रालय / MINISTRY OF SHIPPING

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NAVAL ARCHITECTURE WING CIRCULAR NO.01 OF 2015

Sub: Procedure for certification and usage of re-rolled steel for RSV 1&2, Port & Harbour Crafts.

It has been decided, based on a recommendation from the Technical Committee of IRS about potential use of steel obtained from shiprecycling, that the construction and repairs of River Sea Vessels of Type 1 & 2 and Port / Harbour crafts may be done using recycled steel. The procedures to be adopted for the use and the certification of the rerolled steel for the construction & repairs of the above mentioned types of vessels, are enclosed at Annexure-1 for information.

In addition, a communication received from the Ministry of Shipping vide letter No. CD-11053/5/2014-Coord dated 09th March 2015 regarding the use of BIS certified steel is also attached herewith for information and strict compliance.

> (Aii Vasudevan) Deputy Chief Ship Surveyor

Encl: As above.

Τo,

- 1. All Indian Shipping Companies.
- 2. INSA, Mumbai
- 3. ICC Shipping Association
- ISBA / SAI 4.
- All Mercantile Marine Departments. 5.
- 6. All Major Port Trusts.
- Indian Register of Shipping, Mumbai. 7.

## Copy to:

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## Procedure for certification and usage of re-rolled steel for shipbuilding and repair for RSV 1&2, Inland Vessels & Harbour Crafts

- 1. The usage of re-rolled steel shall be limited to the construction and repair of harbor crafts which do not proceed to sea and River Sea Vessels of type 1&2 operating in fair weather.
- 2. The steel shall be subjected to hot rolling process duly approved by IRS. Rerolled steel by cold rolling process shall not be used for ship construction & repair.
- 3. Re-rolled steel shall not be used in highly stressed areas such as continuous hatch coaming tops and the structural members in the mid-ship area.
- 4. The thickness of such plating is to be limited to a maximum of 12 mm. However, higher thickness may be allowed subject to appropriate additional testing is carried out by IRS to confirm the type of steel and its usability, and adequate precautions should be taken during construction.
- 5. Every re-rolled steel material intended for use on board ships shall be tested and certified by IRS for the acceptability of chemical, physical and mechanical properties, and shall meet all the class and BIS requirements for shipbuilding quality steel.
- 6. During the process of re-rolling, if laminations are observed, such plates/sections shall not be used.
- 7. Steel re-rolling mills intending to produce steel for shipbuilding & repair are to be initially subjected to a 'works approval' by IRS. Works approval would include approval of the rolling process including the pre-heating temperature and soaking time. The quality management system (ISO 9000 or equivalent) of the mill shall be verified for ensuring consistent quality of product. Works approval shall also require testing of samples of steel produced by the re-rolling process to verify the quality and properties of such re-rolled steel products.
- 8. Steel from recycling yards used as raw material should be subjected to inspection and testing prior to re-rolling in order to establish the chemical and mechanical properties and to verify the general condition of the steel to rule out undue corrosion, cracks and pitting. Based on the results of testing, and inspection by IRS, steel having properties meeting the class and BIS requirements would be identified and accepted for re-rolling.
- 9. Each of the rolled products shall also be subjected to visual inspection to verify dimensional tolerances and tested and certified by IRS for chemical, physical and mechanical properties.
- 10. Each rerolled steel marterial shall be given specific number / branding and unique identification mark of IRS in order to prevent its supply to ships other than covered under para 1.
- 11. Prior to usage of each sheet for fabrication at shipbuilding yards, satisfactory welding procedure qualification tests as per IRS requirements are to be carried out to ensure the suitability of the steel plate and welding methods.

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