Amendments to the "Rules for the Approval of Manufacturers of Materials"

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The following requirements either supersede those indicated in the Rules with the same number or are new. The additions are underlined and deletions stricken through.

RULES FOR THE APPROVAL OF MANUFACTURERS OF MATERIALS

CHAPTER 2 STEEL AND IRON PRODUCTS

SECTION 1 ROLLED STEEL PLATES AND SECTIONS

1 General

1.1 Application

1.1.1 This Section specifies the procedure for the approval of manufacturing processes of plates and sections intended for hull and other structural applications and pressure systems.
In addition to the provisions given in the specific items [2] to ~~[8]~~ [9], the requirements in Ch 1 are also to be complied with as appropriate.

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9 Corrosion Resistant Steel

9.1 Application

9.1.1 Provision is made in this Article [9] for the specific approval of corrosion resistant steels based upon corrosion testing.

The corrosion testing is to be carried out in addition to the approval testing specified in Article [2] for the approval of normal and higher strength hull structural steels.
The corrosion tests and assessment criteria are to be in accordance with the Appendix of the Annex to Performance Standard for Alternative Means of Corrosion Protection for Cargo Oil Tanks of Crude Oil Tankers (MSC.289 (87)).

9.2 Specific information to be submitted for approval

9.2.1 In addition to the information required in [2.2.1] the following is to be submitted together with the request for approval:

a) Corrosion test plan and details of equipment and test environments.
b) Technical data related to product assessment criteria for confirming corrosion resistance.
c) The technical background explaining how the variation in added and controlled elements improves corrosion resistance. The manufacturer will establish a relationship of all the chemical elements which affect the corrosion resistance. The chemical elements added or controlled to achieve the required level of corrosion resistance are to be specifically verified for acceptance. Verification is to be based on the ladle analysis of the steel.
d) The grades, the brand name and maximum thickness of corrosion resistant steel to be approved. Designations for corrosion resistant steels are given in Table 4
e) The welding processes and the brand name of the welding consumables to be used for approval.

Table 4 : Designations for Corrosion Resistant Steels

Type of steel	Location where steel is effective	Corrosion Resistant Designation
Rolled steel for hull	For lower surface of strength deck and surrounding structures (ullage space)	RCU
	For upper surface of inner bottom plating and surrounding structures	RCB
	For both strength deck and inner bottom plating	RCW

9.3 Approval of test plan

9.3.1 The test program submitted by the manufacturer is to be reviewed by Tasneef. If found satisfactory, it will be approved and returned to the manufacturer for acceptance prior to tests being carried out. Tests that need to be witnessed by the Tasneef Surveyor will be identified.

9.3.2 Method for selection of test samples is to satisfy the following:

a) The numbers of test samples is to be in accordance with the requirements of the Appendix of the Annex to Performance Standard for Alternative Means of Corrosion Protection for Cargo Oil Tanks of Crude Oil Tankers (MSC.289 (87)).

b) The number of casts and test samples selected are to be sufficient to make it possible to confirm the validity of interaction effects and/or the control range (upper limit, lower limit) of the elements which are added or intentionally controlled, for improving the corrosion resistance. Where agreed, this may be supported with data submitted by the manufacturer.

c) Additional tests may be required by Tasneef based on but not limited to the following considerations:

1) When Tasneef determines that the control range is set by the theoretical analysis of each element based on existing data, the number of corrosion resistance tests conducted in accordance with the Appendix of the Annex to Performance Standard for Alternative Means of Corrosion Protection for Cargo Oil Tanks (MSC.289 (87)) is too few to adequately confirm the validity of the control range of chemical composition;

2) When Tasneef determines that the data of the corrosion resistance test result obtained for setting the control range of chemical composition varies too widely;

3) When Tasneef determines that the validity of the corrosion resistance test result for setting the control range of chemical composition is insufficient, or has some flaws; and

4) When Tasneef Surveyor has not attended the corrosion resistance tests for setting the control range of chemical composition, and Tasneef determines that additional testing is necessary in order to confirm the validity of the test result data.

9.3.3 The chemical composition of the corrosion resistant steel is to be within the range specified for rolled steel for hull. Elements to be added for improving the corrosion resistance and for which content is not specified are to be generally within 1% in total.

9.4 Approval Test

9.4.1 The manufacturer is to carry out the approval test in accordance with the approved test plan.

The Tasneef Surveyor is to be present, as a rule, when the test samples for the approval test are being identified and for approval tests, see also [9.3.1].

9.5 Test Results

9.5.1 After completion of the approval test, the manufacturer is to produce the report of the approval test and submit it to Tasneef.

9.5.2 Tasneef will give approval for corrosion resistant steel where approval tests are considered to have given satisfactory results based on the data submitted in accordance with the provisions of this Article [9]. **9.5.3** The certificate is to contain the manufacturer's name, the period of validity of the certificate, the grades and thickness of the steel approved, welding methods and welding consumables approved.

9.6 Weldability tests

9.6.1 The results will be assessed by Tasneef in accordance with the acceptance criteria specified in the Appendix of the Annex to Performance Standard for Alternative Means of Corrosion Protection for Cargo Oil Tanks (MSC.289 (87)).

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