IRCLASS
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CLASSIFICATION NOTES:

MANUFACTURING APPROVAL SCHEME OF HIGH STRENGTH STEELS FOR WELDED STRUCTURES

REVISION 1

JULY 2026

CLASSIFICATION NOTES

Manufacturing Approval Scheme of High Strength Steels for Welded Structures

The July 2026 version of this Classification Notes is applicable to steel products for marine and offshore structures which are contracted for construction on or after 1 January 2027 or when the application for certification of steel products submitted by an approved manufacturer is dated on or after 1 January 2027, or the application for certification of manufacturer approval is dated on or after 1 January 2027. Requirements of this document are also applicable to ships constructed on or after 1 January 2027.

CLASSIFICATION NOTES

Manufacturing Approval Scheme of High Strength Steels for Welded Structures

Revision 1, July 2026

TABLE 1 – AMENDMENTS INCORPORATED IN THIS EDITION

These amendments will come into force on 1 January 2027

Section/ Clause	Subject/ Amendments
2/ 2.1 b); 3/ 3.7.7	Version of referenced ISO standard is updated.
2/ 2.2 a)	Amended to specify optional high heat input weldability approval criteria and high heat input levels.
2/ 2.3 f) (new)	Added to specify documentation to be submitted when changing approved maximum heat input and/or plate thickness.
3/ Table 3.6	Versions of referenced ISO and ASTM standards are updated. Also included FL+10 requirements for tensile and Charpy impact tests of butt weld assemblies for heat inputs exceeding 200 kJ/cm.
3/ 3.7.1 d) (new)	Added to specify test assembly requirements, heat input limits, and approval validity for high heat input welding.
3/ 3.7.2	Amended to clarify that testing specified in 3.7.2 a) and b) are to be repeated in the PWHT condition.
3/ 3.7.6 b)	Amended to clarify that additional test is to be undertaken at FL+10mm for cases of heat input > 200 kJ/cm.
3/ 3.7.6 d)	Amended to specify that the specimens for CTOD test are also to be taken from butt weld test assembly specified in 3.7.1 b), c) and d).
5/ 5.1.1 (new)	Issuance of certificate is specified.
5/ 5.1.2 (new)	Information generally required to be included on the certificate is specified.
5/ 5.2 (new)	It is clarified that the heat input value is to be included in the grade notation.

CLASSIFICATION NOTES

Manufacturing Approval Scheme of High Strength Steels for Welded Structures

Revision 1, July 2026

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Section 1

Scope of Application

This classification note specifies the procedure for the approval of the manufacturing process of high strength steels for welded structures.

All materials are to be manufactured at works which have been approved by IRS for the type, delivery condition, grade and thickness of steel which is being supplied. The suitability of each grade of steel for forming and welding is to be demonstrated during the initial approval tests at the steelworks.

The manufacturing approval scheme is valid for verifying the manufacturer's capability to provide satisfactory products stably under effective process and production controls in operation including programmed rolling, which is required in Pt. 2, Ch. 3, Sec 4, 4.2.2 of Rules and Regulations for the Construction and Classification of Steel Ships.

Section 2

Approval of Application

2.1 Documents to be submitted

The manufacturer is to submit, a request for approval, a proposed approval test program (see 3.1) and general information relevant to:

a) Name and site address of the manufacturer, location of the workshops, general indications relevant to the background, dimension of the works, estimated total annual production of finished products, as deemed useful.

b) Organisation and quality

- organisational chart
- number of staff employed
- staff employed and organisation of the quality control department
- qualification of the personnel involved in activities related to the quality of the products
- certification of compliance of the quality system with ISO 9001:2015, if any
- approval certificates already granted by other Classification Societies, if any

c) Manufacturing facilities

- flow chart of the manufacturing process
- origin and storage of raw materials
- storage of finished products
- equipment for systematic control during manufacturing

d) Details of inspections and quality control facilities

- details of system used for identification of materials at the different stages of manufacturing
- equipment for mechanical tests, chemical analyses and metallography and relevant calibration procedures
- equipment for non-destructive examinations (NDE)
- list of quality control procedures

2.2 Manufacturing specification

a) Material to be approved, including type of products (plates, sections, bars and tubular), delivery condition, grades of steel including any additional notations, range of thickness and aim material properties as follows:

- range of chemical composition, aim analyses and associated control limits, including grain refining, nitrogen binding, micro alloying and residual elements, for the various grades of steel; if the range of chemical composition depends on thickness and delivery condition, the different ranges are to be specified, as appropriate.

- in addition, where zirconium, calcium and rare earth metals have been used during steelmaking for grain refinement and, or inclusion modification, the contents of these elements shall be specified in the manufacturing specification.

- aim carbon equivalent *Ceq* according to IIW formula or *CET* formula and/or aim *P*cm content and associated control limits.

- production statistics of the chemical composition and mechanical properties (R_{eH}, R_m, A% and CVN). The statistics are intended to demonstrate the capability to manufacture the steel products.

- For high heat input welding, weldability confirmation scheme is optional for those manufacturers wishing to have their products approved for weldability for high heat input welding (as defined in Main Rules, Part 2, Chapter 3, Section 4, 4.1.7) under the testing conditions as specified in this document.

- Where the manufacturer requests an approval for welding with high heat input, the heat input requested for approval is to be not less than 60 [kJ/cm] and stated in increments of 10 [kJ/cm] for N/NR and TM, and to be not less than 40[KJ/cm] and stated in increments of 5 [kJ/cm] for QT steels.

b) Steelmaking (if applicable)

- steel making process and capacity of furnace/s or converter/s

- raw material used

- deoxidation, grain refining, nitrogen binding and alloying practice

- desulphurisation, dehydrogenation, sulphide treatment, ladle refining and vacuum degassing installations, if any

- casting methods: ingot or continuous casting. In the case of continuous casting, information relevant to type of casting machine, teeming practice, methods to prevent re-oxidation, inclusions and segregation control, presence of electromagnetic stirring, soft reduction, etc., is to be provided as appropriate

- casting/solidification cooling rate control

- ingot or slab size and weight

- ingot or slab treatment: scarfing and discarding procedures

c) Reheating and rolling

- type of furnace and treatment parameters

- rolling: reduction ratio of ingot/slab/bloom/billet to finished product, rolling and finishing temperatures for each grade/thickness combination

- descaling treatment during rolling

- capacity of the rolling stands

d) Heat treatment

- type of furnaces, heat treatment parameters for products to be approved
- accuracy and calibration of temperature control devices
- the methods used to determine austenitizing temperature, re-crystallization temperature and Ar3 temperature
- description of quenching and tempering process, if applicable

e) Programmed rolling

For products delivered in the Normalised rolling (NR) or thermo-mechanical rolling (TM) condition, the following additional information on the programmed rolling schedules is to be given:

- description of the rolling process
- the methods used to determine austenitizing temperature, re-crystallization temperature and Ar3 temperature
- control standards for typical rolling parameters used for the different thickness and grades of steel (temperature and thickness at the beginning and at the end of the passes, interval between passes, reduction ratio, temperature range and cooling speed of accelerated cooling, if any) and relevant method of control
- calibration of the control equipment

f) Recommendations for fabrication and welding in particular for products delivered in the NR or TM condition:

- cold and hot working recommendations if needed in addition to the normal practice used in the shipyards and workshops
- minimum and maximum heat input and recommended pre-heat/interpass temperature

g) Where any part of the manufacturing process is assigned to other companies or other manufacturing plants, additional information required by IRS is to be included.

h) Approval already granted by other Classification Societies and documentation of approval tests performed.

2.3 Documents to be submitted for changing the approval conditions

The manufacturer has to submit to the Society the documents required in 2.1 together with the request of changing the approval conditions, in the case of the following a) through f) as applicable:

a) Change of the manufacturing process (steel making, casting, rolling and heat treatment).

b) Change of the maximum thickness (dimension).

c) Change of the chemical composition, added element, etc.

d) Subcontracting the rolling, heat treatment, etc.

e) Use of the ingots, slabs, blooms and billets manufactured by companies other than the ones verified in the approval tests.

f) For steels intended for high-heat input welding notation, change of maximum heat input and/or applicable plate thickness.

However, where the documents are duplicated by the ones at the previous approval for the same type of product, part or all of the documents may be omitted except the approval test program (see 3.1).

Section 3

Approval Tests

3.1 Extent of the approval tests

The extent of the test program is specified in 3.6 and 3.7; it may be modified on the basis of the preliminary information submitted by the manufacturer.

In particular a reduction of the indicated number of casts, steel plate thicknesses and grades to be tested or complete suppression of the approval tests may be accepted taking into account:

a) Approval already granted by other Classification Societies and documentation of approval tests performed.

b) Grades of steel to be approved and where available the long term statistical results of chemical and mechanical properties.

An increase of the number of casts and thicknesses to be tested may be required in the case of newly developed types of steel or manufacturing processes.

In case of multi-source slabs or changing of slab manufacturer, the rolled steel manufacturer is required to obtain the approval of the manufacturing process of rolled steels using the slabs from each slab manufacturer and to conduct approval tests in accordance with 3.6 and 3.7. A reduction or complete suppression of the approval tests may be considered taking into account previous approval as follows:

- the rolled steel manufacturer has already been approved for the rolling process and heat treatment using approved other semi finished products characterized by the same thickness range, steel grade, grain refining and micro-alloying elements, steel making(deoxidation) and casting process.

- the semi finished products have been approved for the complete manufacturing process with the same conditions (steelmaking, casting, rolling and heat treatment) for the same steel types.

3.2 Approval test program

Where the number of tests differs from those shown in 3.6 and 3.7, the program is to be confirmed by IRS before the tests are carried out.

3.3 Approval survey

The approval tests are to be witnessed by the Surveyor at the manufacturer’s plant and the execution of the plant inspection in operation may be required by the Surveyor during the visit for the approval.

If the testing facilities are not available at the works, the tests are to be carried out at accredited laboratories.

3.4 Selection of the test product

For each grade of steel and for each manufacturing process (e.g. steel making, casting, rolling and condition of supply), one test product with the maximum thickness (dimension) to be approved is in general to be selected for each kind of product.

In addition, for initial approval, IRS will require selection of one test product of representative thickness.

The selection of the casts for the test product is to be based on the typical chemical composition, with particular regard to the aimed *Ceq*, *CET* or *P*cm values and grain refining micro-alloying additions.

3.5 Position of the test samples and specimens

The test samples are to be taken, unless otherwise agreed, from the product (plate, flat, section, bar and tubular) corresponding to the top and bottom of the ingot as indicated in Table 3.6, or, in the case of continuous casting, a random sample.

The position of the samples to be taken in the length of the rolled product, "piece" defined in Pt. 2, Ch 3, Sec 2 of *Rules and Regulations for the construction and Classification of Steel Ships*, (top and bottom of the piece) and the direction of the test specimens with respect to the final rolling direction of the material are indicated in Table 3.6.

The position of the samples in the width of the product is to be in accordance with Pt. 2, Ch 3, Sec 2 of *Rules and Regulations for the construction and Classification of Steel Ships*.

The position of the tensile and Charpy impact test samples with respect to the plate thickness is to be in accordance with 2.6.2 of Classification note *Approval Scheme for the Manufacturing Process of Normal and Higher Strength Hull Structural Steels.*

3.6 Tests on base material

3.6.1 Type of tests

The tests to be carried out are indicated in the following Table 3.6.

Table 3.6 : Tests on base material

Type of Test		Position and direction of test specimens	Remarks
1	Chemical analysis (ladle and product[1)])	Top	a) Contents of C, Mn, Si, P, S, Ni, Cr, Mo, Al, N, Nb, V, Ti, B, Zr, Cu, As, Sn, Bi, Pb, Ca, Sb, O, H are to be reported. b) Carbon equivalent calculation, and/or c) *P*cm calculation, as applicable.
2	Segregation examination	Top	Sulphur prints[2)] are to be taken from plate edges which are perpendicular to the axis of the ingot or slab. These sulphur prints are to be approximately 600 mm long taken from the centre of the edge selected, i.e. on the ingot centreline, and are to include the full plate thickness.
3	Micrographic examination[3)]	Top	a) Grain size determination. Ferrite and/or prior austenite grain size should be determined. b) All photomicrographs are to be taken at x 100 and 500 magnification.

Table 3.6 : Tests on base material							
Type of Test		**Position and direction of test specimens**	**Remarks**				
			c) Non-metallic inclusion contents/ Cleanliness The level of non-metallic inclusions and impurities in term of amount, size, shape and distribution shall be controlled by the manufacturer. The standards of the micrographic examination methods ISO 4967:2013 or equivalent standards are applicable. Alternative methods for demonstrating the non-metallic inclusions and impurities may be used by the manufacturer.				
4	Tensile test	Top and bottom - longitudinal and transverse direction	Yield strength (R_{eH}), Tensile strength (R_m), Elongation (A5), Reduction in Area (RA) and Y/T ratio are to be reported.				
5a	Charpy Impact tests on unstrained specimens for grades[4)]	Top and bottom	Testing temperature (°C)				
	AH	Longitudinal and transverse direction	+20	0	-20		
	DH		0	-20	-40		
	EH		0	-20	-40	-60	
	FH		-20	-40	-60	-80	
5b	Charpy Impact tests on strain aged specimens for grades[4)5)]	Top	Deformation of 5% + 1 hour at 250°C				
	AH	Either longitudinal or transverse	+20	0	-20		
	DH		0	-20	-40		
	EH		0	-20	-40	-60	
	FH		-20	-40	-60	-80	
6	Drop weight test	Top	The test is to be performed only on plates in accordance with ASTM E208:2020. The NDTT is to be determined and photographs of the tested specimens are to be taken and enclosed with the test report.				
7	Through thickness tensile tests	Top and bottom	Optional for grades with improved through thickness properties, testing in accordance with Pt.2, Ch.3, Sec.8 of *Rules and Regulations for the Construction and Classification of Steel Ships.*				
8	Weldability test[6)]						
a)	Butt Weld Assembly as-welded	Top	Cross weld tensile, Charpy impact test on WM, FL, FL+2, FL+5, FL+10(only for > 200 kJ/cm), FL+20 Macro examination and hardness survey, CTOD at -10°C on Grain-coarsened HAZ.				

Table 3.6 : Tests on base material			
Type of Test		**Position and direction of test specimens**	**Remarks**
b)	Butt Weld Assembly (PWHT), if applicable	Top	Cross weld tensile, Charpy impact test on WM, FL, FL+2, FL+5, FL+10(only for > 200 kJ/cm), FL+20 Macro examination and hardness survey, CTOD at -10°C on Grain-coarsened HAZ.
c)	Y-shape weld crack test (Hydrogen crack test)	Top	

Note 1 The product analyses should be taken from the tensile specimen. The deviation of the product analysis from the ladle analysis shall be permissible in accordance with the limits given in the manufacturing specification.

Note 2 Other tests than Sulphur prints for segregation examination may be applied and subject to acceptance by IRS.

Note 3 The micrographs are to be representative of the full thickness. For thick products in general at least three examinations are to be made at surface, 1/4t and 1/2t of the product.

Note 4 In addition to the determination of the absorbed energy value, also the lateral expansion and the percentage crystallinity are to be reported.

Note 5 Strain ageing test is to be carried out on the thickest plate.

Note 6 Weldability test is to be carried out on the thickest plate.

3.6.2 Test specimens and testing procedure

The test specimens and testing procedures are to be in accordance with Part 2 Ch.2 of *Rules and Regulations for the Construction and Classification of Steel Ships*, where applicable.

3.6.3 Other tests

Additional tests such as CTOD test on parent plate, large scale brittle fracture tests (Double Tension test, ESSO test, Deep Notch test, etc.) or other tests may be required in the case of newly developed type of steel, outside the scope , or when deemed necessary by IRS.

3.7 Weldability tests - Butt weld test

3.7.1 For H420 to H500 grade steels: Weldability tests are to be carried out on samples of the thickest plate. Testing on higher grades can cover the lower strength and toughness grades.

a) 1x butt weld test assembly welded with a heat input 15±2 kJ/cm is to be tested as-welded.

b) 1x butt weld test assembly welded with a heat input 50±5 kJ/cm for N/NR and TM and 35±3.5 kJ/cm for QT steels is to be tested as-welded.

c) 1x butt weld test assembly welded with the same heat input as given in b) is to be post-weld heat treated (PWHT) prior to testing.

d) Where manufacturers optionally request approval for steels intended for high heat input welding, assemblies are also to be welded using the maximum heat input requested for approval.

(i) One test plate is required, to represent the maximum heat input level at the plate thickness requested for approval.

(ii) The heat input is not to be less than 60 [kJ/cm] for N/NR and TM, and 40 [kJ/cm] for QT steels, and expressed in an increment of [10 kJ/cm] for N/NR and TM and 5 [kJ/cm] for QT steels, at the stated plate thickness, e.g. requested maximum heat input of 100 [kJ/cm] at 60[mm] plate thickness.

(iii) Testing is to include assemblies in the as-welded condition and the Post Weld Heat Treated (PWHT) condition.

(iv) The approval for the thickness of plate tested at the specified heat input level does not imply suitability for thinner plates at the same heat input level, where lower heat inputs may be required.

Guidance notes:

(i) High heat input used for the approval of thick plate may not be suitable for applications on thinner plates.

(ii) A grade notation of W300, for example, demonstrates the suitability of the material at the maximum approved thickness to be welded with heat inputs up to 300 [kJ/cm].

(iii) The suitability of high heat inputs for lower thickness plates is to be determined by the fabricator, together with any manufacturers recommendations.

3.7.2 For H550 to H960 grade steels:

In general, the maximum plate thickness with the highest toughness grade for each strength grade is to be tested. Provided the chemical composition of the higher grade is representative to the lower grade, testing requirements on the lower grades may be reduced at the discretion of IRS.

a) 1x butt weld test assembly welded with a heat input 10±2 kJ/cm is to be tested as-welded.

b) 1x butt weld test assembly welded with a maximum heat input as proposed by the manufacturer is to be tested as-welded. The approved maximum heat input shall be stated on the manufacturer approval certificate.

Option: If the manufacturer requests to include the approval for Post Weld Heat Treated (PWHT) condition, 1x additional butt weld test assembly welded with a maximum heat input proposed by the manufacturer for the approval same as test assembly b) is to be post-weld heat treated (PWHT) prior to testing, and the above testing is to be repeated in the PWHT condition.

3.7.3 Butt weld test assembly

The butt weld test assemblies of N/NR plates are to be prepared with the weld seam transverse to the final plate rolling direction.

The butt weld test assemblies of TM/TM+AcC/TM+DQ and QT plates are to be prepared with the weld seam parallel to the final plate rolling direction. The butt weld test assemblies of long products, sections and seamless tubular in any delivery condition are to be prepared with the weld seam transverse to the rolling direction.

3.7.4 Bevel preparation

The bevel preparation should be preferably 1/2V or K related to thickness.

The welding procedure should be as far as possible in accordance with the normal welding practice used for the type of steel in question.

The welding procedure and welding record are to be submitted for review.

3.7.5 Post-weld heat treatment procedure

a) Steels delivered in N/NR or TM/TM+AcC/TM+DQ condition shall be heat treated for a minimum time of 1 hour per 25 mm thickness (but not less than 30 minutes and needs not be more than 150 minutes) at a maximum holding temperature of 580°C, unless otherwise approved at the time of approval.

b) Steels delivered in QT condition shall be heat treated for a minimum time of 1 hour per 25 mm thickness (but not less than 30 minutes and needs not be more than 150 minutes) at a maximum holding temperature of 550°C with the maximum holding temperature of at least 30°C below the previous tempering temperature, unless otherwise approved at the time of approval.

c) Heating and cooling above 300°C shall be carried out in a controlled manner in order to heat/cool the material uniformly. The cooling rate from the max. holding temperature to 300°C shall not be slower than 55°C/hr.

3.7.6 Type of tests

From the test assemblies the following test specimens are to be taken:

a) 1 cross weld tensile test - 1 full thickness test sample or sub-sized samples cover the full thickness cross section.

b) 1 set of 3 Charpy V-notch impact specimens transverse to the weld seam and 1-2 [mm] below the surface with the notch located at the fusion line and at a distance 2, 5 and minimum 20 [mm] from the straight fusion line. For cases of heat input > 200 [kJ/cm], then an additional test is to be taken at 10 [mm] from fusion line. An additional set of 3 Charpy test specimens at root is required for each aforementioned position for plate thickness $t \geq 50$ [mm]. The fusion boundary is to be identified by etching the specimens with a suitable reagent. The test temperature is to be the one prescribed for the testing of the steel grade.

c) Hardness tests HV10 across the weldment. The indentations are to be made along a 1-2 mm transverse line beneath the plate surface on both the face side and the root side of the weld as follows:

- fusion line
- HAZ: at each 0.7 mm from fusion line into unaffected base material (6 to 7 minimum measurements for each HAZ)

The maximum hardness value should not be higher than 350HV for grade steels H420 to H460; not be higher than 420HV for H500 to H690; and not be higher than 450HV for H890 and H960.

A sketch of the weld joint depicting groove dimensions, number of passes, hardness indentations should be attached to the test report together with photomacrographs of the weld cross section.

d) CTOD test

CTOD test specimens are to be taken from butt weld test assembly specified in 3.7.1 b), c) and d), and 3.7.2 b). CTOD test is to be carried out in accordance with EN ISO 15653:2018 or equivalent.

- the specimen geometry (B = W) is permitted for plate thickness up to 50 mm. For plate thicker than 50 mm, subsidiary specimen geometry (50x50 mm) is permitted, which is to be taken 50 mm in depth through thickness from the subsurface and 50 mm in width. See Figure 3.7.6 a) and b) for more details
- the specimens shall be notched in through thickness direction
- grain-coarsened HAZ (GCHAZ) shall be targeted for the sampling position of the crack tip
- the test specimens shall be in as-welded and post-weld heat treated, if applicable
- three tests shall be performed at -10°C on each butt weld test assembly

For grades H690 and above, dehydrogenation of as-welded test pieces may be carried out by a low temperature heat treatment, prior to CTOD testing. Heat treatment conditions of 200°C for 4 h are recommended, and the exact parameters shall be notified with the CTOD test results.

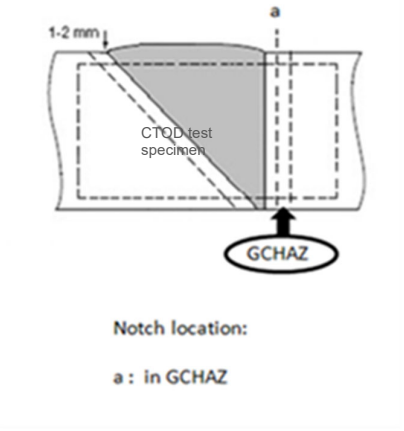

Figure 3.7.6 a) - For plate thickness t ≤ 50 mm, CTOD test specimen is to be sampled in full thickness

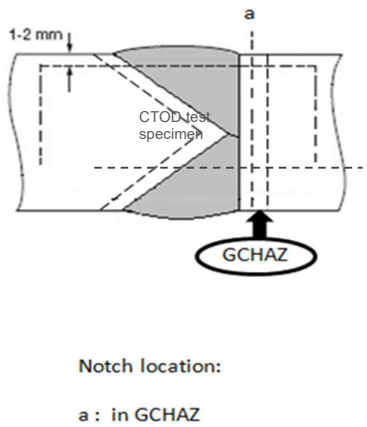

Figure 3.7.6 b) - For plate thickness t > 50 mm, subsidiary test specimen with a thickness of maximum 50 mm in subsurface area is to be sampled

3.7.7 Crack susceptibility weld test (Hydrogen crack test)

Testing in accordance with national and international recognised standards such as ISO 17642-2:2005 for Y-groove weld crack test. Minimum preheat temperature is to be determined and the relationship of minimum preheat temperature with thickness is to be derived.

3.7.8 Other tests

Additional tests may be required in the case of newly developed types of steel, outside the scope or when deemed necessary by IRS.

Section 4

Results

All the results are to comply with the requirements of the scheme of initial approval.

The subject manufacturer shall submit all the test results together with the manufacturing specification containing all the information required under Section 2 and manufacturing records relevant to steel making, casting, rolling and heat treatment, applicable to the product submitted to the tests.

Section 5

Certification

5.1 Approval

5.1.1 IRS issues the certificate where the test report is found to be satisfactory.

5.1.2 The following information is generally required to be included on the certificate:

a) Manufacturer
b) Grade designation with notation of heat input, where applicable (see 5.2)
c) Deoxidation practice
d) Fine grain practice
e) Condition of supply
f) Maximum plate thickness approved
g) For plates approved for high heat input welding, the tested thickness will also be stated.

5.2 Grade designation

The notation indicating the value of heat input applied in the confirmation test is to be added to the grade designation of the test plate, e.g., “H420-W300” (in the case of heat input 300 [kJ/cm] applied). The heat input selected is not to be less than 60 [kJ/cm] for N/NR and TM, and 40 [kJ/cm] for QT steels and expressed in an increment of 10 [kJ/cm] for N/NR and TM, and an increment of 5 [kJ/cm] for QT.

5.3 List of approved manufacturers

The approved manufacturers are entered in a list containing the types of steel and the main conditions of approval.

Section 6

Renewal of approval

The validity of the approval is to be a maximum of five years.

Renewal can be granted by a periodic inspection and evaluation of the result of the inspection to the surveyor's satisfaction during the period.*

Where for operational reasons, the renewal audit falls outside the period of approval, the manufacturer will still be considered as approved if agreement to this audit date is made within the original period of approval, in this instance if successful, the extension of approval will be back dated to the original renewal date.

Manufacturers who have not produced the approved grades and products during the period between renewals may be required to either carry out approval tests or, on the basis of the statistical data of results of production of similar grades of products, at the discretion of IRS, be reapproved.

* The provision for renewal of approval is also to be applied to all grades and products which were approved by IRS prior to an implementation of this Classification Note regardless of the validity of certificate in existing approvals. Such renewal is to be completed within five years after this Classification Note becomes effective.

Section 7

Suspension and Withdrawal of the approval

During the period of validity the approval may be reconsidered in the following cases:

a) In service failures, traceable to product quality.

b) Non conformity of the product revealed during fabrication and construction.

c) Discovered failure of the Manufacturer's quality system.

d) Changes brought by the Manufacturer, without preliminary agreement of the Society, to the extent of invalidating the approval.

e) Evidence of major non conformities during testing of the products.

End of Classification Note