



-Confidential-

Quality Survey Scheme

(for Nippon Kaiji Kyokai)



General Manager of Shanghai Office

Baoshan Iron and Steel Co., Ltd.
(Core Base Plate Line No.1 and No.2)

May. 25 2011

NIPPON KAIJI KYOKAI	QUALITY SURVEY SCHEME	Date	25 May. 2011
Baoshan Iron & Steel Co.,Ltd (Core Base Plate Line No.1 and No.2)		Approval No.	07CLQA153

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1. Introduction

- 1.1 This Quality Survey Scheme relates to Nippon Kaiji Kyokai for approval of the Quality Assurance System as well as Production procedures/facilities, Workmanship and Inspection/testing methods as defined in Nippon Kaiji Kyokai Rules for Approval of Manufacturers and Service Suppliers (the **Rules**), under which Baoshan Iron and Steel Co.,Ltd, (Core Base Plate Line No.1 and No.2) have requested to be assessed.
- 1.2 The Quality Survey Scheme (the **Scheme**) is an audit-based approach to the survey of materials produced at approved works, according to the Rules.
- 1.3 The Quality Survey Scheme is set out in the following documents, which describe how the Scheme shall be operated.
 - a) "Rules for Approval of Manufacturers and Service Suppliers"
 - b) "Guidance for the Approval and Type Approval of Materials and Equipment for Marine use"
 - c) "ClassNK Instructions-Approval of Manufacturers and Service Suppliers"
- 1.4 Unless agreed in writing by both parties, the Quality Survey Scheme is to be run in accordance with the documents in paragraph 1.3, and any failure on behalf of the Client to abide by them may lead to suspension or removal of approval under the Scheme.

2. Works covered by this Schedule

- 2.1 The works covered by this Schedule is Baoshan Iron & Steel Co.Ltd. (Core Base Plate Line No.1 and No.2) at the following address:

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Plate Line No.1: No.855, Fujin Road, Baoshan District, Shanghai, 201900, Peoples Republic of China

Plate Line No.2: No.777, North Wenchuan Road, Baoshan District, Shanghai, 200949 Peoples Republic of China

3. Scope of Products Covered by the Scheme

- 3.1 The scope of products covered by the Scheme is that given for Baoshan Iron and Steel Co.,Ltd., (Core Base Plate Line No.1 and No.2), in approval certificate NKR-450ROL in ClassNK List of Approved Materials and Equipment, which is available at www.classnk.or.jp
- 3.2 Any requests by the Client to extend the scope of approval will be dealt with under the relevant section of ClassNK Rules.
- 3.3 The Client is responsible for ensuring that the Society's brand mark is applied only to test certificates for material within the approved scope for the Scheme. Any misuse of the Society's brand mark may be a cause for suspension or removal from the Scheme.

4. Process Routes including inspection and testing

- 4.1 The Scheme applies to the process routes including inspection and testing items set out in Appendix 1.
- 4.2 If the Client wishes to change the process route for materials produced according to the Scheme, this must be agreed by ClassNK in writing, and this Scheme Schedule must be modified accordingly.
- 4.3 ClassNK reserves the right to conduct additional testing to maintain approval for specific products if ClassNK considers that significant changes are made to the manufacturing process route.

5. Scheme Audits for the confirmation of the quality system

- 5.1 ClassNK will conduct Scheme audits on a regular basis at the works covered by this Schedule.
- 5.2 Scheme audits will be in accordance with the requirements of the "NK Instructions: Approval of Manufacturers and Service Suppliers"

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5.3 ClassNK will conduct a minimum of 4 man days of audit per year against the requirements of this Scheme, at an approximate frequency of 1 man days every three months.

5.4 A schedule for the audits is given in Table 1, below. The timings given are approximate, but the assessor should ensure that all of the areas are covered during the year, result of audit to be recorded in Appendix 2.

5.5 ClassNK reserves the right to request manufacturers to demonstrate compliance with the Rules by performing tests on material selected by the assessor other than the attending surveyor. This re-assessment will principally be to verify that the Scheme is being maintained according to the Rules, and is expected to take no more than 1 man days.

5.6 In addition to the regular Scheme audits, the Client will be subject to a periodical surveillance between 2nd and 3rd anniversary date and renewal assessment within 5 years. This will be conducted by an assessor other than the attending surveyor. The re-assessment will principally be to verify that the Scheme is being maintained according to the Rules, and is expected to take no more than 1 man days.

Table 1. Proposed Audit Schedule for Baoshan Iron and Steel Co., Ltd. (Core Base Plate Line No.1 and No.2)

Area	Q1	Q2	Q3	Q4
Manufacturing facilities of work	0.2			
Establishment of quality system		0.2		
Responsibility and authority			0.25	
Verification resources and personnel				0.25
contract review	0.2			
Design control		0.2		
Document control			0.25	
Purchased and subcontracted products control				0.25
Identification of products	0.2			
Production process control		0.2		
Inspection and testing control			0.25	
Control of inspection, testing and measuring equipment				0.25
Control of unconforming products	0.2			
Control of handling, storage, packing and delivery of products		0.2		
Training			0.25	
Servicing				0.25
Statistical technique	0.2			
Improvement of quality		0.2		
Total	1	1	1	1
Grand Total	4 days			

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6. Control procedure of *NK* Mark and authorized signatories

6.1 As part of this Scheme, the Client is authorized to apply the Society's brand mark *NK* to the Products Covered by the Scheme, and the Client is also authorized to apply the mark of Society's electronic sign and stamp to all manufacturer's test certificates relating to the Products Covered by the Scheme.

6.2 The mark is supplied to the Client in electronic form, and appears as follows:

The Society's brand mark : *NK*

The mark of Society's electronic sign:

The mark of Society's electronic stamp:

(note: Size to be 26.5 mm in outer diameter)



6.3. The Scheme mark must be applied to the Client's test certificate in such a way that it is clearly legible. The mark may be applied in black and white.

6.4 In addition to any other statement must also appear on the products certificate:

The above products have been examined under the Quality Survey Scheme on the basis of the manufacturer's quality system which has been approved by the Society. (Approval No.07CLQA153)"

6.5 The lay out of test certificates produced under the Scheme must be approved by ClassNK prior to implementation.

6.6 The Client's test certificate must be signed (manually or electronically) by an authorized representative. This representative shall take responsibility for ensuring that the Scheme mark is correctly applied, and that all the requirements, of this Scheme have been met relating to all material referred to on the test certificate.

6.7 The Client remains responsible for ensuring that the material meets the requirements of the Rules, as well as any additional requirements, specified by the purchaser.

6.8 On no account may the Scheme mark be applied to certificates which relate to material outside the scope of this Schedule.

6.9 The Scheme mark may not be used for any purpose other than for application to Client's test certificates according to the Scheme.

6.10 A list of authorized signatories acceptable to NK is given in Appendix 3.

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7. Procedures for record submit and the certification of materials according to the Scheme.

7.1 Products & Technique Management Dept. of Baosteel (Core Base Plate Line No.1 and No.2) is responsible for the certification system.

7.2 A computer system has been employed for production, sale, quality management, etc. in Baoshan Iron & Steel Co., Ltd. (Core Base Plate Line No.1 and No.2). The system can realize automatically collecting the necessary information, generating and printing the test certificates. The main flow is as follows: The requirements of customer order, including the certificate type and test items, will be input the computer system then the order will be converted into a manufacturing specification by process design engineer. The requirement of inspection and testing will be sent automatically to the relevant department, and the data of inspection and testing will be fed back to the computer system. The qualified data will be sent automatically to print test certificate.

7.3 A computer program will be designed to ensure the scheme mark is only applied to product certificates which are under the scope of the scheme.

7.4 The test certificates will be transmitted to the customer and NK Shanghai Office by post, or designated person.

8. Information to be supplied to ClassNK by the Client

8.1 As part of the Scheme, the Client agrees to supply certain information to ClassNK for the purposes of assessment of ongoing capability to supply according to the requirements of the Rules.

8.2 This information will be treated as strictly confidential by ClassNK, and will not be used in any way which is traceable to the Client, except with the Client's express permission in writing.

8.3 The information to be supplied to ClassNK under this Scheme is as follows.

a) A full list of all mechanical test results on NK grades in spreadsheet form. This should include the average and standard deviation of each parameter for each grade, and where possible the distribution of results.

b) Where more than 20 results are available for a particular grade, the results for this grade should be plotted in a sequential form to show any trends in the data.

c) A full list of chemical analysis results on NK grades in spreadsheet form. This should include the average and standard deviation for each element specified in the Rules, in

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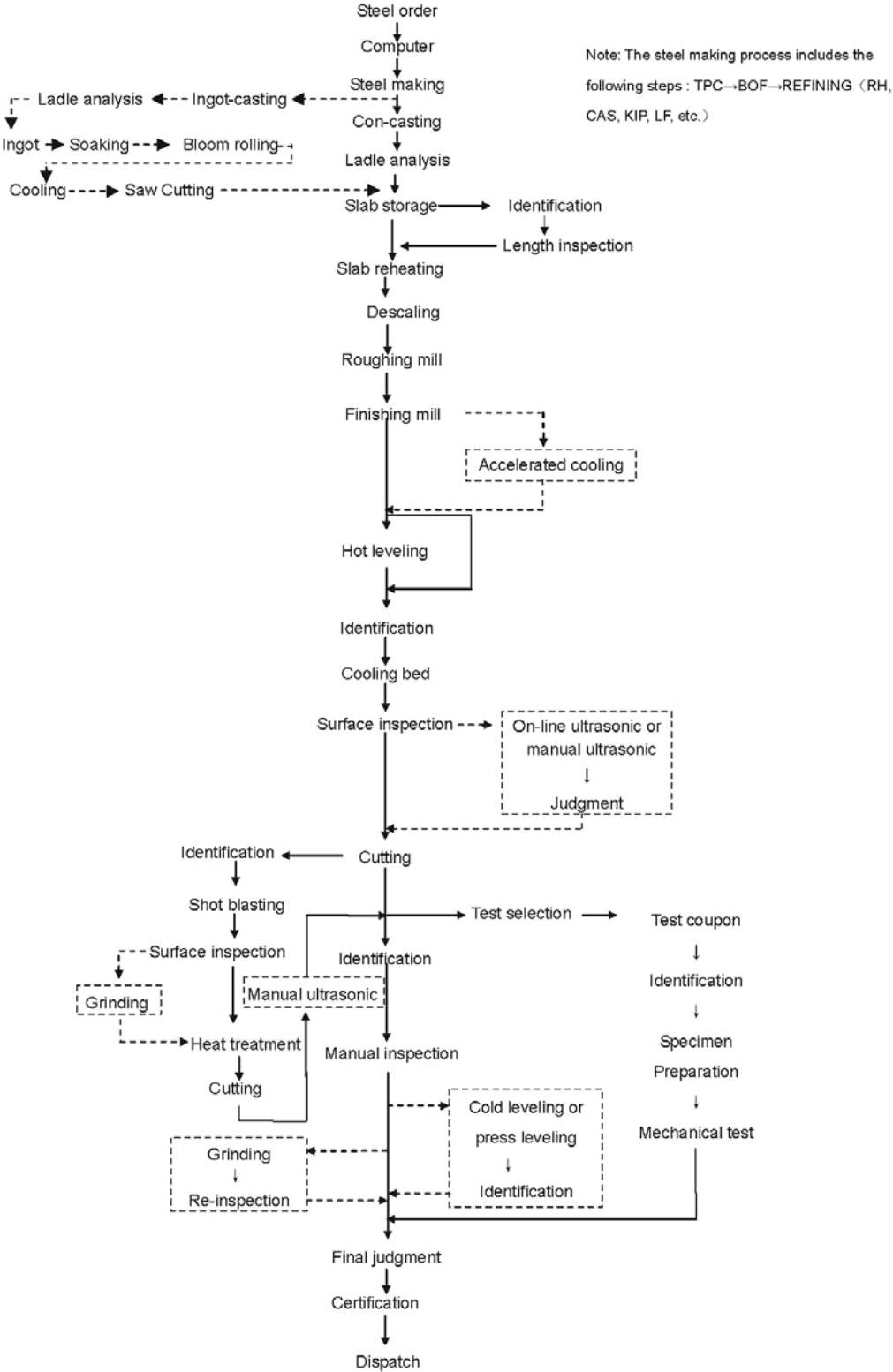
each grade. Where possible the statistical distribution of results for the main alloying elements should be provided.

d) A list of any purchaser complaints received with respect to material supplied under the Scheme. This should include detail of the purchaser, the tonnage affected, the nature of the complaint, the results of any investigation of causes, and any corrective or preventive measures taken to prevent recurrence.

8.4 This data shall be supplied to the attending survey or every year within one month of the end of the period in question.

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Appendix 1.1 Process Flow for Steel Plates - Heavy Plate Mill



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**Appendix 2
Record of Audit Result**

	Date of Audit	Name of auditor	Area/Item of audit	Result	Remarks
Q1			Manufacturing facilities of work		
			Contract review		
			Identification of products		
			Control of uncomfoting products		
			Statistical technique		
Q2			Establishment of quality system		
			Design control		
			Production process control		
			Control of handling, storage, packing and delivery of products		
			Improvement of quality		
Q3			Document control		
			Responsibility and authority		
			Inspection and testing control		
			Training		
Q4			Verification resource and personnel		
			Purchased and subcontracted products control		
			Control of inspection, testing and measuring equipment		
			Servicing		

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Appendix 3. List of approved signatories

Name	Signature	Position
冯太国		Manager of Product & technique Management Department