

AMENDMENTS FOR OTHER GUIDANCE

(Guidance for Approval of Manufacturing Process and Type Approval, Etc.)

- For external opinion inquiry -

2022.09.



Machinery Rule Development Team

- Main Amendments -

(1) Enter into force on 1 July 2023 (the date of application for certification of products or the contract date for ship construction)

● To reflect Request for Establishment/Revision of Classification Technical Rules

Present	Amendment	reason
<p style="text-align: center;">CHAPTER 1 <Omitted></p> <p style="text-align: center;">CHAPTER 2 APPROVAL OF MANUFACTURING PROCESS</p> <p style="text-align: center;">Section 1 <Omitted> Section 2-1 Rolled Steels</p> <p>201. ~ 202. <Omitted></p> <p>203. Approval tests</p> <p style="padding-left: 20px;">1. <Omitted></p> <p style="padding-left: 20px;">2. Approval test and acceptance criteria</p> <p style="padding-left: 40px;">(1) Approval tests are to be carried out in the presence of the Surveyor at the manufacturing plant and approval test items are to be as given in Table 2.2.1</p> <p style="padding-left: 40px;">(2) <Omitted></p> <p>204. ~ 205. <Omitted></p>	<p style="text-align: center;">CHAPTER 1 <Same as the present Guidance></p> <p style="text-align: center;">CHAPTER 2 APPROVAL OF MANUFACTURING PROCESS</p> <p style="text-align: center;">Section 1 <Same as the present Guidance> Section 2-1 Rolled Steels</p> <p>201. ~ 202. <Same as the present Guidance></p> <p>203. Approval tests</p> <p style="padding-left: 20px;">1. <Same as the present Guidance></p> <p style="padding-left: 20px;">2. Approval test and acceptance criteria</p> <p style="padding-left: 40px;">(1) Approval tests are to be carried out in the presence of the Surveyor at the manufacturing plant and approval test items are to be as given in Table 2.2.1</p> <p style="padding-left: 40px;">(2) <Same as the present Guidance></p> <p>204. ~ 205. <Same as the present Guidance></p>	<p>- To reflect revision of Pt 2 of the Rules for Material grade (Table 2.2.1 of next page)</p>

Present	Amendment	reason
<p data-bbox="302 169 846 201">Section 2-2 ~ Section 5 <Omitted></p> <p data-bbox="342 229 804 292">Section 6 Aluminium Alloys Section 6-2 <New></p>	<p data-bbox="1016 169 1809 201">Section 2-2 ~ Section 5 <Same as the present Guidance></p> <p data-bbox="1048 229 1809 323">Section 6-1 Aluminium Alloys Section 6-2 Aluminium/steel transition joints (2023)</p> <p data-bbox="994 352 1220 379">611. Application</p> <p data-bbox="1048 403 1832 491"><u>The requirements in this Section apply to tests and inspection for the approval of manufacturing process of aluminium/steel transition joints as specified in Pt 2, Ch 1, Sec 8 of the Rules.</u></p> <p data-bbox="994 549 1361 576">612. Data to be submitted</p> <p data-bbox="1059 592 1832 651"><u>The following reference data in addition to those specified in 102. are to be submitted to the Society.</u></p> <ul style="list-style-type: none"> <li data-bbox="1059 655 1832 683"><u>(1) Type of base and bonding material (e.g Material grade, etc.)</u> <li data-bbox="1059 687 1832 715"><u>(2) Range of transition joints for which approval is requested.</u> <li data-bbox="1059 719 1832 746"><u>(3) Manufacturing(bonding) method(e.g explosion bonding, etc.)</u> <li data-bbox="1059 751 1832 810"><u>(4) Maximum temperature allowed at the interface of the transition joint(min. 300 °C)</u> <li data-bbox="1059 815 1832 874"><u>(5) Mechanical properties specified for the transition joint after heating to the maximum temperature allowed at the interface</u> <li data-bbox="1059 879 1832 1241"><u>(6) Information for manufacturing and quality</u> <ul style="list-style-type: none"> <li data-bbox="1099 900 1832 959"><u>(A) Approved manufacturer information for base and bonding materials</u> <li data-bbox="1099 963 1832 1054"><u>(B) Details of the manufacturing method of the transition joints including the surface preparation condition of the base material and the bonding material</u> <li data-bbox="1099 1059 1832 1118"><u>(C) Facilities and equipment for surface inspection and ultrasonic test</u> <li data-bbox="1099 1123 1832 1182"><u>(D) Dimensions of base material and bonding material before bonding</u> <li data-bbox="1099 1187 1832 1214"><u>(E) Dimensions of the final product after bonding</u> <li data-bbox="1099 1219 1832 1241"><u>(F) National/international Standards related to products</u> 	<p data-bbox="1839 296 2145 451">- The requirements for Aluminium/steel transition joints are newly established.</p>

Present	Amendment	reason
	<p>613. Approval tests</p> <p>1. Selection of test samples</p> <p>(1) <u>Test samples used for the approval test are to, as a rule, be taken in the presence of the Surveyor from transition joints under the same conditions of the bonding process and manufacturing process.</u></p> <p>(2) <u>The thickness and dimensions for the test sample used in the approval test are, as a rule, to be maximum thickness and dimensions.</u></p> <p>2. Details of test</p> <p>(1) <u>All of the approval tests required in each Sec of this Chapter shall be carried out for the base material and the bonding material. However, it may be omitted if it is approved in other manufacturers by the Society.</u></p> <p>(2) <u>Testing method and acceptance criteria are to be in accordance with the Table 2.6.3.</u></p>	<p>- The requirements for Aluminium/steel transition joints are newly established.</p>

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<p data-bbox="219 1185 450 1214"><hereafter, omitted></p>	<p data-bbox="667 167 1312 193">Table 2.6.3 Test items and selection of test specimens</p> <table border="1" data-bbox="667 212 1718 738"> <thead> <tr> <th data-bbox="667 212 887 256">Approval test items</th> <th data-bbox="887 212 1402 256">Approval testing method</th> <th data-bbox="1402 212 1718 256">Acceptance criteria</th> </tr> </thead> <tbody> <tr> <td data-bbox="667 256 887 320">Macro structure</td> <td data-bbox="887 256 1402 320">ISO 4969 or equivalent method.</td> <td data-bbox="1402 256 1718 320">Acceptance criteria is the reference.</td> </tr> <tr> <td data-bbox="667 320 887 384">Micro structure</td> <td data-bbox="887 320 1402 384">Microscopic photographs (approx. 100x) of base metal, joining part and bonding materials are to be taken</td> <td data-bbox="1402 320 1718 384">Acceptance criteria is the reference.</td> </tr> <tr> <td data-bbox="667 384 887 464">Tensile test</td> <td data-bbox="887 384 1402 464">In accordance with Pt 2, Ch 1, 802. of the Rules.</td> <td data-bbox="1402 384 1718 464">To meet the requirements in Pt 2, Ch 1, 802. of the Rules.</td> </tr> <tr> <td data-bbox="667 464 887 568">Bend test</td> <td data-bbox="887 464 1402 568">In accordance with Pt 2, Ch 1, 802. of the Rules.</td> <td data-bbox="1402 464 1718 568">To meet the requirements in Pt 2, Ch 1, 802. of the Rules.</td> </tr> <tr> <td data-bbox="667 568 887 647">Shear test</td> <td data-bbox="887 568 1402 647">In accordance with Pt 2, Ch 1, 802. of the Rules.</td> <td data-bbox="1402 568 1718 647">To meet the requirements in Pt 2, Ch 1, 802. of the Rules.</td> </tr> <tr> <td data-bbox="667 647 887 738">Ultrasonic test</td> <td data-bbox="887 647 1402 738">KS D 0234 or equivalent method.</td> <td data-bbox="1402 647 1718 738">Unbonded areas are not acceptable</td> </tr> </tbody> </table> <p data-bbox="654 815 1037 841">614. Dealing after approval</p> <p data-bbox="719 858 1832 948">Transition joints which conform to the requirements in this Section are to be dealt with as [in approved case] in the requirements in Pt 2, Ch 1, 201. 3 (2) of the Rules, unless otherwise specified by the Society.</p> <p data-bbox="719 1198 1218 1224"><hereafter, same as the present Guidance></p>	Approval test items	Approval testing method	Acceptance criteria	Macro structure	ISO 4969 or equivalent method.	Acceptance criteria is the reference.	Micro structure	Microscopic photographs (approx. 100x) of base metal, joining part and bonding materials are to be taken	Acceptance criteria is the reference.	Tensile test	In accordance with Pt 2, Ch 1, 802. of the Rules.	To meet the requirements in Pt 2, Ch 1, 802. of the Rules.	Bend test	In accordance with Pt 2, Ch 1, 802. of the Rules.	To meet the requirements in Pt 2, Ch 1, 802. of the Rules.	Shear test	In accordance with Pt 2, Ch 1, 802. of the Rules.	To meet the requirements in Pt 2, Ch 1, 802. of the Rules.	Ultrasonic test	KS D 0234 or equivalent method.	Unbonded areas are not acceptable	<p data-bbox="1839 212 2145 368">- The requirements for Aluminium/steel transition joints are newly established.</p>
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