

# RULES

## FOR THE CLASSIFICATION AND CONSTRUCTION OF SHIPS CARRYING LIQUEFIED GASES IN BULK

ND No. 2-020101-176-E

### RULE CHANGE NOTICE

ENTERS INTO FORCE:

01.01.2026



St. Petersburg  
2025

# **RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SHIPS CARRYING LIQUEFIED GASES IN BULK**

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The present Rule Change Notice to the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk (hereinafter — RCN) has been approved in accordance with the established approval procedure and contains information on amendments and additions, except for editorial amendments. RCN amendments come into force on 1 January 2026.

**REVISION HISTORY**

**RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SHIPS CARRYING LIQUEFIED GASES IN BULK**

**PART IX. MATERIALS AND WELDING**

Item	Applicability	Description	Remarks
<a href="#">Table 2.1-3</a>	Ships carrying liquefied gases in bulk Cargo tanks, secondary barriers and process pressure vessels High manganese austenitic steel rolled products	New type of steel (high manganese austenitic steel) has been introduced.	IMO resolution MSC.523(106)

## PART IX. MATERIALS AND WELDING

### 2 MATERIAL REQUIREMENTS

Table 2.1-3 is amended as follows:

"Table 2.1-3

Plates, sections and forgings for cargo tanks, secondary barriers and process pressure vessels for design temperatures <sup>1</sup> below –55 °C and down to –165 °C. Maximum thickness <sup>2</sup> 25 mm		
Minimum design temperature, in °C	Chemical composition <sup>3</sup> and heat treatment	Charpy V-notch impact test temperature, °C
–60	1,5 % nickel steel N or N+T or Q+T or TMCP	–65
–65	2,25 % nickel steel N or N+T or Q+T or TMCP <sup>4</sup>	–70
–90	3,5 % nickel steel N or N+T or Q+T or TMCP <sup>4</sup>	–95
–105	5 % nickel steel N or N+T or Q+T <sup>4, 5</sup>	–110
–165	9 % nickel steel N+N+T or Q+T	–196
–165	Austenitic steels such types* 304, 304L, 316, 316L, 321 and 347 Solution treated	–196
–165	<a href="#">High manganese austenitic steel — hot rolling and controlled cooling<sup>6, 7</sup></a>	–196
–165	Aluminium alloys type* 5083, 1550, 1565ch Annealed	Not required
–165	Austenitic Fe – Ni alloy (36 % Ni)	Not required
<b>Tensile and Charpy V-notch impact test</b>		
Plates	Each piece shall be tested	
Sections and forgings	Each batch shall be tested	
<b>Charpy V-notch impact test</b>		
Plates	Transverse specimens	
	Minimum average energy value KV 27 J	
Sections and forgings	Longitudinal specimens	
	Minimum average energy value KV 41 J	
<sup>1</sup> The requirements for materials use at design temperatures below –165 °C shall comply with the values specified in the national/ international standards.		
<sup>2</sup> For steel 1,5 %; 2,25 %; 3,5% and 5% Ni, with thickness greater than 25 mm, the Charpy V-notch impact test temperature shall be corrected as follows:		
Material thickness <i>t</i> , in mm	Test temperature, in °C	
25 < <i>t</i> ≤ 30	10 °C below design temperature	
30 < <i>t</i> ≤ 35	15 °C below design temperature	
35 < <i>t</i> ≤ 40	20 °C below design temperature	
The Charpy V-notch impact energy value shall be in accordance with the table for the applicable type of test specimen.		
<sup>3</sup> The chemical composition limits shall comply with the approved specification.		
<sup>4</sup> A lower minimum design temperature for quenched and tempered steels may be permitted.		
<sup>5</sup> A specially heat treated, for example triple heat treated 5 % nickel steel may be used down to –165 °C, provided that the Charpy V-notch impact tests are carried out at –196 °C.		
<sup>6</sup> <a href="#">Use of the material shall be subject to the required operational conditions based on the provisions of IMO circular MSC.1/Circ.1599/Rev.3.</a>		
<sup>7</sup> <a href="#">The impact test may not be omitted for high manganese austenitic steel.</a>		
* In compliance with the international and national standards.		

<b>Plates, sections and forgings for cargo tanks, secondary barriers and process pressure vessels for design temperatures<sup>1</sup> below –55 °C and down to –165 °C. Thickness above 40 mm</b>	
<b>Requirements for Charpy V-notch impact bend testing.</b>	
40 < t ≤ 45 <sup>68</sup> mm	25 °C below design temperature
45 < t ≤ 50 <sup>68</sup> mm	30 °C below design temperature
<sup>68</sup> For semi-finished products of t > 40 mm in thickness, testing of a further set of samples taken from mid-thickness is required. This requirement does not apply to normal, higher and high strength rolled products complying with the requirements of the RS rules and specified in 3.2 and 3.13, Part XIII "Materials" of the RS Rules/C.	

Russian Maritime Register of Shipping

**Rule Change Notice  
to the Rules for the Classification and Construction  
of Ships Carrying Liquefied Gases in Bulk**

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FAI "Russian Maritime Register of Shipping"  
7, Litera A, Millionnaya Ulitsa,  
St. Petersburg, 191186  
[www.rs-class.org/en/](http://www.rs-class.org/en/)