

Scope and Delivery Condition: Hot-rolled plates are delivered in not-pickled condition and without oil coating. Normalizing (N) is to be replaced by identical heat-treatment during hot-working.

Dimensions of plates and permissible variations expressed in mm shall conform to requirements of table 1.

Table 1

Thickness	Width	Length	Permissible variations		
			in thickness	in width	in length
from 8,0 до 15,0 excl.	1500	6000	-0,8/+0,4	+12	+40
from 15,0 до 20,0 incl.			-0,8/+0,6		
from 8,0 до 15,0 excl.	2000		-0,8/+0,4	+25	
from 15,0 до 20,0 incl.			-0,8/+0,6		

Note- Plates are delivered with **trimmed edges** and **cut ends**.

Deviation from flatness per a meter of length shall not exceed 7 mm for plates in width 1500 mm and 10 mm for plates in width 2000 mm.

Cutting obliquity shall not cause the plate being outside permissible variation in length.

Surface quality: The surface of plate shall be free of hot tears, through tears, rolled burns-on, rolled crusts, blisters, pipes, cracks, slivers, rolled slag patches and rolled-in scale. Local surface defects such as, but not limited to, pitted surface and grooves are allowed unless they result in the plates being outside the permissible variations in thickness. Surface defects are allowed to be removed with abrasive conditioning. If abrasive conditioning is used, the minus deviation in thickness is allowed to be augmented by no more than 5 % of nominal thickness, the area of separate conditioned spot being no more than 100 cm² and the total area of conditioned spots on a plate being no more than 2% of the plate area. If the conditioned spots coincide on both sides of a plate the permissible depth of conditioning shall be determined as the sum of depths of conditioning on each side of a plate that does not exceed the permissible variation in thickness.

The surface quality shall be inspected by naked eyes without using magnifying devices.

Chemical composition of steel based on heat analysis shall conform to requirements of table 2, %:

Table 2

Steel grade	C	Mn	Si	P	S	Cu	Ni	Al	Cr	N	CEV
S235JR (1.0038)	0,10	0,40	0,15	0,035	0,035	0,20	0,20	+	0,20	0,012	0,35
	0,17	0,60	0,30	max	max	max	max		max	max	
S355J2 (1.0577)	0,13	1,15	0,30	0,025	0,025	0,20	0,20	0,020	0,20	0,012	0,45
	0,20	1,40	0,55	max	max	max	max	min	max	max	max

Notes

- 1 The symbol «+» means that content of element is not specified, but checked and shall be reported in the inspection certificate.
- 2 The actual molybdenum and vanadium content shall be reported in the inspection certificate.
- 3 The carbon equivalent **CEV** shall be determined as follows:

$$CEV = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Ni + Cu}{15}$$

When calculating the carbon equivalent value, the content of the elements reported in the inspection certificate shall be used in the formula.

Sampling and sample preparation for the determination of chemical composition shall comply with DIN EN ISO 14284:2003.

Chemical composition shall be determined in accordance with Producer's practice.

Permissible variations for product analysis (made by the Customer) of both steel grades shall be as given below, %:

C	Mn	Si	P	S	N
+0,03/-0,02	±0,03	±0,02	+0,005	+0,005	+0,002
<p>Mechanical Properties and Impact strength shall conform to requirements of tables 7 and 9 of DIN EN 10025-2:2005. One plate per lot shall be subject to inspection to determine mechanical properties and impact strength.</p>					
<p>Macrostructure shall be free of delaminations. The absence of delaminations is guaranteed by manufacturing technology.</p>					
<p>Rules of acceptance: Plates are delivered by heats. Dimensions and shape of plates shall be measured as per Producer's practice with instrument providing suitable accuracy of measurement. 10 % of plates per lot shall be subject to shape and dimensions inspection. Unspecified rules of acceptance, test methods, sampling and test piece selection, re-testing procedure, instrument and equipment that provide suitable accuracy when checking the tested parameters, the calibration of instrument and equipment shall be at the discretion of the Producer.</p>					
<p>Rounding of numbers: carried out as per ISO 80000-1:2009(E) (rule B).</p>					
<p>Packing: Plates are delivered in bundles without strapping as per Producer's practice. Mass of such bundle shall not exceed 8 mt. Each bundle is accompanied by packing list including number of plates per a bundle.</p>					
<p>Marking on plates: conventional numeric code (steel grade and heat number to be decoded in the inspection certificate) shall be painted or hot stamped.</p>					
<p>Marking on top plate: the top plate of each bundle shall be marked with thermostable tag that provides heat number, steel grade, plate dimensions.</p>					
<p>Marking on tags: heat number, steel grade, dimensions and mass. At least two tags are attached to the bundle with one transverse strapping tape <i>in one turn</i>.</p>					
<p>Inspection Certificate: in accordance with DIN EN 10204:2005 3.1, reporting all the tested parameters and referencing all the applied standards.</p>					
Customer's Signature			Producer's Signature		

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1) **The requirements of indicated standard are to be fulfilled taking into consideration the following additions, alterations and definitions.**