
**STEEL CASTINGS
GENERAL SPECIFICATIONS**

GOST 977 – 88

Translated by RUSSTRANS
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GOST 977 – 88 Steel casting – general Specification

In which place	Type	Should be as
<p>Para 1.3. Table 1. Column « Silicon » for steel 08ГДНФЛ</p>	<p>1.15 – 0.40</p>	<p>0.15 – 0.40</p>
<p>Para 1.4. Table 3. Column «permissible deviation, %, for higher limits of contents” for fraction of total mass of silicon upto 0.50 %</p>	<p>+ 0.01</p>	<p>+ 0.10</p>
<p>Para 3.3. Table 7. Description column</p>	<p>Elongation □, %</p>	<p>Elongation □, %</p>

ИУС No. 5 1990

S T A T E S T A N D A R D O F U S S R

STEEL CASTINGS
General specifications**GOST**
977-88ОКП 411200

Effective from 01.01.1990

The present standard covers steel castings, which are manufactured by all casting methods from the structural non-alloy, alloy, and alloy with special properties of steel castings.

1. GRADES

1.1. The following grades of steel are specified for manufacturing steel castings:

Structural non – alloyed:

15Л, 20Л, 25Л, 30Л, 35Л, 40Л, 45Л, 50Л;

Structural alloyed:

20ГЛ, 35ГЛ, 20ГСЛ, 30ГСЛ, 20Г1ФЛ, 20ФЛ, 30ХГСФЛ, 45ФЛ, 32Х06Л, 40ХЛ, 20ХМЛ, 20ХМФЛ, 20ГНМФЛ, 35ХМЛ, 30ХНМЛ, 35ХГСЛ, 35НГМЛ, 20ДХЛ, 08ГДНФЛ, 13ХНДФТЛ, 12ДН2ФЛ, 12ДХН1МФЛ, 23ХГС2МФЛ, 12Х7Г3СЛ, 25Х2ГНМФЛ, 27Х5ГСМЛ, 30Х3С3ГМЛ, 03Н12Х5М3ТЛ, 03Н12Х5М3ТЮЛ:

Structural alloyed, used under the contractual obligations between the countries – members of (СЭВ) council for mutual economic assistance.

15ГЛ, 30ГЛ, 45ГЛ, 70ГЛ, 55СЛ, 40Г1, 5ФЛ, 15ФЛ, 30ХЛ, 25ХГЛ, 35ХГЛ, 50ХГЛ, 60ХГЛ, 70Х2ГЛ, 35ХГФЛ, 40ХФЛ, 30ХМЛ, 40ХМЛ, 40ХНЛ, 40ХН2Л, 30ХГ1, 5МФРЛ, 75ХНМФЛ, 40ГТЛ, 20ГНМЮЛ;

Alloy with special characteristics:

a) Martensite class

20X13Л, 08X14НДЛ, 09X16H4БЛ, 09X17H3СЛ, 10X12НДЛ – corrosion resistant; 20X5МЛ, 20X8ВЛ, 40X9C2Л – heat resistant; 20X12ВНМФЛ – heat proof; 85X4M5Φ2B6Л (P6M5Л), 90X4M4Φ2B6Л (P6M4Φ2Л) – fast cutting.

б) Martensite – Ferrite class

15X13Л – corrosion resistant;

в) Ferrite class

15X25ТЛ – corrosion resistant;

г) Austenite– Martensite class

08X15H4ДМЛ, 08X14H7МЛ, 14X18H4Г4Л – corrosion resistant;

д) Austenite – Ferrite class

12X25H5ТМФЛ, 16X18H12C4ТЮЛ, 10X18H3Г3Д2Л – corrosion resistant; 35X23H7СЛ, 40X24H12СЛ, 20X20H14C2Л – heat resistant.

е) Austenite class

10X18H9Л, 12X18H9ТЛ, 10X18H11БЛ, 07X17H16ТЛ, 12X18H12M3ТЛ – corrosion resistant; 55X18Г14C2ТЛ, 15X23H18Л, 20X25H19C2Л, 18X25H19СЛ, 45X17Г13H3ЮЛ – heat resistant; 35X18H24C2Л, 31X19H9MBБТЛ, 12X18H12БЛ, 08X17H34B5T3Ю2PЛ, 15X18H22B6M2PЛ, 20X21H46B8PЛ – heat resistant; 110Г13Л, 110Г13X2БPЛ, 110Г13ФТЛ, 130Г14ХМФАЛ, 120Г10ФЛ – wear resistant.

Alloy with special characteristics, used under the contractual obligations between the countries – members of (СЭВ) council for mutual economic assistance.

а) Martensite – Ferrite class

15X14НЛ, 08X12H4ГСМЛ – corrosion resistant.

б) Austenite – Ferrite class

12X21H5Г2СЛ, 12X21H5Г2СТЛ, 12X21H5Г2CM2Л, 12X19H7Г2CAЛ, 12X21H5Г2CAЛ, 07X18H10Г2C2M2Л, 15X18H10Г2C2M2Л, 15X18H10Г2C2M2ТЛ – corrosion resistant.

The area of usage of structural alloy steel is given in appendix 1, alloys with special characteristics is given in appendix 2.

1.2 The steel should be melted in furnaces with main lining, melting of steel in furnaces is permitted with acid lining under the conditions fulfilled as per the present standard.

NOTE: The possibility of application of Converter steel should be indicated in the design document (КД) and (or) standard technical documentation (HTД)

1.3 Chemical composition of structural non-alloy and alloy steel should be in accordance with table 1, alloy steel with special composition – as per table 2.