

JIS

JAPANESE INDUSTRIAL STANDARD

**Carbon Steel Pipes for
Pressure Service**

 **JIS G 3454**—1988

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by

Japanese Standards Association

In the event of any doubt arising,
the original Standard in Japanese is to be final authority.



JAPANESE INDUSTRIAL STANDARD
Carbon Steel Pipes for Pressure Service

J I S
G 3454-1988

1. Scope

This Japanese Industrial Standard specifies the carbon steel pipes, hereinafter referred to as the "pipes", used for pressure service at an approximate maximum temperature of 350°C. The pipes for high pressure service shall be in accordance with JIS G 3455.

- Remarks 1. Pertaining to the electric-resistance welded steel tubes, when previously agreed upon with the manufacturer, the purchaser may designate the supplementary quality requirements Z 3 or Z 4 specified in Appendix, in addition to the items specified in this text.

Appendix Z 3 Ultrasonic Examination

Appendix Z 4 Eddy Current Examination

2. The units and numerical values given in { } in this Standard are based on the International System of Units (SI) and are appended for informative reference.

Further, the traditional units accompanied by numerical values in this Standard shall be converted to the SI units and numerical values on Jan. 1, 1991.

2. Grade and Designation

The pipe shall be classified into two grades and their letter symbols shall be as given in Table 1-1 or Table 1-2.

Table 1-1. Letter Symbol of Grade
(Applicable till the end of 1990)

Letter symbol of grade
STPG 38
STPG 42

Table 1-2. Letter Symbol of Grade
(Applicable on and after Jan. 1, 1991)

Letter symbol of grade	(Informative reference) Traditional letter symbol of grade
STPG 370	STPG 38
STPG 410	STPG 42

Applicable Standards: See page 15.

3. Chemical Composition

The pipe shall be tested in accordance with 9.1 and the ladle analysis values obtained shall conform to Table 2-1 or Table 2-2.

Table 2-1. Chemical Composition
(Applicable till the end of 1990)

Unit: %

Letter symbol of grade	C	Si	Mn	P	S
STPG 38	0.25 max.	0.35 max.	0.30 to 0.90	0.040 max.	0.040 max.
STPG 42	0.30 max.	0.35 max.	0.30 to 1.00	0.040 max.	0.040 max.

Table 2-2. Chemical Composition
(Applicable on and after Jan. 1, 1991)

Unit: %

Letter symbol of grade	C	Si	Mn	P	S
STPG 370	0.25 max.	0.35 max.	0.30 to 0.90	0.040 max.	0.040 max.
STPG 410	0.30 max.	0.35 max.	0.30 to 1.00	0.040 max.	0.040 max.

4. Mechanical Properties

4.1 Tensile Strength, Yield Point or Proof Stress and Elongation The pipe shall be tested in accordance with 9.2 and the tensile strength, yield point or proof stress and elongation obtained shall comply with Table 3-1 or Table 3-2.

Table 3-1. Mechanical Properties
(Applicable till the end of 1990)

Letter symbol of grade	Tensile strength kgf/mm ² {N/mm ² }	Yield point or proof stress kgf/mm ² {N/mm ² }	Elongation %			
			No. 11 and No. 12 test pieces	No. 5 test piece	No. 4 test piece	
					Longi-tudinal	Trans-verse
STPG 38	38 {373} min.	22 {216} min.	30 min.	25 min.	28 min.	23 min.
STPG 42	42 {412} min.	25 {245} min.	25 min.	20 min.	24 min.	19 min.