

JIS G3456

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JIS G3456 is a Japanese Industrial Standard that specifies the requirements for carbon steel pipes used for high-temperature service. These pipes are designed for applications such as the transportation of steam, water, and other fluids at elevated temperatures. The standard covers dimensions, tolerances, mechanical properties, and chemical composition to ensure the pipes' reliability and performance in high-temperature environments.

● Dimensions and Sizes of JIS G3456

Outside Diameter mm	Nominal Wall Thickness mm									
	SCH10	SCH20	SCH30	SCH40	SCH60	SCH80	SCH100	SCH120	SCH140	SCH160
10.5	–	–	–	1.7	–	2.4	–	–	–	–
13.8	–	–	–	2.2	–	3	–	–	–	–
17.3	–	–	–	2.3	–	3.2	–	–	–	–
21.7	–	–	–	2.8	–	3.7	–	–	–	4.7
27.2	–	–	–	2.9	–	3.9	–	–	–	5.5

34	-	-	-	3.4	-	4.5	-	-	-	6.4
42.7	-	-	-	3.6	-	4.9	-	-	-	6.4
48.6	-	-	-	3.7	-	5.1	-	-	-	7.1
60.5	-	-	-	3.9	-	5.5	-	-	-	8.7
76.3	-	-	-	5.2	-	7	-	-	-	9.5
89.1	-	-	-	5.5	-	7.6	-	-	-	11.1
101.6	-	-	-	5.7	-	8.1	-	-	-	12.7
114.3	-	-	-	6	-	8.6	-	11.1	-	13.5
139.8	-	-	-	6.6	-	9.5	-	12.7	-	15.9
165.2	-	-	-	7.1	-	11	-	14.3	-	18.2
216.3	-	6.4	7	8.2	10.3	12.7	15.1	18.2	20.6	23
267.4	-	6.4	7.8	9.3	12.7	15.1	18.2	21.4	25.4	28.6
318.5	-	6.4	8.4	10.3	14.3	17.4	21.4	25.4	28.6	33.3
355.6	6.4	7.9	9.5	11.1	15.1	19	23.8	27.8	31.8	35.7
406.4	6.4	7.9	9.5	12.7	16.7	21.4	26.2	30.9	36.5	40.5
457.2	6.4	7.9	11.1	14.3	19	23.8	29.4	34.9	39.7	45.2
508	6.4	9.5	12.7	15.1	20.6	26.2	32.5	38.1	44.4	50
558.8	-	-	-	15.9	22.2	28.6	34.9	41.3	47.6	54
609.6	-	-	-	17.5	24.6	31	38.9	46	52.4	59.5
660.4	-	-	-	18.9	26.4	34	41.6	49.1	56.6	64.2

●Chemical Composition of JIS G3456

Chemical Composition Unit: %					
Designation of Grade	C	Si	Mn	P	S
STPT 370	0.25 max.	0.10 to 0.35	0.30 to 0.90	0.035 max.	0.035 max.
STPT 410	0.30 max.	0.10 to 0.35	0.30 to 1.00	0.035 max.	0.035 max.
STPT 480	0.33 max.	0.10 to 0.35	0.30 to 1.00	0.035 max.	0.035 max.

●Mechanical Properties Tensile Strength and Yield Strength of JIS G3456

Designation of Grade	Tensile StrengthN/mm ²	Yield Point or Proof StressN/mm ²
STPT 370	370 min.	215 min.
STPT 410	410 min.	245 min.
STPT 480	480 min.	275 min.