

JIS

JAPANESE INDUSTRIAL STANDARD

**Carbon steel tubes for
building structure**

JIS G 3475—1996

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Carbon steel tubes for building structure

G 3475-1996

1. Scope This Japanese Industrial Standard specifies the carbon steel tubes (hereafter referred to as "steel tube") mainly used for structural members for buildings.

Remarks: The cited standards to this Standard are given in Attached Table 2.

Informative reference The piles for foundation of buildings are covered by JIS A 5525 (Steel pipe piles).

2. Grade and symbol The steel tube shall be classified into three categories, and their symbols shall be as given in Table 1.
3. Method of manufacture The method of manufacture shall be as follows :
- (1) The steel tube shall be manufactured by either the seamless, electric resistance welding, butt welding, or arc welding (straight seam welding) process.
 - (2) The steel tube shall be as manufactured conditions (hot formed, blue heat formed, or cold formed), otherwise appropriate heat treatment shall additionally be applied thereto.
4. Chemical composition The steel tube shall be tested in accordance with 9.1, and the cast analysis values thereof shall be as given in Table 1.

Table 1. Chemical composition

Unit : %

Symbol of grade	C	Si	Mn	P	S	N
STKN400W	0.25 max.	—	—	0.030 max.	0.030 max.	0.006 max.
STKN400B	0.25 max.	0.35 max.	1.40 max.	0.030 max.	0.015 max.	0.006 max.
STKN490B	0.22 max.	0.55 max.	1.60 max.	0.030 max.	0.015 max.	0.006 max.

Remarks 1. An alloying element(s) other than those given in Table 1 may be added, as necessary.

2. The specification of N is only applicable to the steel tube as cold formed conditions.

Further, when such element as Al which is able to immobilize N is added, the content of total N may be contained up to and including 0.009 %, provided that the nitrogen of solid solution type is less than 0.006 %.

3. The product analysis value may be used in lieu of the cast analysis value upon agreement between the purchaser and supplier. In this case, the permissible range of the values given in Table 1 excluding the values of N shall be in accordance with Table 1 in JIS G 0321.
4. The chemical composition other than those given in Table 1 which are involved in the formula in 5. for calculation of the carbon equivalent or the chemical composition on sensitivity of welding crack shall be determined in accordance with 9.1.