Manufacturing Method Symbols for Stainless Steel Pipes

Amended Rules

Rules for the Survey and Construction of Steel Ships Part K

Reason for Amendment

Part K of the Rules for the Survey and Construction of Steel Ships stipulates that steel pipes for pressure piping are to be legibly stamped or stenciled with symbols indicating their manufacturing methods, with reference being given to JIS G 3454 for specific details of such symbols.

Although Part K also stipulates the same for stainless steel pipes, it does not stipulate the specific details of the manufacturing method symbols to be stamped or stenciled onto such pipes.

Accordingly, relevant requirements are amended to clarify the specific details of the symbols used to indicate the manufacturing methods of stainless steel pipes.

Outline of Amendment

Specifies the specific details of symbols used to indicate stainless steel pipe manufacturing methods in the notes to Table K4.19, with reference also being given to JIS G 3459.

“Rules for the survey and construction of steel ships” has been partly amended as follows:

Part K MATERIALS

Chapter 4 STEEL PIPES

4.3 Stainless Steel Pipes

4.3.1 Application

1 The requirements apply to the stainless steel pipes for low temperature service or corrosion-resistance service (hereinafter referred to as “stainless steel pipes” in **4.3**).

2 Stainless steel pipes having characteristics differing from those specified in **4.3** are to comply with the requirements in **1.1.1-3**.

4.3.2 Kinds

The stainless steel pipes are classified as specified in **Table K4.19**.

4.3.4 Chemical Composition

The chemical composition of stainless steel pipes is to comply with the requirements given in **Table K4.19**.

Table K4.19 has been amended as follows.

Table K4.19 Grades and Chemical Composition

Grade (Symbol)	Chemical composition (%)								
	C	*Si*	*Mn*	*P*	*S*	*Ni*	*Cr*	*Mo*	Others
*K*304*TP*	0.08 max.	1.00 max.	2.00 max.	0.040 max.	0.030 max.	8.00~ 11.00	18.00~ 20.00	-	-
*K*304*LTP*	0.030 max.					9.00~ 13.00			
*K*309*STP*	0.08 max.					12.00~ 15.00	22.00~ 24.00		
*K*310*STP*		1.50 max.				19.00~ 22.00	24.00~ 26.00		
*K*316*TP*		1.00 max.				10.00~ 14.00	16.00~ 18.00	2.00~ 3.00	
*K*316*LTP*	0.030 max.					12.00~ 16.00			
*K*317*TP*	0.08 max.					11.00~ 15.00	18.00~ 20.00	3.00~ 4.00	
*K*317*LTP*	0.030 max.								
*K*321*TP*	0.08 max.					9.00~ 13.00	17.00~ 19.00	-	$Ti \geq 5 \times C$
*K*329*J*1*TP*	0.08 max.	1.00 max.	1.50 max.	0.040 max.	0.030 max.	3.00~ 6.00	23.00~ 28.00	1.00~ 3.00	-
*K*329*J*3*LTP*	0.030 max.	1.00 max.	1.50 max.	0.040 max.	0.030 max.	4.50~ 6.50	21.00~ 24.00	2.50~ 3.50	*N*: 0.08~0.20
*K*329*J*4*LTP*	0.030 max.	1.00 max.	1.50 max.	0.040 max.	0.030 max.	5.50~ 7.50	24.00~ 26.00	2.50~ 3.50	*N*: 0.08~0.30
*K*347*TP*	0.08 max.	1.00 max.	2.00 max.	0.040 max.	0.030 max.	9.00~ 13.00	17.00~ 19.00	-	$Nb \geq 10 \times C$

Notes:

Symbols indicating the method of manufacture are to be added to the ends of the above-mentioned symbols as follows:

Hot finished seamless steel tube	: *-S-H*
Cold finished seamless steel tube	: *-S-C*
Automatic arc welded steel tube	: *-A*
Cold finished automatic arc welded steel tube	: *-A-C*
Bead conditioned automatic arc welded steel tube	: *-A-B*
Laser welded steel tube	: *-L*
Cold finished laser welded steel tube	: *-L-C*
Bead conditioned laser welded steel tube	: *-L-B*
Electric-resistance welded steel tube (other than hot and cold finished)	: *-E-G*
Cold finished electric-resistance welded steel tube	: *-E-C*

4.3.9 Marking

Marking for stainless steel pipes is to comply with the requirements given in **4.2.9**.