BS 3601

●Production Standard of BS 3601

●BS 3601

BS3601 pipe is made of carbon steel with excellent room temperature performance and is widely used in applications with high pressure requirements. BS 3601 pipes in both black and hot-dip galvanized (galvanized) versions, they can withstand the strict fire protection requirements. BS 3601 pipe with a wide range of steel grades such as BS3601 320, BS3601 360 and BS3601 430.

●Dimensions and Sizes of BS 3601

Method of Manufacture	Outside Diameter	Thickness
	mm	mm
Buttwelded	8 to 50 （nominal size）	Up to and including 4.5
Electric Resistance Welded	12.7 to 508	Up to and including 12.5
Seamless	12.7 to 1016	Up to and including 65
Submerged Arc Welded	114.3 to 2220	Up to and including 50

●Chemical Composition of BS 3601

Steel Grade	Method of Manufacture	Chemical Composition（ladle analysis） （see notes 1 and 2）					
		C	Si	Mn		P	S
		max	max	min	max	max	max
		%	%	%	%	%	%
320	Welded（BW and ERW）	0.16a	–	0.3	0.7	0.04	0.04
360	Seamless（S）	0.17	0.35	0.4	0.8	0.04	0.04
	Welded（ERW）	0.17a	0.35	0.4	0.8	0.04	0.04
430	Seamless（S）	0.21	0.35	0.4	1.2	0.04	0.04
	Welded（ERW）	0.21	0.35	0.4	1.2	0.04	0.04
	Welded（SAW）	0.25	0.50	–	1.2	0.04	0.04
NOTE 1：Elements not quoted in this table are not intentionally added other than for the purpose of finishing the heat.							
NOTE 2：For permissible deviations on product analysis，see Table 3.							
NOTE 3： Re is the yield strength. For acceptance purposes either the upper yield stress ReH or the 0.5% proof stress（total elongation）Rt0.5 is determined（see 13.1）.							
Rm is the tensile strength.							
A is the percentage elongation after fracture on a gauge length of Lo=5.65√So.（So is the original cross-sectional area of the gauge length.）							
a is the thickness of the test piece.							
a For welded tubes made from rimmed Steel the C max. is 0.19%.							
b 1N/mm2 = 1MPa.							

●Mechanical Properties Tensile Strength and Yield Strength of BS 3601

Steel Grade	Method of Manufacture	Mechanical Properties at Room Temperature（see note 3）						
		Rm		Remin For thickness in mm			A	Bend test bar diameter
		min	max	≤16	＞16≤40	＞40≤65	min	
		N/mm2 b	N/mm2	N/mm2	N/mm2	N/mm2	%	
320	Welded（BW and ERW）	320	460	195	–	–	25	–
360	Seamless（S）	360	500	235	225	215	25	4a
	Welded（ERW）	360	500	235	–	–	25	–
430	Seamless（S）	430	570	275	265	255	22	4a
	Welde+d（ERW）	430	570	275	–	–	22	–

	Welded（SAW）	430	570	275	265	255	22	4a
NOTE 1：Elements not quoted in this table are not intentionally added other than for the purpose of finishing the heat.								
NOTE 2：For permissible deviations on product analysis，see Table 3.								
NOTE 3： Re is the yield strength. For acceptance purposes either the upper yield stress ReH or the 0.5% proof stress（total elongation）Rt0.5 is determined（see 13.1）.								
Rm is the tensile strength.								
A is the percentage elongation after fracture on a gauge length of Lo=5.65√So.（So is the original cross-sectional area of the gauge length.）								
a is the thickness of the test piece.								
a For welded tubes made from rimmed Steel the C max. is 0.19%.								
b 1N/mm2 = 1MPa.								