

A588/A588M-03a 厚度100mm的最小屈服强度为345MPa 的高强度低合金结构钢
 Standard Specification for High-Strength Low-Alloy Structural Steel with 50 ksi [345MPa]
 Minimum Yield Point to 4-in. [100-mm] Thick

牌号 ^a Symbol of grade (制造manufacture)	钢板成品 厚度 Plate Thickness mm	化学成分 % (熔炼分析) Chemical Composition % (Heat analysis)									其它 other	拉伸试验 Tensile Test					
		C ^b ≤	Si	Mn ^b	P ≤	S ≤	Ni	Cr	Cu	V		屈服强度 Yield Stress N/mm ² ≥	抗拉强度 Tensile Strength N/mm ² ≥	断后伸长率 ^d Elongation % ≥ L ₀ =200mm L ₀ =50mm			
A588 Grade A (细晶处理fine grain practice)	≤200	0.19	0.30 ~0.65	0.80 ~1.25			≤0.40	0.40 ~0.65	0.25 ~0.40	0.02 ~0.10	—	≤100	345	485	18	21	
											—	>100~125	315	460	—	21	
												—	>125~200	290	435	—	21
A588 Grade B (细晶处理fine grain practice)	≤200	0.20	0.15 ~0.50	0.75 ~1.35			≤0.50	0.40 ~0.70	0.20 ~0.40	0.01 ~0.10	—	≤100	345	485	18	21	
					0.04	0.05						—	>100~125	315	460	—	21
												—	>125~200	290	435	—	21
A588 Grade C (细晶处理fine grain practice)	≤200	0.15	0.15 ~0.40	0.80 ~1.35			0.25 ~0.50	0.30 ~0.50	0.20 ~0.50	0.01 ~0.10	—	≤100	345	485	18	21	
												—	>100~125	315	460	—	21
												—	>125~200	290	435	—	21
A588 Grade K (细晶处理fine grain practice)	≤200	0.17	0.25 ~0.50	0.50 ~1.20			≤0.40	0.40 ~0.70	0.30 ~0.50		Mo≤0.10 Nbc: 0.005 ~0.05	≤100	345	485	18	21	
												—	>100~125	315	460	—	21
												—	>125~200	290	435	—	21

注Note:
 a 按Guide G 101中熔炼分析预测计算的耐大气腐蚀性指数应≥ 6.0。
 The steel shall have an atmospheric corrosion resistance index of 6.0 or higher, calculated from the heat analysis in accordance with Guide G 101-predictive Method Based on the Date of Larabee and Coburn.
 b 规定最大碳含量每降低0.01%, 规定最大锰含量增大0.06%, 但最大不超过1.50%。For each reduction of 0.01% below the specified carbon maximum, an increase of 0.06% manganese above the specified maximum will be permitted, up to maximum of 1.50%.
 c 对厚度<13mm的钢板, 不规定最小Nb含量。
 For plates under 1.2 in. [13 mm] in thickness, the minimum columbium is waived.
 d 宽度大于600mm的钢板, 延伸率规定减少2%。
 For plates wider than 600mm, the elongation requirement is reduced two percentage points.
 备注Remarks:
 1.本标准的钢在大多数环境中的耐大气腐蚀性实质上好于含铜或不含铜的碳素结构钢,在大气中暴露时,在许多应用中能裸露使用(未上漆)。
 The atmospheric corrosion resistance of the steel in most environments is substantially better than that of carbon structural steels with or without copper addition. When properly exposed to the atmosphere, this steel can be used bare (unpainted) for many applications.