



## TECHNICAL DATA OF NON ALLOY AND FINE GRAIN STEEL HOLLOW SECTIONS CONFORMING TO EN 10210-1&2: 2006

**SCOPE** : Hot-Finished Welded Structural Hollow Sections of Non-Alloy and Fine Grain Steel.  
**SIZE RANGE** : CHS: Size 21.3-219.1 mm & Thickness 2.00-8.20 mm, SHS: Size 16X16-150X150 mm; RHS: Size 30X20-200X100 mm & Thickness 1.00-8.50 mm  
**TOLERANCES** :

Circular Section - Tolerances on dimensions	Square/Rectangular Section - Tolerances on dimensions
<p><u>Characteristics / Tolerances</u></p> <p>External Dimensions (D) : ±1%, with a minimum of ±0.5 mm</p> <p>Thickness (T) : -10% (+ve tolerance limited by mass tolerance)</p> <p>Out-of-roundness : 2% for hollow sections having d/t ≤ 100</p> <p>Straightness (e) : 0.20% of total length and 3 mm over any 1 m length</p> <p>Mass per unit length : ± 6% on individual delivered lengths</p>	<p><u>Characteristics / Tolerances</u></p> <p>External Dimensions (H/B) : For H, B &lt; 100 ±1%, with a minimum of ±0.5 mm; 100 ≤ H, B ≤ 200 : ± 0.8%;</p> <p>Thickness (T) : -10% (+ve tolerance limited by mass tolerance)</p> <p>Concavity/convexity (x1/x2) : Max. 1%</p> <p>External Corner Profile (R) : 3.0T max</p> <p>Squareness of side (θ) : 90° ± 1° ; Twist (v) : 2mm plus 0.5mm/m length</p> <p>Straightness (e) : 0.20% of total length and 3 mm over any 1 m length</p> <p>Mass per unit length : ± 6% on individual delivered lengths</p>

STEEL GRADE	CHEMICAL COMPOSITION															MECHANICAL PROPERTIES								
	C	Si	Mn	P	S	Nb	V	Al (t)	Ti	Cr	Ni	Mo	Cu	N	CEV	YS Min	UTS			EI Min	MIN IMPACT ENERGY			
	Max	Max	Max	Max	Max	Max	Max	Min	Max	Max	Max	Max	Max	Max	Max	t ≤ 16mm	t < 3mm	3 ≤ t ≤ 40mm m	t ≤ 40mm	-50°C	-20°C	0°C	20°C	
	%															MPa			%	Joule				
S235 JRH	0.170	--	1.400	0.040	0.040	--	--	--	--	--	--	--	--	0.009	0.370	235	360-510	360-510	26	--	--	--	27	
S275 JOH	0.200	--	1.500	0.035	0.035	--	--	--	--	--	--	--	--	0.009	0.410	275	430-580	410-560	23	--	--	27	--	
S275 J2H	0.200	--	1.500	0.030	0.030	--	--	--	--	--	--	--	--	0.410	--					27	--	--		
S355 JOH	0.220	0.550	1.600	0.035	0.035	--	--	--	--	--	--	--	--	0.009	0.450	355	510-680	470-630	22	--	--	27	--	
S355 J2H	0.220	0.550	1.600	0.030	0.030	--	--	--	--	--	--	--	--	0.450	--					27	--	--		
S355 K2H	0.220	0.550	1.600	0.030	0.030	--	--	--	--	--	--	--	--	0.450	--					40	--	--		
S275NH	0.200	0.400	0.50-1.40	0.035	0.030	0.050	0.080	0.020	0.030	0.300	0.300	0.100	0.350	0.015	0.400	275	370-510		24	--	40	--	--	
S275NLH	0.200	0.400	0.50-1.40	0.030	0.025	0.050	0.080	0.020	0.030	0.300	0.300	0.100	0.350	0.015	0.400					27	--	--	--	
S355NH	0.200	0.500	0.90-1.65	0.035	0.030	0.050	0.120	0.020	0.030	0.300	0.500	0.100	0.350	0.020	0.430	355	470-630		22	--	40	--	--	
S355NLH	0.180	0.500	0.90-1.65	0.030	0.025	0.050	0.120	0.020	0.030	0.300	0.500	0.100	0.350	0.020	0.430					27	--	--	--	
S420NH	0.220	0.600	1.00-1.70	0.035	0.030	0.050	0.200	0.020	0.030	0.300	0.800	0.100	0.700	0.025	0.500	420	520-680		19	--	40	--	--	
S420NLH	0.220	0.600	1.00-1.70	0.030	0.025	0.050	0.200	0.020	0.030	0.300	0.800	0.100	0.700	0.025	0.500					27	--	--	--	
S460NH	0.220	0.600	1.00-1.70	0.035	0.030	0.050	0.200	0.020	0.030	0.300	0.800	0.100	0.700	0.025	0.530	460	540-720		17	--	40	--	--	
S460NLH	0.220	0.600	1.00-1.70	0.030	0.025	0.050	0.200	0.020	0.030	0.300	0.800	0.100	0.700	0.025	0.530					27	--	--	--	

**ON-LINE NDT** : Full body for NPS 1/2" to 4" and Weld Seam for NPS 3" to 8" tested by Eddy Current Test Machine

**WORKMANSHIP** : All Sections are finished with Bare, Black Lacquer Coated or Galvanized (EN 10240 / EN ISO 1461)

**MARKING** : Each Pipe shall be stencilled as per EN 10210 / Client Requirement: "TIGER/MADE IN UAE EN 10210 GRADE ----- / SIZE---/LENGTH---"

**Value Addition:** We are limiting the out-of-roundness for CHS sections upto 0.75%D. For SHS/RHS sections, Side tolerances ±0.5%, Concavity/convexity 0.50mm max, External corner profile 2T average, Twist 2mm/6mtr max and Straightness 1 mm per meter