

## Declaration of Performance (according to Regulation EU No 305/2011)

Unique ID code: TST Celsius420NH [Grade S420NH / 1.8750]

Harmonised standard: EN 10210-1:2006 - Hot finished structural hollow sections of non-alloy and fine grain steels - Part 1: Technical delivery conditions (issued on the Official Journal of the European Union on 01/02/2007)

Intended use: To be used in metal structures or in composite metal and concrete structures. This product is supplied with a specific inspection document 3.1 (according to EN 10204) that includes the full length non-destructive testing of the weld (as defined in table 2 of EN 10210-1). This product is suitable for being used as constituent product of a steel structure according to EN 1090. Table 1 of EN 1090-2:2018 requires a 3.1 inspection document for structural steel above S275.

Manufacturer: TATA STEEL UK LIMITED  
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System of AVCP: System of assessment and verification of constancy of performance of the product  
System 2+ (FPC Certificate No: 1370-CPR-1705  
Corby and 1370-CPR-1706 Hartlepool)

Notified body: Notified body No. 1370  
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Date: 01/11/2019

Table 1 – Essential characteristics and declared performances

Essential characteristic	Performance		Harmonised technical specification	
	Nominal thickness (mm)	Values Min (MPa)		
Yield strength	≤ 16	420	EN 10210-1 2006	
	> 16 ≤ 40	400		
	> 40	390		
Tensile strength	Nominal thickness (mm)	Values (MPa)	EN 10210-1 2006	
	≤ 65	min		
	max	680		
Elongation	Nominal thickness (mm)	Values min (%)	EN 10210-1 2006	
	≤ 65	19		
	17			
Impact strength (longitudinal)	Grade	Impact Value min, average (J) at Test Temp (°C)	EN 10210-1 2006	
	NH	40J at - 20°C*		
Weldability (CEV)	Nominal thickness (mm)	Values max (%)	EN 10210-1 2006	
	≤ 16	0.45		
	> 16	0.45		
Durability	Nominal thickness (mm)	Composition (cast) (max. unless otherwise shown)	EN 10210-1 2006	
		C		0.22
		Si		0.14 – 0.25
		Mn		1.00 – 1.70
		P		0.035
		S		0.030
		Nb		0.050
		V		0.20
		Al		0.020 min.
		Ti		0.03
Tolerances on dimensions and shape	Round, square, rectangular and elliptical hollow sections	In accordance with EN 10210-2: 2006	EN 10210-1 2006	

Notes:  
\* Value for 10 x 10mm specimen; 10 x 7.5mm specimen = 30J; 10 x 5mm specimen = 20J  
\* GF – Fully killed fine grain steel containing nitrogen binding elements

CE

1370

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EN 10210-1: 2006

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**Performance declared for the following essential characteristics (see Table 1):**  
Yield strength  
Tensile strength  
Elongation  
Impact strength  
Weldability  
Durability

**Tolerances on dimensions and shape**

**Dangerous Substances: No Performance Determined (NPD)**