TATA STEEL

Declaration of Performance

(according to Regulation EU No 305/2011)

Unique ID code TSNT TT460MH [Grade S460MH / 1.8849]

Harmonised standard EN 10219-1:2006 - Cold formed welded 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 10219-1). 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 NEDERLAND TUBES BV

Registered in Netherlands No. 20022812

Registered office: Souvereinstraat 35, Oosterhout,

4903 RH. Netherlands

Website: www.tatasteeleurope.com

System of AVCP System of assessment and verification of constancy

of performance of the product System 2+ (FPC Certificate No: 2814/CPR/RQA2007001/A)

Notified body No. 0343

LRQA Nederland B.V. George Hintzenweg 77 3068 AX Rotterdam

Netherlands

DocuSigned by:

-BBAC84320D6F4EC..

Jacob Gerkema Managing Director Tata Steel Nederland Tubes B.V. Souvereinstraat 35, Oosterhout, 4903 RH Netherlands Date 01/04/2024

Harmonised Essential Performance technical characteristic specification Nominal Value thickness min (MPa) Yield strength (mm) 460 ≤ 16 Nominal Values Tensile thickness (MPa strength (mm) min max 530 ≤ 16 720 Nominal Value thickness min (%) Elongation (mm) long. ≤ 16 (15 where Table B.5, Note a applies) Nom. Impact Value Impact Grade Thk min. average (J) strength at Test Temp (°C) (mm) (longitudinal) MH ≤ 16 40J at - 20°C Nominal Value thickness Weldability max (%) (CEV) (mm) ≤ 16 0.46 EN 10219-1: Nominal Composition (cast) thickness (max. unless otherwise shown) 2006 (mm) C: 0.16 V: 0.12 Al: 0.020 min. Si: 0.60 Mn: 1.70 Ti: 0.050 P: 0.035 Ni: 0.30 Durability ≤ 16 S: 0.030 Mo: 0.20 Nb: 0.050 N: 0.025 GF deoxidation (a) Durability is also dependent on any method of protection subsequently applied and the type and thickness of the coating Rectangular sections Circular sections H.B < 0.5% dimensions 100 min. = 0.25 mm (b)mm H.B ≤ ± 0.5% 200 0.4% (b) min.= ± 0.25 mm $max.= \pm 5 mm (b)$ Outside mm H,B > 200 0.3% (b) mm EN 10219-2 (c) EN 10219-2 (c) Thickness Out-ofroundness (for Not applicable 1% (b) D/T < 100) Tolerances or 0.4 % dimensions Concavity/ Not applicable min. = 0.25 mm (b) and shape convexity Squareness of $90^{\circ} \pm 0.5^{\circ}$ (b) Not applicable External corner profile 2T ± 0.2T (or 1.8T Γ ≤ 6.0 to 2.2T) (b) 6.0 < T 2.5T ± 0.25T (or Not applicable ≤10.0 2.25T to 2.75T) (b) 3T ± 0.3T (or 2.7T 10.0 to 3.3T) (b) Twist EN 10219-2 (c) Not applicable Straightness EN 10219-2 (c) EN 10219-2 (c) Mass per unit EN 10219-2 (c) EN 10219-2 (c) length EN 10219-2 (c) EN 10219-2 (c) Lenath

Table 1 - Essential characteristics and declared performances

Notes:

(a) GF – Fully killed steel containing nitrogen binding elements

(b) The declared tolerance is half of the maximum allowed by EN 10219-2:2006

(c) The declared tolerance is the maximum allowed by EN 10219-2:2006





0343

TATA STEEL NEDERLAND TUBES BV Registered in Netherlands No. 20022812 Registered office: Souvereinstraat 35, Oosterhout, 4903 RH, Netherlands

24

TSNT TT460MH [Grade S460MH / 1.8849]

EN 10219-1:2006

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 10219-1). 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.

Performance declared for the following essential characteristics:

Yield strength: 460 MPa
Tensile strength: 530 – 720 MPa
Elongation: 17% (15% where Table B.5.a applies)
Impact strength: 40J at - 20°C
Weldability (CEV): 0.46%

Durability: See Declaration of Performance **Tolerances on dimensions and shape:** See Declaration of

Performance

Dangerous Substances: No Performance Determined (NPD)

TATA STEEL

Declaration of Performance

(according to The Construction Products (Amendment etc.) (EU Exit) Regulations SI 2020-1359)

Unique ID code TSNT TT460MH [Grade S460MH / 1.8849]

Designated standard EN 10219-1:2006 - Cold formed welded 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 10219-1). 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 NEDERLAND TUBES BV

Registered in Netherlands No. 20022812

Registered office: Souvereinstraat 35, Oosterhout,

4903 RH, Netherlands

Website: www.tatasteeleurope.com

System of AVCP System of assessment and verification of constancy

> of performance of the product System 2+ (FPC Certificate No: 0038/CPR/RQA20070001/A)

> > Date 01/04/2024

Approved body No. 0038 Approved body

LRQA Verification Ltd. 1 Trinity Park, Bickenhill Lane

Solihull, West Midlands

Birmingham

B37 7ES

United Kingdom

DocuSigned by:

BBAC84320D6F4EC..

Jacob Gerkema Managing Director Tata Steel Nederland Tubes B.V. Souvereinstraat 35. Oosterhout, 4903 RH Netherlands

Table 1 Essential characteristics and declared performances

Tal	ole 1 – E	ssential	characteristics and	declared performan	ces
Essential characteristic			Performance		Harmonised technical specification
Yield strength	Nominal thickness (mm) ≤ 16		Value min (MPa) 460		
Tensile strength	Nominal thickness (mm)		Values (MPa) min max		
suerigui	≤ 16 Nominal		530 Valu	720	
Elongation	thickness (mm)		min (%) long. 17		
	≤ 16		(15 where Table B.5, Note a applies)		
Impact strength	Grade Nom. Thk. (mm)		Impact Value min. average (J) at Test Temp (°C)		
(longitudinal)	MH ≤ 16		40J at - 20°C		
Weldability (CEV)	Nominal thickness (mm)		Value max (%)		
	≤ 16		0.46		EN 10219-1:
Durability	Nominal thickness (mm)		Composition (cast) (max. unless otherwise shown)		2006
	≤ 16		C: 0.16 Si: 0.60 Mn: 1.70 P: 0.035 S: 0.030 Nb: 0.050	V: 0.12 Al: 0.020 min. Ti: 0.050 Ni: 0.30 Mo: 0.20 N: 0.025	
			GF deoxidation (a)		
	Durability is also dependent on any method of protection subsequently applied and the type and thickness of the coating				
Tolerances on dimensions and shape			ular sections	Circular sections	
	Outside dimensions	H,B < 100 mm	0.5% min. = 0.25 mm <i>(b)</i>	_	
		H,B ≤ 200 mm	0.4% (b)	± 0.5% min.= ± 0.25 mm max.= ± 5 mm <i>(b)</i>	
		H,B > 200 mm	0.3% <i>(b)</i>		
	Thickness		EN 10219-2 (c)	EN 10219-2 (c)	
	Out-of- roundness (for D/T < 100)		Not applicable	1% <i>(b)</i>	
	Concavity/ convexity		0.4 % min. = 0.25 mm <i>(b)</i>	Not applicable	
	Squareness of side		90° ± 0.5° (b)	Not applicable	
	External corner profile	T ≤ 6.0 6.0 < T ≤10.0 T > 10.0	2T ± 0.2T (or 1.8T to 2.2T) (b) 2.5T ± 0.25T (or 2.25T to 2.75T) (b) 3T ± 0.3T (or 2.7T to 3.3T) (b)	Not applicable	
	Twist		EN 10219-2 (c)	Not applicable	1
	Straightness		EN 10219-2 (c)	EN 10219-2 (c)	1
	Mass per unit length		EN 10219-2 (c)	EN 10219-2 (c)	
Length EN 10219-2 (c) EN 10219-2 (c) Notes:					1
(a) CF Fully k	مغم اممال:			alamanta	



(a) GF – Fully killed steel containing nitrogen binding elements

(b) The declared tolerance is half of the maximum allowed by EN 10219-2:2006

c) The declared tolerance is the maximum allowed by EN 10219-2:2006



UK

TATA STEEL NEDERLAND TUBES BV Registered in Netherlands No. 20022812 Registered office: Souvereinstraat 35, Oosterhout, 4903 RH, Netherlands

24

TSNT TT460MH [Grade S460MH / 1.8849]

EN 10219-1:2006

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 10219-1). 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.

Performance declared for the following essential characteristics:

Yield strength: 460 MPa Tensile strength: 530 - 720 Mpa

Elongation: 17% (15% where Table B.5.a applies)

Impact strength: 40J at - 20°C Weldability (CEV): 0.46% **Durability:** See Declaration of Performance

Tolerances on dimensions and shape: See Declaration of

Performance

Dangerous Substances: No Performance Determined (NPD)