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Purchasing guidelines for: EN 12810/11 System Scaffold

NASC
NATIONAL ACCESS & SCAFFOLDING CONFEDERATION

INTRODUCTION

The purpose of this guidance note is to detail best purchasing practice for EN 12810/11 System Scaffold. If the system is sourced from an NASC compliant company, as demonstrated by the NASC CoP assessment report, then no further action is required, other than a visual inspection of your supplier's certificate of product compliance with the NASC CoP product audit (a list of suppliers and products may be found on the NASC website). If the system is not sourced from an NASC compliant company, then the guidelines below should be followed.

APPROVAL DATA

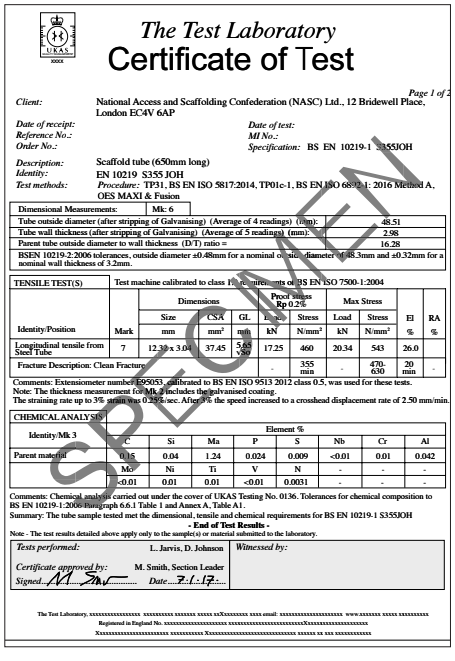
The approval data is proof that the full system has been tested and analysed to the required European standards, and should consist of:

- A full test report and structural calculations by an external body to EN 12810/12811.
- Examples of external test authorities are, Dibt, TUV, SP, NF, Oxford Brookes, Testconsult, Slender Structures, S-Mech, James Crosbie Associates, Raprig Design.

MATERIAL CERTIFICATION

Test data is the criteria to which the product is independently tested as seen on the test report example opposite, & should consist of:

- Annual testing on System Scaffold key components for all suppliers/manufacturers, [standards, ledgers, transoms, steel decks & board bearers] as follows:
- Chemical analysis*
- Mechanical analysis*
- Outside diameter & wall thickness dimension*
- Weld testing to ISO 5817:2014 min level D & should take into account the following:
  - Visual & MPI of 4 welds.
  - 2 x macro weld inspections.
  - Cross weld or bend hardness survey.



The Test Laboratory
Certificate of Test

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Client: National Access and Scaffolding Confederation (NASC) Ltd., 12 Bridewell Place, London EC4V 6AP

Date of receipt: — *Date of test:*
Reference No.: — *Ml No.:*
Order No.: — *Specification:* BS EN 10219-1 S355JOH

Description: Scaffold tube (650mm long)
Identity: EN 10219 S355 JOH
Test methods: *Procedure:* TP31, BS EN ISO 5817:2014, TP01c-1, BS EN ISO 6892-1: 2016 Method A, OES MAXI & Fusion

Dimensional Measurements:	Mk: 6
Tube outside diameter (after stripping of Galvanising) (Average of 4 readings) (mm):	48.51
Tube wall thickness (after stripping of Galvanising) (Average of 5 readings) (mm):	2.98
Parent tube outside diameter to wall thickness (D/T) ratio =	16.28

BSEN 10219-2:2006 tolerances, outside diameter ±0.48mm for a nominal outside diameter of 48.3mm and ±0.32mm for a nominal wall thickness of 3.2mm.

TENSILE TEST(S) — Test machine calibrated to class 1 requirements of BS EN ISO 7500-1:2004

Identity/Position	Mark	Dimensions Size mm	CSA mm²	GL mm	Proof Stress Rp 0.2% Load kN	Stress N/mm²	Max Stress Load kN	Stress N/mm²	El %	RA %
Longitudinal tensile from Steel Tube	7	12.39 x 3.04	37.45	5.65 √S0	17.25	460	20.34	543	26.0	
Fracture Description: Clean Fracture					-	355 min	-	470-630	20 min	-

Comments: Extensiometer number E95053, calibrated to BS EN ISO 9513 2012 class 0.5, was used for these tests.
Note: The thickness measurement for Mk 3 includes the galvanised coating.
The straining rate up to 3% strain was 0.25%/sec. After 3% the speed increased to a crosshead displacement rate of 2.50 mm/min.

CHEMICAL ANALYSIS

Identity/Mk 3	Element %							
	C	Si	Ma	P	S	Nb	Cr	Al
Parent material	0.15	0.04	1.24	0.024	0.009	<0.01	0.01	0.042
	Mo	Ni	Ti	V	N	-	-	-
	<0.01	0.01	0.01	<0.01	0.0031	-	-	-

Comments: Chemical analysis carried out under the cover of UKAS Testing No. 0136. Tolerances for chemical composition to BS EN 10219-1:2006+A1:paragraph 6.6.1 Table 1 and Annex A, Table A1.
Summary: The tube sample tested met the dimensional, tensile and chemical requirements for BS EN 10219-1 S355JOH
- End of Test Results -
Note - The test results detailed above apply only to the sample(s) or material submitted to the laboratory.

Tests performed: L. Jarvis, D. Johnson — *Witnessed by:*
Certificate approved by: M. Smith, Section Leader
Signed: ..... *Date:* 7/1/17

SPECIMEN

The Test Laboratory, xxxxxxxxxxxxxxxx xxxxxxxxxx xxxxxxx xxxxx xxXxxxxxxxx xxxx email: xxxxxxxxxxxxxxxxxxxx www.xxxxxxx xxxxx xxxxxxxxx
Registered in England No. xxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxXxxxxxxxxxxxxxxxxxxxx
Xxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxx Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxx xx xxx xxxxxxxxxx

Annual tests must be by a UKAS accredited facility or TUV/SGS.

* If a current internationally recognised system approval is in place, [eg Dibt, NF schemes], then chemical, mechanical & dimensional annual testing is not required.

** If a current international welding approval is in place, [Eg, ISO 3834-2, or EN 1090-1/2] then weld testing to ISO 5817:2014 is not required.

MATERIAL CERTIFICATION

You need to check that a material test certificate from the manufacturer/supplier are available for all keysystem components. Below is an example of a material test certificate, which will detail the following information:

- The British or European specification/standard, eg EN 10219-1 S355 JOH, S460 MH, S275 JRH.
- The specification/standard should be clearly identified on the test certificate.
- The test certificate will detail that it is to the requirements of: EN 10204:2004 section 3.1.

Contact No:

MILL TEST CERTIFICATE

Certificate No: XXXXX

Buyer: Buyer s name here

EN 10204-3.1

Description: SCAFFOLDING TUBE

STANDARD:EN10219-1 DATE: XXXXXXX

ITEM	GRADE	SIZE (mm)			WEIGHT	HEAT NO	Chemical composition (%)						Mechanical property			Technical property			
							C	Si	Mn	P	S	AL	Tensile (N/mm^2)	Yield (N/mm^2)	Elongat-ion %	Impact (J)			Bend
																20 C	0 C	-20 C	
1	S355JOH	48.3*3.2*6400			743.556	L921182	0.17	0.02	0.16	0.018	0.01	0.029	565	440	37		62		Qualified
2	S355JOH	48.3*3.2*6400			750.505	L921186	0.19	0.02	1.170	0.016	0.012	0.024	575	456	34.0		60		Qualified
3	S355JOH	48.3*3.2*4870			249.586	L921188	0.17	0.01	1.140	0.017	0.011	0.026	579	421	30.0		65		Qualified
4	S355JOH	48.3*3.2*3960			149.632	L921183	0.16	0.02	1.140	0.013	0.007	0.024	564	433	32.5		60		Qualified
5	S355JOH	48.3*3.2*3050			106.636	L921183	0.16	0.02	1.140	0.013	0.007	0.024	564	433	32.5		60		Qualified
6	S355JOH	48.3*3.2*2430			91.819	L921183	0.16	0.02	1.140	0.013	0.007	0.024	564	433	32.5		60		Qualified
7	S355JOH	48.3*3.2*1520			78.89	L921188	0.17	0.01	1.140	0.017	0.011	0.026	579	421	30.0		65		Qualified
		TOTAL			2170.62														

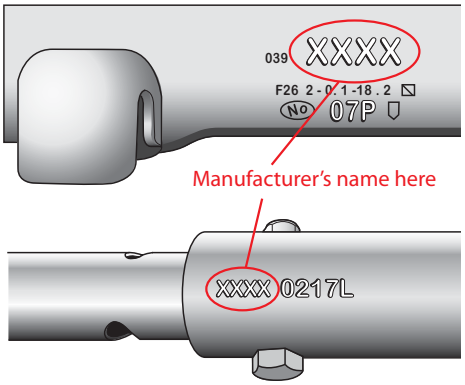
Issuer: Signed By: DATE:

XXXXXX PIPE & TUBE CO
XXXXX X XXXXX XXX
XXXXX XXX XXXX X

MARKING REQUIREMENTS

You need to check that each system component is permanently marked on the surface with the following information:

- Year of manufacture.
- Registered trade mark, or the manufacturer's name.
- NASC member companies name, [when the original manufacturer is not an NASC member].
  Note: Marking location can vary.



USER GUIDE/PRODUCT MANUAL

Is there a system specific user guide/product manual available which in includes the following information:

- Instructions for the sequence of erection/dismantle.
- The layout of each system configuration.
- Instructions for tying, including maximum leg load.
- Statement of limitation, [eg wind pressure/snow loads].
- Specification of items which are not purpose designed.
- Loads imposed on the façade and foundation.
- Indication that damaged components may not be used.
- Instructions for storage, maintenance & repair, if appropriate.
- How to obtain further technical information.