

TEST REPORT

No. : TJN1802002236ML
 Date : Mar 07, 2018
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CUSTOMER NAME: TIANJIN WELLMADE SCAFFOLD CO., LTD.
 ADDRESS: NO.1 GUANGYUAN ROAD, TANGGUANTUN INDUSTRIAL ZONE, JINGHAI, TIANJIN, China

Sample Name : Swivel Coupler
 Product Specification : QD48.3*OD48.3mm
 Manufacturer : Tianjin Wellmade Scaffold Co., Ltd

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Quantity : 1 group
 Date of Receipt : Feb 11, 2018
 Testing Start Date : Feb 11, 2018
 Testing End Date : Mar 07, 2018

Test result(s) : For further details, please refer to the following details (Unless otherwise stated the result in this test report refer only to the item specified)

Signed for SGS-CTE Standards Technical Services (China) Co., Ltd

Habe He
 Authorized signatory



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1. Test Item: Slipping force, Failure force and Indentation

Test method: BS 1462-2-3:2011 metal scaffolding-Part 2:Tubular (tube and coupler) scaffolds-section 3: specification for steel and aluminium couplers, fitting and accessories EN 74-1:2005 Couplers, spigot pins and base plates for use in tube work and scaffolds - Part 1: Couplers for tubes - Requirements and test procedures

Test Results:

Test Clause	Test Item	Test Requirement (Swivel coupler, Class A)	Test Result	Conclusion
7.2.1	Slipping force	$\Delta_{s1} > 7mm, F_{slip} > 7.0kN$	$\Delta_{s1} = 7.7mm, F_{slip} = 7.2kN$	Pass
		$1mm \leq \Delta_{s2} \leq 2mm, F_{slip} \geq 10.0kN$	$\Delta_{s2} = 1.2mm, F_{slip} = 10.2kN$	Pass
7.2.2	Failure force	$F_{fail} > 19.0kN$	$F_{fail} = 22.7kN$	Pass
7.5	Indentation	$\Delta_{i1} < 1.5mm, \Delta_{i2} < 1.5mm$	$\Delta_{i1} = 0.7mm, \Delta_{i2} = 1.5mm$	Pass

- Note:
- F_{slip}, F_{fail} the 5% quantile of the 5% level of confidence.
 - $\gamma_{RF} = 1.25$ according to EN 101.
 - Specification of tube for slipping force: Steel tube of $\phi 48.3mm \times 3.2mm$ (wall thickness)
 Specification of tube for indentation: Steel tube of $\phi 48.3mm \times 2.8mm$ (wall thickness)
 Specification of steel bar for failure force: steel bar of $\phi 48.3mm$
 - Please see Annex A for details of test results.
 - The testing item was subcontracted.



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Annex A Details of test results

1.1 Slipping force

Sample No.	F_s (kN, $\Delta_{s1} > 7mm$)	F_s (kN, $1mm \leq \Delta_{s2} \leq 2mm$)
1 [#]	12.50	15.50
2 [#]	12.27	15.20
3 [#]	12.06	13.88
4 [#]	12.62	15.10
5 [#]	12.20	15.10
6 [#]	11.21	12.23
7 [#]	12.78	13.48
8 [#]	13.33	15.10
9 [#]	11.18	15.10
F_{slip}	10.6	10.3

Note: In accordance with EN 74-1:2005, the test can be ended when the test load reached twice the specified F_s given in Table 8 of EN 74-1:2005. The result of F_{slip} is the statistical result of the other 4 specimens.

1.2 Failure force

Sample No.	F_{fail} (kN)
11 [#]	43.01
12 [#]	43.01
13 [#]	41.32
14 [#]	41.50
F_{fail}/R_2	25.7



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1.3 Indentation

Sample No.	Δ_{i1} (mm, $F_{i1} < 7kN$)
10 [#]	0.93
17 [#]	0.93
18 [#]	0.93
19 [#]	0.43
20 [#]	0.72

Sample photos:



2. Test Item: Coating Thickness Test

Test Method: ISO 1463:2003

Sample No.	Result (μm)					Conc.	Note
	1	2	3	4	5		
1	76.7	74.3	66.7	57.8	71.1	+15	Pass Fig.1
2	67.2	66.8	66.1	69.5	66.1	+15	Pass Fig.2
3	82.3	101.0	104.3	104.3	99.2	+15	Pass Fig.3

Note: The results comply with the requirement of EN 74-1:2005.



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***** End of report*****



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