

TEST REPORT

No. : SHIN2007040543CM

Date : Jul 23, 2020

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scan to see the report



SHIN2007040543CM

CUSTOMER NAME: NANJING TUOPENG CONSTRUCTION TECHNOLOGY CO., LTD.
ADDRESS: NO.21, CHENLV ROAD, XIONGZHOU STREET, LUHE DISTRICT,
NANJING, JIANGSU, CHINA

Sample Name : DROP FORGED DOUBLE COUPLER
Product Specification : 48.3 x 48.3mm
Material and Mark : Q235

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.

Test Required : Please see the next page(s)
Ref. Standard : Please see the next page(s)
Date of Receipt : Jul 07, 2020
Testing Start Date : Jul 07, 2020
Testing End Date : Jul 23, 2020
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Service (Shanghai)Co., Ltd.

Tiffany Liu
Authorized signatory



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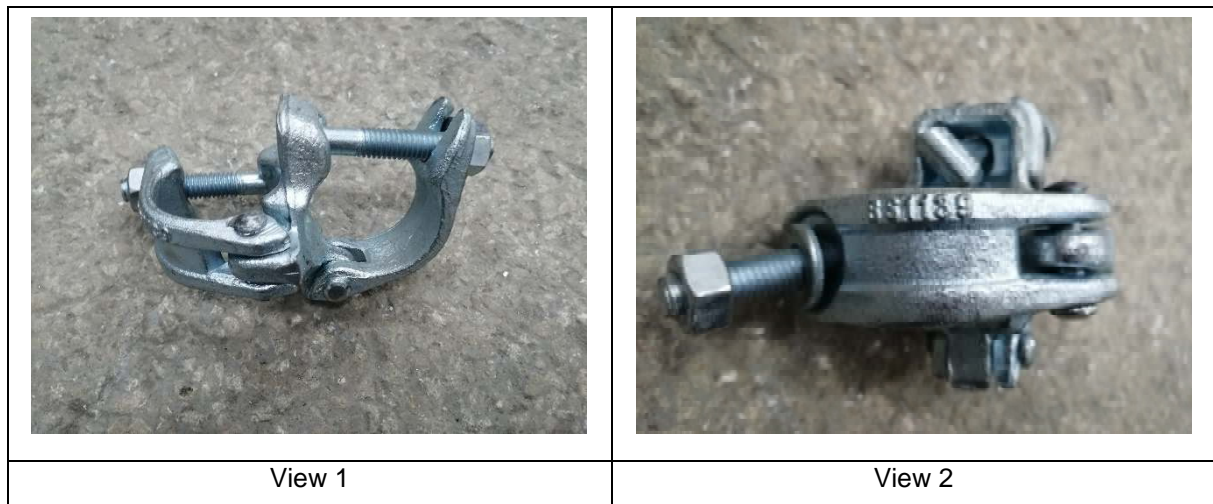
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Summary of Results:

No.	Test Item	Test Method	Result	Conclusion
1	Slipping force	EN 74-1:2005 clause 7.2.1	See result	Pass
2	Failure force	EN 74-1:2005 clause 7.2.2	See result	Pass
3	Pull-apart force	EN 74-1:2005 clause 7.3	See result	Pass
4	Rotational moment and the stiffness	EN 74-1:2005 clause 7.4.2	See result	Pass
5	Indentation	EN 74-1:2005 clause 7.5	See result	Pass

Note: Pass : Meet the requirements;
 Fail : Does not meet the requirements;
 / : Not Apply to the judgment.

Original Sample Photos:



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Test Item: Slipping force, Failure force, Pull-apart force, Rotational moment and the stiffness and Indentation

Test Method: EN 74-1:2005

Sample Description: See photos

Test Condition:

Specimen: Right angle coupler, Class B, 30pcs

Test Results:

Test Clause	Test Item	Test Requirement (Right angle coupler, Class B)	Test Result	Conclusion
7.2.1	Slipping force	$\Delta_1 \leq 7\text{mm}$, $F_{s,5\%} \geq 10.0\text{kN}$	$\Delta_1 = 7\text{mm}$, $F_{s,5\%} = 17.5\text{kN}$	Pass
		$1\text{mm} \leq \Delta_2 \leq 2\text{mm}$, $F_{s,5\%} \geq 15.0\text{kN}$	$1\text{mm} \leq \Delta_2 \leq 2\text{mm}$, $F_{s,5\%} = 17.0\text{kN}$	
7.2.2	Failure force	$F_{f,5\%}/\gamma R_2 \geq 30.0\text{kN}$	$F_{f,5\%}/\gamma R_2 = 50.6\text{kN}$	Pass
7.3	Pull-apart force	$F_{p,5\%}/\gamma R_2 \geq 30.0\text{kN}$	$F_{p,5\%}/\gamma R_2 = 48.7\text{kN}$	Pass
7.4.2	Rotational moment and the stiffness	$M_T = \pm 0.13\text{kNm}$, $C_\varphi \geq 7.5\text{kNm/rad}$	$M_T = \pm 0.13\text{kNm}$, $C_\varphi = 51.5\text{kNm/rad}$	Pass
		$1^\circ \leq \theta \leq 2^\circ$, $M_{T,5\%} \geq 0.13\text{kNm}$	$1^\circ \leq \theta \leq 2^\circ$, $M_{T,5\%} = 0.28\text{kNm}$	
7.5	Indentation	$F = 10\text{kN}$, $\Delta_{10} \leq 1.5\text{mm}$	$F = 10\text{kN}$, $\Delta_{10} < 1.5\text{mm}$	Pass

Note:

- $F_{s,5\%}$, $F_{f,5\%}$, $F_{p,5\%}$, $M_{T,5\%}$: the 5% quantile for the 75% level of confidence.
- $\gamma R_2 = 1.25$ according to EN 74-1.
- Specification of tube for slipping force, rotational moment and the stiffness: Steel tube of $\Phi 48.3\text{mm} \times 3.2\text{mm}$ (wall thickness).
Specification of steel bar for failure force and pull-apart force: steel bar of $\Phi 48.3\text{mm}$.
Specification of tube for indentation: Steel tube of $\Phi 48.3\text{mm} \times 2.8\text{mm}$ (wall thickness).
- Please see Annex A for details of test results.



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Annex A Details of test results

1. Slipping force

Sample No.	F_s (kN, $\Delta_1=7\text{mm}$)	F_s (kN, $1\text{mm}\leq\Delta_2\leq2\text{mm}$)
1	20.67	20.43
2	22.42	22.42
3	21.43	21.17
4	17.97	17.63
5	20.39	20.37
6	20.39	20.29
7	22.58	22.36
8	18.37	17.66
9	20.11	20.17
10	20.44	19.93
$F_{s,5\%}$	17.5	17.0

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 $F_{s,5\%}$ is the statistical result of the other 7 specimens.

2. Failure force

Sample No.	F_f (kN)
11	65.03
12	66.82
13	69.57
14	68.64
15	67.21
$F_{f,5\%}/\gamma R_2$	50.6



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3. Pull-apart force

Sample No.	F_P (kN)
16	63.41
17	61.68
18	63.33
19	62.59
20	62.17
$F_{p,5\%}/\sqrt{R2}$	48.7

4. Rotational moment and the stiffness

Sample No.	C_φ (kNm/rad, $M_T=\pm 0.13$ kNm)	M_T (kNm, $1^\circ \leq \theta \leq 2^\circ$)
21	51.42	0.38
22	53.26	0.41
23	56.00	0.36
24	44.58	0.32
25	54.12	0.45
-	$C_\varphi=51.5$	$M_{T,5\%}=0.28$

5. Indentation

Sample No.	Δ_{10} (mm, $F=10$ kN)
26	0.21
27	0.33
28	0.17
29	0.15
30	0.16

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



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