



TEST REPORT

No. : SHIN1907051496CM

Date : Aug 06, 2019

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Sample name: DROP FORGED SWIVEL COUPLER

Test Method: EN 74-1:2005

Sample Description: See photos

Test Condition:

Specimen: Swivel coupler, Class A, 20pcs

Test Results:

Test Clause	Test Item	Test Requirement (Swivel coupler, Class A)	Test Result	Conclusion
7.2.1	Slipping force	$\Delta_1 \leq 7\text{mm}$, $F_{s,5\%} \geq 7.0\text{kN}$	$\Delta_1 = 7\text{mm}$, $F_{s,5\%} = 12.4\text{kN}$	Pass
		$1\text{mm} \leq \Delta_2 \leq 2\text{mm}$, $F_{s,5\%} \geq 10.0\text{kN}$	See Annex A	
7.2.2	Failure force	$F_{r,5\%}/\gamma R2 \geq 14.0\text{kN}$	$F_{r,5\%}/\gamma R2 = 18.9\text{kN}$	Pass
7.5	Indentation	$F = 4.7\text{kN}$, $\Delta_{10} \leq 1.5\text{mm}$	$F = 4.7\text{kN}$, $\Delta_{10} < 1.5\text{mm}$	Pass

Note:

1. $F_{s,5\%}$, $F_{r,5\%}$: the 5% quantile for the 75% level of confidence.
2. $\gamma R2 = 1.25$ according to EN 74-1.
3. Specification of tube for slipping force: Steel tube of $\Phi 48.3\text{mm} \times 3.2\text{mm}$ (wall thickness)
Specification of steel bar for failure 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)
4. 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	15.06	$F_s=20.0\text{kN}$, $\Delta_2<1\text{mm}$
2	14.32	* $F_s=19.42\text{kN}$, $\Delta_2<1\text{mm}$
3	12.78	$F_s=20.0\text{kN}$, $\Delta_2<1\text{mm}$
4	13.17	* $F_s=19.60\text{kN}$, $\Delta_2<1\text{mm}$
5	14.01	$F_s=20.0\text{kN}$, $\Delta_2<1\text{mm}$
6	14.23	$F_s=20.0\text{kN}$, $\Delta_2<1\text{mm}$
7	13.69	$F_s=20.0\text{kN}$, $\Delta_2<1\text{mm}$
8	14.26	$F_s=20.0\text{kN}$, $\Delta_2<1\text{mm}$
9	14.17	$F_s=20.0\text{kN}$, $\Delta_2<1\text{mm}$
10	12.85	* $F_s=18.18\text{kN}$, $\Delta_2<1\text{mm}$
$F_{s,5\%}$	12.4	-

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; or test load reached a value after which the load cannot be usefully increased, such as sample 2[#], 4[#] and 10[#].

2. Failure force

Sample No.	F_f (kN)
11	26.85
12	28.71
13	25.99
14	25.92
15	25.48
$F_{f,5\%}/YR2$	18.9



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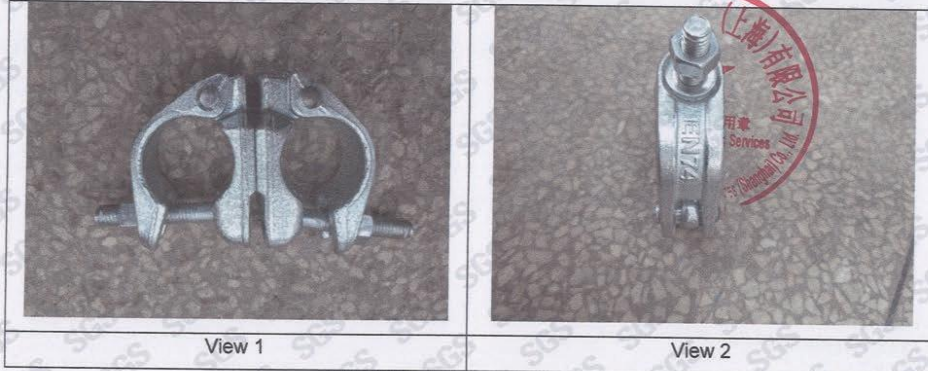
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3. Indentation

Sample No.	Δ_{10} (mm, F=4.7kN)
16	0.50
17	0.70
18	1.12
19	0.87
20	0.77

Sample Photos:



View 1

View 2

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

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