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TEST REPORT

(This Report is issued subject to the terms & conditions set out below)

Your Ref: MQ-96492 dated 17 December 2014 Our Ref: MM-44949/TKC/1 Date: 15 January 2015

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Subject : Testing of Right-angle Couplers submitted by Heiwagiken Co., Ltd on 09 January 2015.

Tested For : **HEIWAGIKEN CO., LTD**
13-21 Chikuchi-Machi,
Yahatanishi-Ku,
Kitakyushu City,
8060001 Japan
Attn: Ms. Li Meilan

Date and Place of Test : 12 January 2015 at Setsco Laboratory

Method of Test : SS 311 : 2005
- Annex C - Slip and Maximum Load Tests

Description of Sample : Six (06) pieces of Right-angle couplers (refer photograph 1) with marking "**14**" (refer photograph 2) and three (03) lengths of 500mm scaffold tubes were received.

Results : Slip and Maximum Load Test
The tested samples met the requirements of SS 311: 2005 Table 4 - Annex C specifications.
(Refer table and photographs 3 to 8 attached).


TAN KOK CHUAN
Testing Officer


CHENG KWANG MENG
Manager (Mechanical Testing)
Mechanical Technology Division

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Results:**Table: Slip and Maximum Load Test**

Sample Reference		Right-angle Coupler Sample Marking: <u>14</u>			SS 311 : 2005 (Table 4 - Annex C) Requirements
		Set 1	Set 2	Set 3	
Weight of sample (g)		706	705	705	-
Slippage Test (mm)	Position A	9	5	8	Shall not exceed 10mm at a tension load of 9.8kN
	Position B	10	9	9	
	Position C	8	4	8	
	Position D	7	8	7	
Maximum Load (kN)		20.3	23.7	21.3	Min. 14.7
Average Maximum Load (kN)		21.8			Min. 15.7

Note: The nuts were tightened by torque wrench to a torque of 34Nm for Slip test and 44Nm for Maximum load test as recommended in the SS 311 : 2005 Specification.

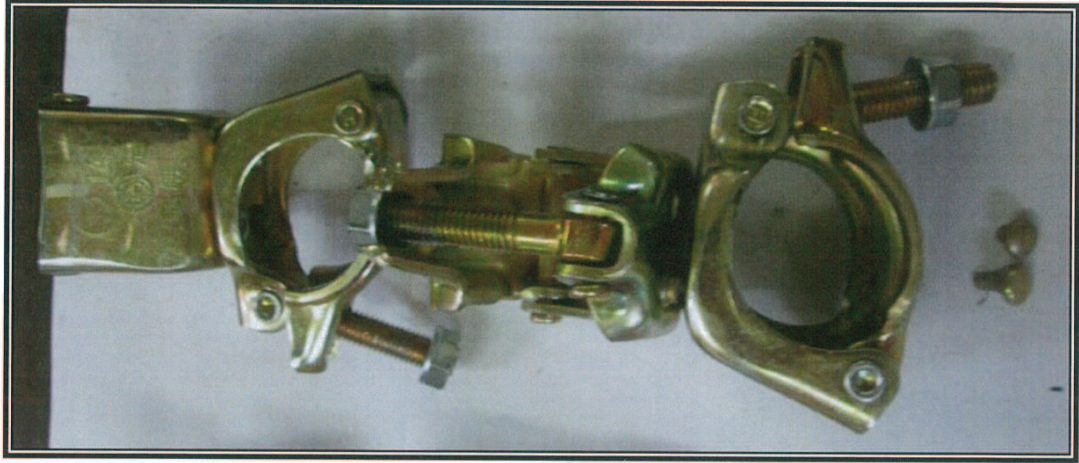


Photograph 1: Shows sample submitted



Photograph 2: Shows sample marking on the coupler (Closed up view)



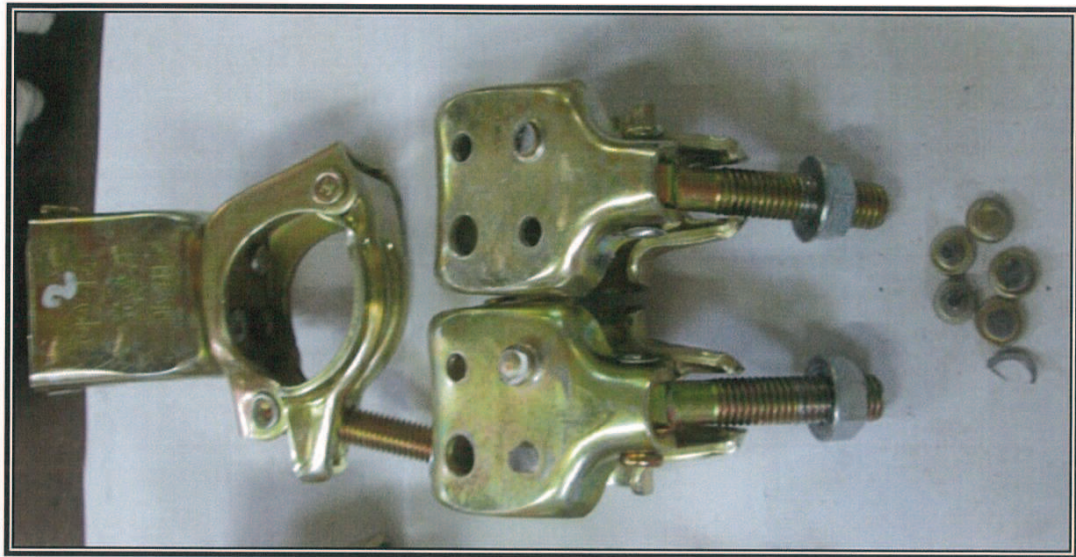
Photograph 3: Shows failure mode of the tested samples - Set 1



Photograph 4: Shows failure mode of the tested sample - Set 1

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Photograph 5: Shows failure mode of the tested sample - Set 2



Photograph 6: Shows failure mode of the tested sample - Set 2





Photograph 7: Shows failure mode of the tested sample - Set 3



Photograph 8: Shows failure mode of the tested sample - Set 3

