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Intertek Report No. GZ11080428-3R1

Superseded the report No. GZ11080428-3 dated on November 8, 2011

EVALUATION
OF
AHG2-5040-steel (A8112), Grade 2 Hinge
FOR
ANGEL METAL CO., LTD.
#1099, WORAM-DONG, DALSEO-GU, DAEGU, SOUTH KOREA

TEST STANDARD:

All tests were conducted in accordance with the client's test plan with reference to ANSI/BHMA A156.1:2006 American National Standard for Butts and Hinges.

TEST SAMPLES:

Sample identified as Model AHG2-5040-steel (A8112), 5.0"x4.0"x3.7mm, Grade 2, 2 Bearings steel Hinge.

Hinges were received in good condition on July 13, 2011, which manufactured by ANGEL METAL CO., LTD.

TEST DATES:

August 12, 2011 to October 28, 2011.

RESULTS:

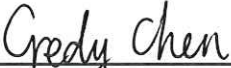
Product **COMPLIED WITH** ANSI/BHMA A156.1 grade 2 requirements.

The attached data are results of the product testing and evaluation.

Amendment:

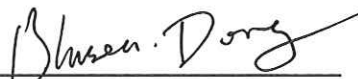
1. The original Report Reference No. GZ11080428-3 dated on November 8, 2011 was modified on August 31, 2012 to add the BHMA Numbers on the report.

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DATA SHEETS
ANSI/BHMA 156.1:2006
AMERICAN NATIONAL STANDARD FOR
BUTTS AND HINGES

Model: AHG2-5040-steel (A8112)
 Grade: Grade 2
 Hinge height: 5 Inch
 Door Weight: 175 lbs

5.10 Baseline Measurement (inches)

	Top	Center	Bottom
Vertical	0.008	0.010	0.010

Lateral	0.040	0.042	0.044
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Comments: _____

5.11 Overload Test Maximum all grades: .015 inches

Lateral shift: 0.008 inches Status

Compliant

5.12 Friction Test (lbf.)

Friction Requirements Maximum Resistance (lbf.)

Inches	3	3 1/2	4	4 1/2	5	6	8
Gr.1&2	N/A	0.50	0.625	0.75	0.88	1.15	1.50
Gr.3	0.50	0.625	1.00	1.50	1.75	2.00	N/A

	In	Out	Average	Status
Friction (lbf.)	0.63	0.68	0.66	Compliant

6.1 Cycle Test

Cycle requirements

Test door weight. 150 lbs.

Grade 1	Grade 2	Grade 3
2,500,000	1,500,000	350,000

Date	Cycle Count	Tech
2011-08-12	0	Blusea
2011-08-18	168,526	Blusea
2011-08-24	337,125	Blusea
2011-08-30	505,548	Blusea
2011-09-05	674,884	Blusea
2011-09-11	842,630	Blusea
2011-09-17	1,012,542	Blusea
2011-09-23	1,179,682	Blusea
2011-09-29	1,348,224	Blusea
2011-10-05	1,500,000	Blusea

Post Cycle Tests:

6.2 Hinge Pin Rise Test

Hinge pin rise requirements-Maximum all Grades 1/4 inches

Status

Pin rise inches

6.4 Vertical and Lateral Wear Test

Vertical wear requirements - Maximum (inches)

Grade 1	Grade 2	Grade 3
.020 inches	.030 inches	.105 inches

Vertical

Top Center Bottom

Post Test

Status

Total wear

Lateral wear requirements - Maximum all Grades .062 inches

Lateral

Top Center Bottom

Post Test

Status

Total wear

6.5 Overload Test

Overload requirements - Maximum all Grades .062 inches

Status

Lateral shift: inches

5.12 Friction Test (lbs.)

In	Out	Average	Status
0.60	0.62	0.61	Compliant

Product Photo



Product Drawing

