

Test Report

No.: SDHG1512020794FT-01

Date: Jun.30, 2016

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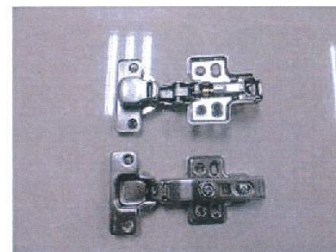
The following sample(s) was / were submitted and identified on behalf of the client as:

Sample Description : SUS304 STAINLESS STEEL CONCEALED HINGE
Style / Item No. : S30
Sample Receiving Date : Dec.04, 2015
Test Performing Date : Dec.04, 2015 to Jan.11, 2016

Test Result Summary

Test(s) Requested	Result(s)
Hinge durability test with reference to clause 6.3.7 of BS EN 15570:2008	PASS

Summary:
1. For further details, please refer to the following page(s).



TESTS AND RESULTS

Test Conducted:

BS EN 15570:2008 –Hardware for furniture — Strength and durability of hinges and their components — Hinges pivoting on a vertical axis (Level 3).

General Test Condition:

The following test program was conducted in a laboratory environment maintained at 15°C to 25°C and 50±5% RH. The sample was individually tested after conditioning in the test environment for at least 24 hours prior to conducting the test.

The complete detailed procedures may be found in the referenced specification and are only summarized herein. Unless otherwise specified, the tests are carried out in the following order on the same sample.

No. of Sample:

3 sets (Sample 1, 2 & 3). For more sample information and pictures, please refer to the following page.

Test	Test Description and Requirements	Test Results
6 Performance Requirements (Strength & Durability)		
General		
6.1	For the following tests, three sets of hinges shall be used as follows: The first set shall be used for the first test sequence specified in 6.2. The second set shall be used for the second test sequence specified in 6.3. The third set shall be used for the corrosion test specified in 6.4.	
6.2	Overload tests	
6.2.1	Vertical static overload Load the door with the mass specified. The mass shall be suspended 100 mm from the edge furthest from the hinge. Open and close the door 10 full cycles (back and forth) from a position 45° from fully closed to a position 10° from fully opened, up to a maximum of 135° from the fully closed position. Opening and closing can be done by hand using 3 s to 5 s for opening and 3 s to 5 s for closing. Carry out inspection and assessment according to 4.6 without the test load. The door and/or hinges shall not become detached.	PASS Loaded:30 kg
6.2.2	Horizontal static overload This test applies only to hinges with an opening angle < 135°. Apply the horizontal static load specified 10 times perpendicular to the plane of the door on its horizontal centreline 100 mm from the edge furthest from the hinge. Carry out inspection without the test load. If the door, hinges or their components become detached.	PASS Loaded: 80 N
6.3	Functional tests	
6.3.2	Operating forces The operating forces shall be measured before and after the durability test. The measurements of operating forces shall be made with the door unloaded.	

Test	Test Description and Requirements	Test Results
6.3.2.2	<p>Closing force, hinges with self-closing mechanisms Fully opened the door 10 times by hand before measure the closing force. Slowly move the door towards the closed position and measure the force at a position 0, 5 mm before the fully closed position. During the measurement, the opening and closing forces shall be applied perpendicular to the front. The closing force of hinges with self closing spring mechanism shall not be less than 0,5N before and after the durability test.</p>	<p>PASS Closing force: 3.8 N</p>
6.3.2.3	<p>Opening and closing forces The opening and closing forces, F, shall be measured at the measuring point, through the full opening angle using a constant and slow opening/closing speed. The opening and closing forces shall be determined at the beginning of the durability test. The forces shall not be more than 20 N before and after the durability test.</p>	<p>PASS Opening and closing forces: 3.8 N</p>
6.3.3	<p>1st vertical static load test Suspend a mass specified on the door. Open and close it 10 full cycles (back and forth) from a position 45° from fully closed to a position 10° from fully opened, up to a maximum of 135° from the fully closed position. After the test, the hinges and their components shall fulfill their functions.</p>	<p>PASS Loaded: 20 kg</p>
6.3.4	<p>1st horizontal static load This test applies only to hinges with an opening angle < 135°. Apply the horizontal static load specified 10 times perpendicular to the plane of the door on its horizontal centre line 100 mm from the edge furthest from the hinge. After the test, the hinges and their components shall fulfill their functions.</p>	<p>PASS Loaded: 40 N</p>
6.3.5	<p>Slam shut Slam closed all doors 10 times using the masses ($m_1 + m_2$). The mass shall fall through a distance of 300 mm or the distance required closing the door through 30°, whichever is the smaller. After the test, the hinges and their components shall fulfill their functions.</p>	<p>PASS</p>
6.3.7	<p>Durability Attach two masses, 1 kg each, and one on each side of the door at the middle of the vertical centerline. Fully open the door to a maximum of 130° and fully close it for the number of cycles (back and forth), without forcing built-in stops in the open position. The door shall be gently opened and closed at each cycle without forcing dampers and/or catch devices including self-opening and self-closing mechanisms. Approximately 3 s shall be used for opening and 3 s for closing the door. If the hinges have dampers and/or catch devices, including self-opening and self-closing mechanisms, these shall be allowed to operate correctly according to their function at each cycle. After the test, the hinges and their components shall fulfill their functions.</p>	<p>PASS Cycles: 80000</p>

Test	Test Description and Requirements	Test Results
6.3.8	Deflection (sagging) test After the durability test and after removing the two 1 kg masses, the sagging shall be determined before and after using adjustment systems. The sagging before using adjustment systems shall not exceed 0, 5 % of the width of the door.	PASS
6.3.9	2nd vertical static load Suspend a mass specified on the door. Open and close it 10 full cycles (back and forth) from a position 45° from fully closed to a position 10° from fully opened, up to a maximum of 135° from the fully closed position. After the test, the hinges and their components shall fulfill their functions.	PASS Loaded:20 kg
6.3.10	2nd horizontal static load This test applies only to hinges with an opening angle < 135°. Apply the horizontal static load specified 10 times perpendicular to the plane of the door on its horizontal centre line 100 mm from the edge furthest from the hinge. After the test, the hinges and their components shall fulfill their functions.	PASS Loaded:40 N
6.4	Corrosion resistance The corrosion test shall be carried out when required on the third set of hinges according to EN ISO 6270-2. Requirement: 3 cycles AHT. With the exception of cutting edges, screw slots, rivet head, aluminium and moulded parts of zinc, all parts which are visible when the hinges are mounted shall show no corrosion. The function shall be maintained. If the corrosion test has not been carried out, information on this shall be included in the product information (Annex A).	PASS

Remark:

1. The dimension of the testing door is 700mm H x 600mm W x 19mm T, weight: 5.4kg;
2. The test content of clause 6.3.7 in this test report is extracted from the test report number SDHG1512020794FT.
3. This test report is to supersede test report number SDHL1601001218FT-01.

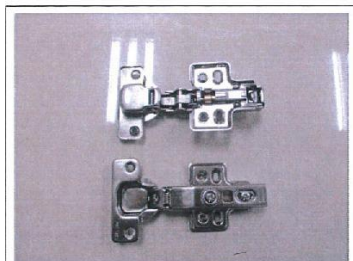
SAMPLE INFORMATION AND PICTURES

Weight: 105.1g/piece

Overall Dimensions: /

Other Dimensions: /

Sample as Received



View 1



View 2

End of Report