



TEST REPORT

NUMBER: SZHH00526912S1

APPLICANT: EMECO
805 ELM AVE HANOVER, PA, 17331 USA

ATTN: MAGNUS BREITLING

DATE: Mar 10, 2011

*THIS IS TO SUPERSEDE REPORT
NO. SZHH00526912 DATED SEP
20, 2010*

SAMPLE DESCRIPTION:
TWO (2) PIECES OF SUBMITTED SAMPLE SAID TO BE :
ITEM NAME : **LANCASTER CHAIR.**



TESTS CONDUCTED:
AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

TO BE CONTINUED

Authorized by:
For Intertek Testing Services
Shenzhen Ltd.



Ben N.L. Lin
General Manager



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CONCLUSION:

<u>TESTED SAMPLES</u>	<u>STANDARD</u>	<u>RESULT</u>
SUBMITTED SAMPLES	- ANSI/BIFMA X5.1-2002	
	SECTION 6, BACKREST STRENGTH TEST	PASS
	- STATIC - TYPE II & III	
	SECTION 8, DROP TEST - DYNAMIC	PASS
	SECTION 11, SEATING DURABILITY TESTS	PASS
	- CYCLIC	
	SECTION 12, STABILITY TESTS	PASS
	SECTION 16, BACKREST DURABILITY TEST	PASS
	- CYCLIC - TYPE II AND TYPE III	
	SECTION 18, LEG STRENGTH TEST	PASS
	- FRONT AND SIDE APPLICATION	

Authorized by:
For Intertek Testing Services
Shenzhen Ltd.



Ben N.L. Lin
General Manager



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TESTS CONDUCTED

1 PERFORMANCE TEST ON CHAIR

AS PER THE CLIENT'S REQUIREMENTS, ACCORDING TO ANSI/BIFMA X5.1-2002, THE SUBMITTED SAMPLES WERE SUBJECTED TO FOLLOWING TESTS.

NUMBER OF SAMPLE TESTED : TWO (2) PIECES (SAMPLE #1 & #2)

TYPE OF THE SUBMITTED SAMPLE: TYPE III

EXECUTIVE SUMMARY :

TEST ITEM	TEST SETUP/ ACCEPTANCE LEVEL	SAMPLE NO.	RESULT
ANSI/BIFMA X5.1-2002 SECTION 6, BACKREST STRENGTH TEST - STATIC-TYPE II & III	<p>TEST SETUP THE CHAIR SHALL BE PLACED ON A TEST PLATFORM IN AN UPRIGHT POSITION AND THE BASE SHALL BE RESTRAINED FROM MOVEMENT, BUT SHALL NOT RESTRICT MOVEMENT OF THE BACKREST THE CHAIR. IF THE TOP OF THE LOAD-BEARING STRUCTURE/SURFACE OF THE BACKREST IS LESS THAN 452 mm (17.8 IN.) ABOVE THE SEAT, POSITION THE TOP OF THE FORM-FITTING DEVICE EVEN WITH THE TOP OF THE LOAD-BEARING STRUCTURE/SURFACE. ATTACH A LOADING DEVICE (FRONT PUSH OR BACK PULL) TO THE HORIZONTAL CENTER OF THE BACKREST AS DETERMINED ABOVE. THE FORCE SHALL BE APPLIED 90° ± 10° TO THE PLANE OF THE BACKREST WHEN AT THE BACK STOP POSITION.</p> <p>TEST PROCEDURES FUNCTIONAL LOAD A FORCE OF 667 N (150 LBF.) SHALL BE APPLIED TO THE BACKREST AT THE BACKSTOP POSITION FOR ONE (1) MINUTE. PROOF LOAD A FORCE OF 1112 N (250 LBF.) SHALL BE APPLIED TO THE BACKREST AT THE BACKSTOP POSITION FOR ONE (1) MINUTE.</p> <p>ACCEPTANCE LEVEL FUNCTIONAL LOAD A FUNCTIONAL LOAD APPLIED ONCE SHALL CAUSE NO LOSS OF SERVICEABILITY TO THE CHAIR. PROOF LOAD A PROOF LOAD APPLIED ONCE SHALL CAUSE NO SUDDEN AND MAJOR CHANGE IN THE STRUCTURAL INTEGRITY OF THE CHAIR. LOSS OF SERVICEABILITY IS ACCEPTABLE.</p>	#1	PASS



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ANSI/BIFMA X5.1-2002 SECTION 8, DROP TEST - DYNAMIC	<p>TEST SETUP THE UNIT SHALL BE PLACED ON A TEST PLATFORM. A TEST BAG SHALL BE ATTACHED TO A DEVICE PERMITTING A FREE FALL TO THE SEATING POSITION. THE BAG SHALL BE CENTERED SIDE-TO-SIDE ON THE SEAT AND SHALL BE POSITIONED NOT MORE THAN 13 mm (0.5 IN.) FROM THE MOST FORWARD SURFACE OF THE BACKREST DURING FREE FALL. THE BAG SHALL NOT CONTACT THE BACKREST DURING THE FREE FALL.</p> <p>TEST PROCEDURES FUNCTIONAL LOAD TEST A TEST BAG APPROXIMATELY 400 mm (16 IN.) IN DIAMETER CONTAINING SAND AND/OR SHOT WEIGHING 102 KG (225 LB.) SHALL BE RAISED 152 mm (6 IN.) ABOVE THE UNCOMPRESSED SEAT AND RELEASED ONE TIME. PROOF LOAD TEST REPEAT ABOVE SETUP AND INCREASE THE WEIGHT OF THE TEST BAG TO A PROOF LOAD OF 136 KG (300 LB.). THE TEST BAG SHALL BE RAISED 152 mm (6 IN.) ABOVE THE UNCOMPRESSED SEAT AND RELEASED ONE TIME.</p> <p>ACCEPTANCE LEVEL FUNCTIONAL LOAD THERE SHALL BE NO LOSS OF SERVICEABILITY. PROOF LOAD THERE SHALL BE NO SUDDEN AND MAJOR CHANGE IN THE STRUCTURAL INTEGRITY OF THE CHAIR. LOSS OF SERVICEABILITY IS ACCEPTABLE.</p>	#2	PASS



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ANSI/BIFMA X5.1-2002 SECTION 11, SEATING DURABILITY TESTS - CYCLIC	<p>IMPACT TEST</p> <p>TEST SETUP</p> <p>THE UNIT SHALL BE PLACED ON A TEST PLATFORM AND BE RESTRAINED IN A MANNER THAT WILL MAINTAIN THE IMPACT LOCATION ON THE SEAT. A TEST BAG APPROXIMATELY 400 mm (16 IN.) IN DIAMETER CONTAINING SAND AND/OR SHOT WEIGHING 57 KG (125 LB.), SHALL BE ATTACHED TO A CYCLING DEVICE, PERMITTING A FREE FALL TO THE SEAT. THE FREE FALL SHALL BEGIN AFTER LIFTING THE TEST BAG 25 mm (1 IN.) ABOVE THE UNCOMPRESSED SURFACE ON THE SEAT, AS MEASURED AT THE CENTER OF THE SEAT. THE CYCLING DEVICE SHALL BE SET AT AN APPROPRIATE RATE BETWEEN 10 AND 30 CYCLES PER MINUTE.</p> <p>TEST PROCEDURE</p> <p>THE CHAIR SHALL BE TESTED TO 100,000 CYCLES.</p> <p>FRONT CORNER LOAD-EASE TEST - CYCLIC - OFF-CENTER</p> <p>TEST SETUP</p> <p>AFTER COMPLETING THE IMPACT TEST, APPLY A LOAD OF 734 N (165 LBF.) THROUGH A 203mm ± 13mm (8 IN. ± 0.51 IN.) DIAMETER LOADING DEVICE AT ONE FRONT CORNER FLUSH TO EACH STRUCTURAL EDGE.</p> <p>TEST PROCEDURE</p> <p>RAISE THE LOADING DEVICE FROM THE SEAT AND LOWER COMPLETELY, WITHOUT IMPACT TO THE SEAT SO THAT IT TAKES THE ENTIRE LOAD WITHOUT ANY SUPPORT FROM THE CYCLING DEVICE, AT A RATE OF 10 TO 30 CYCLES PER MINUTE. APPLYING THE LOADS IN AN ALTERNATING SEQUENCE TO ATTAIN A TOTAL OF 40,000 CYCLES.</p> <p>ACCEPTANCE LEVEL</p> <p>THERE SHALL BE NO LOSS OF SERVICEABILITY TO THE CHAIR AFTER COMPLETION OF BOTH THE IMPACT AND LOAD-EASE TESTS.</p>	#2	PASS



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ANSI/BIFMA X5.1-2002 SECTION 12, STABILITY TESTS	<p>REAR STABILITY</p> <p>TEST SETUP</p> <p>THE CHAIR SHALL BE PLACED ON A TEST PLATFORM. A 79 KG (173 LB.) WEIGHT SHALL BE PLACED ON THE SEAT AT THE CENTER OF THE UNIT OR ON THE SEATING POSITION NEAREST TO THE CENTER OF THE CHAIR. THE WEIGHT SHALL BE STRAPPED. A BLOCK, OBSTRUCTION OR OTHER RESTRAINING DEVICE 13 mm (0.5 IN.) IN HEIGHT SHALL BE AFFIXED TO THE TEST PLATFORM. THE DEVICE SHALL PREVENT SLIDING BUT NOT RESTRICT THE UNIT FROM TIPPING.</p> <p>TEST PROCEDURE</p> <p>A REARWARD FORCE, EITHER PUSH OR PULL, SHALL BE APPLIED TO THE BACKREST OF THE CHAIR, IN THE PLANE OF THE TOP OF THE WEIGHT, OR THE TOP OF THE BACKREST, WHICHEVER IS LOWER. A FORCE SHALL BE APPLIED UNTIL THE TOTAL UNIT WEIGHT IS TRANSFERRED TO THE REAR SUPPORT MEMBERS (THIS TYPICALLY OCCURS WHEN THE FRONT SUPPORT MEMBERS LIFT OFF THE TEST PLATFORM.). DETERMINE THAT THE FORCE REQUIRED TO ACHIEVE THE CONDITION EXCEEDS THE ACCEPTANCE LEVELS BELOW.</p> <p>ACCEPTANCE LEVEL</p> <p>THE FORCE DETERMINED SHALL NOT BE LESS THAN 156 N (35 LBF.)</p> <p>FRONT STABILITY</p> <p>TEST SETUP</p> <p>THE UNIT SHALL BE PLACED ON A TEST PLATFORM.</p> <p>TEST PROCEDURE</p> <p>APPLY A VERTICAL LOAD OF 600 N (135 LBF.), THROUGH A 200 mm (7.87 IN) DIAMETER DISK, THE CENTER OF WHICH IS 60 mm (2.4 IN.) FROM THE FRONT CENTER EDGE OF THE LOAD-BEARING SURFACE OF THE SEAT.</p> <p>APPLY A HORIZONTAL FORCE OF 20N (4.5 LBF.) AT THE SAME LEVEL OF THE PLANE OF THE TOP OF THE SEAT. THE FORCE SHALL BE COINCIDENT WITH THE SIDE-TO-SIDE CENTERLINE OF THE SEAT.</p> <p>ACCEPTANCE LEVEL</p> <p>THE CHAIR SHALL NOT TIP OVER AS THE RESULT OF THE FORCE APPLICATION.</p>	#2	PASS



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ANSI/BIFMA X5.1-2002 SECTION 16, BACKREST DURABILITY TEST - CYCLIC - TYPE II AND TYPE III	<p>TEST SETUP</p> <p>THE CHAIR SHALL BE PLACED ON A TEST PLATFORM IN AN UPRIGHT POSITION WITH THE BASE/LEGS RESTRAINED FROM MOVEMENT.</p> <p>IF THE TOP OF THE LOAD-BEARING STRUCTURE/SURFACE OF THE BACKREST IS LESS THAN 452 mm (17.8 IN.) ABOVE THE SEAT, POSITION THE TOP OF THE FORM-FITTING DEVICE EVEN WITH THE TOP OF THE LOAD-BEARING STRUCTURE/SURFACE.</p> <p>ATTACH A LOADING DEVICE (FRONT PUSH OR BACK PULL) TO THE HORIZONTAL CENTER OF THE BACKREST AS DETERMINED ABOVE. THE FORCE SHALL BE APPLIED 90°± 10° TO THE PLANE OF THE BACKREST(S) WHEN AT THE BACK STOP POSITION. A WEIGHT OF 102KG (225 LB.) SHALL BE SECURED IN THE CENTER OF THE SEAT.</p> <p>THE LOADING DEVICE SHALL BE ADJUSTED TO APPLY A 334 N (75 LBF.) TOTAL FORCE TO THE BACKREST. THE LOADING DEVICE SHALL BE SET AT AN APPROPRIATE RATE BETWEEN 10 AND 30 CYCLES PER MINUTE.</p> <p>FOR CHAIRS WITH BACKREST WIDTHS GREATER THAN 406 mm (16 IN.) AT THE HEIGHT OF THE LOADING POINT, APPLY THE LOAD TO THE BACKREST FOR 80,000 CYCLES.</p> <p>KEEPING THE LOAD AT THE HEIGHT DETERMINED ABOVE, REPOSITION THE LOAD 102 mm (4 IN.) TO THE RIGHT OF THE VERTICAL CENTERLINE. APPLY THIS LOAD FOR 20,000 CYCLES.</p> <p>KEEPING THE LOAD AT THE HEIGHT DETERMINED ABOVE, REPOSITION THE LOAD 102 mm (4 IN.) TO THE LEFT OF THE VERTICAL CENTERLINE. APPLY THIS LOAD FOR 20,000 CYCLES.</p> <p>ACCEPTANCE LEVEL</p> <p>THERE SHALL BE NO LOSS OF SERVICEABILITY.</p>	#1	PASS



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ANSI/BIFMA X5.1-2002 SECTION 18, LEG STRENGTH TEST - FRONT AND SIDE APPLICATION	<p>FRONT LOAD TEST</p> <p>TEST SETUP THE CHAIR SHALL BE PLACED ON A TEST PLATFORM, WITH THE BACK LEGS RESTRAINED. THE LOADING DEVICE SHALL BE ATTACHED TO THE CHAIR SO THAT AN INITIALLY HORIZONTAL FORCE IS APPLIED INWARD AND PARALLEL TO THE FRONT-TO-REAR AXIS OF THE CHAIR, BETWEEN 13 mm (0.5 IN.) AND 38 mm (1.5 IN.) FROM THE BOTTOM OF A LEG. THE LOAD SHALL BE APPLIED TO THE APPARENT WEAKEST POINT OF THE LEG.</p> <p>TEST PROCEDURES</p> <p>FUNCTIONAL LOAD TEST A FORCE OF 334 N (75 LBF.) SHALL BE APPLIED ONCE TO EACH FRONT LEG INDIVIDUALLY FOR ONE (1) MINUTE.</p> <p>PROOF LOAD TEST A FORCE OF 556 N (125 LBF.) SHALL BE APPLIED ONCE TO EACH FRONT LEG INDIVIDUALLY FOR ONE (1) MINUTE.</p> <p>SIDE LOAD TEST</p> <p>TEST SETUP THE CHAIR SHALL BE PLACED ON A TEST PLATFORM, WITH THE SIDE LEG(S) RESTRAINED. THE LOADING DEVICE SHALL BE ATTACHED TO THE CHAIR SO THAT AN INITIALLY HORIZONTAL FORCE IS APPLIED INWARD AND PARALLEL TO THE SIDE-TO-SIDE AXIS OF THE CHAIR, BETWEEN 13 mm (0.5 IN.) AND 38 mm (1.5 IN.) FROM THE BOTTOM OF A LEG.</p> <p>TEST PROCEDURE</p> <p>FUNCTIONAL LOAD TEST A FORCE OF 334 N (75 LBF.) SHALL BE APPLIED ONCE TO A FRONT AND REAR LEG INDIVIDUALLY FOR ONE (1) MINUTE.</p> <p>PROOF LOAD TEST A FORCE OF 512 N (115 LBF.) SHALL BE APPLIED ONCE TO A FRONT AND REAR LEG INDIVIDUALLY FOR ONE (1) MINUTE.</p> <p>ACCEPTANCE LEVEL - FRONT AND SIDE LOAD TESTS</p> <p>FUNCTIONAL LOAD FUNCTIONAL LOAD(S) APPLIED ONCE IN EACH DIRECTION SHALL CAUSE NO LOSS OF SERVICEABILITY.</p> <p>PROOF LOAD PROOF LOAD(S) APPLIED ONCE EACH DIRECTION SHALL CAUSE NO SUDDEN AND MAJOR CHANGE IN THE STRUCTURAL INTEGRITY OF THE CHAIR. LOSS OF SERVICEABILITY IS ACCEPTABLE.</p>	#1	PASS

DATE SAMPLE RECEIVED : SEP 13, 2010
TESTING PERIOD : SEP 13, 2010 TO SEP 20, 2010

END OF REPORT

TO: EMECO

ATTENTION: MAGNUS BREITLING

DATE: MAR 10, 2011

Re : Report Revision Notification

Intertek Testing Services Report Number SZHH00526912 Dated Sep 20, 2010

Please be informed that all the content recorded in the above captioned report will be void. This captioned report is now superseded by a revised

Intertek Testing Services Report, SZHH00526912S1.

Thank you for your attention.

AUTHORIZED BY:
FOR INTERTEK TESTING SERVICES
SHENZHEN LTD.



BEN N.L. LIN
GENERAL MANAGER