Test Report No.:	**UNT160122C38**
Client	
Name :	**GMET Mfg Processes Co., Ltd.**
Address :	**No.50, Guangfu S. Rd., Hukou Township, Hsinchu County 303, Taiwan**
Test Item :	**Lithium iron phosphate Rechargeable Battery Cell**
Identification :	**G35145158**
Testing laboratory	
Name :	**Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**
Address :	**No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City, TAIWAN**
Test specification	
Standard :	**United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 6th), Section 38.3**
Test Result :	The test item passed.
Prepared By :	Signature: Bob Tsai; Date: 2016.03.17; Supervisor
Approved By:	Signature: Ted Wu; Date: 2016-03-17; Senior Manager

This report should not be used by the client to claim product certification, approval, or endorsement by TAF, NVLAP, NIST or any government agencies.

ilac-MRA TAF Testing Laboratory 2021

TEST REPORT

United Nations, Recommendations on the Transport of Dangerous Goods,
Manual of Test and Criteria (Rev. 6th), Section 38.3

Report Reference No.....:	UNT160122C38
Compiled by .....:	See cover sheet
Approved by .....:	See cover sheet
Date of issue.....:	2016-03-17
Total number of pages	22
Testing Laboratory.....:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Address .....:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City, TAIWAN
Applicant's name.....:	GMET Mfg Processes Co., Ltd.
Address .....:	No.50, Guangfu S. Rd., Hukou Township, Hsinchu County 303, Taiwan
Test specification:	
Standard .....:	United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 6th), Section 38.3.
Test item description……..:	Lithium iron phosphate Rechargeable Battery Cell
Trade Mark .....:	GMET or GMET
Manufacturer .....:	GMET Mfg Processes Co., Ltd.
Model/Type reference.....:	G35145158
Ratings .....:	3.2V, 40Ah

Summary of testing:

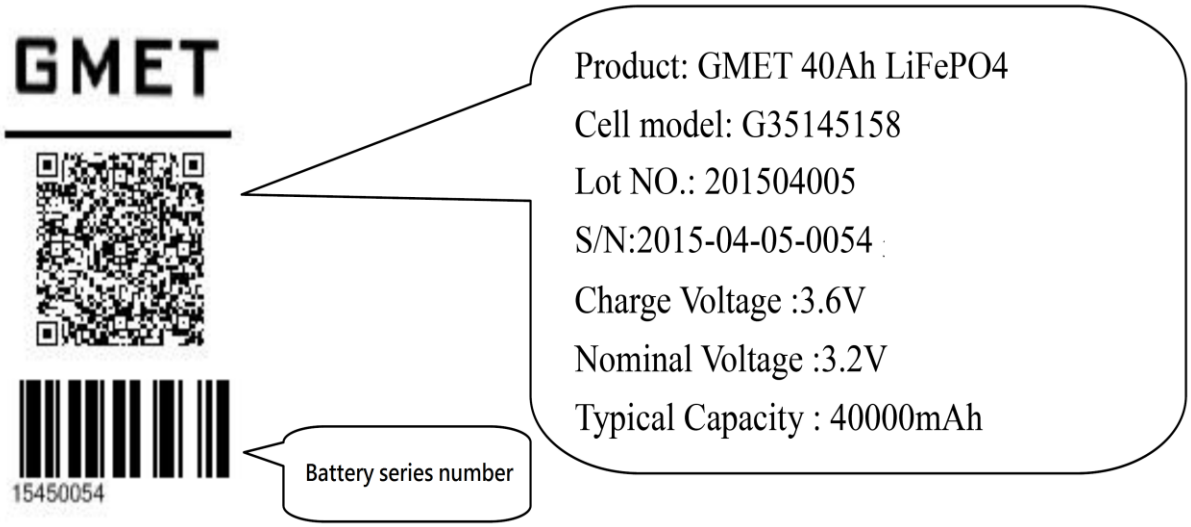
The load conditions used during testing: The battery pack is charged and discharged according to its rating.

Nominal capacity (Ah):	40
Nominal voltage (Vdc):	3.2
Minimum end voltage of discharge (Vdc)	2.0
Max. charge voltage (Vdc):	3.6
Max. charge current (A):	120
Max. continue discharge current (A)	120

Tests performed (name of test and test clause):

Reference Standard	Clause	Contents of Test
UN 38.3	38.3.4.1	Altitude simulation
UN 38.3	38.3.4.2	Thermal test
UN 38.3	38.3.4.3	Vibration
UN 38.3	38.3.4.4	Shock
UN 38.3	38.3.4.5	External short circuit
UN 38.3	38.3.4.6	Crush
UN 38.3	38.3.4.7	Overcharge
UN 38.3	38.3.4.8	Forced discharge

Copy of marking plate



Test item particulars .....:	
Classification of installation and use .....:	Built-in
Supply Connection.....:	Customized terminal
.....:	
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing .....:	
Date of receipt of test item .....:	2016-01-22
Date (s) of performance of tests .....:	2016-01-22 ~ 2016-03-09

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

General product information:

1) The equipment under test (EUT) is a Lithium iron phosphate Rechargeable Battery Cell.
2) The maximum ambient temperature is specified as Max. 45 °C for Charging and 60 °C for Discharging.
3) Dimension of the battery: (T) 35mm by (W) 145mm by (L) 158mm.
4) Weight: Approx. 1460g.

Test condition:
Temperature: 20±5°C
Relative humidity: 60%
Air pressure: 950 mbar

The test samples were pre-production samples without serial number.

United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 6th), Section 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3	**Lithium batteries**		**P**

38.3.1	**Purpose**		**P**
38.3.2	**Scope**		**P**
38.3.2.1	Lithium cells or batteries which differ from a tested type by: (a) A change of more than 0.1 g or 20% by mass, whichever is greater, to the cathode, to the anode, or to the electrolyte; or (b) A change that would materially affect the test results.	This a new product (new application)	N/A
38.3.2.2	Classification	The EUT is a Lithium iron phosphate Rechargeable Battery Cell.	P
38.3.3	**The number and condition of cells and batteries**		**P**
	Cells (Primary/Rechargeable)	The EUT is a Lithium iron phosphate Rechargeable Battery Cell.	P
	Batteries (Primary/Rechargeable)	The EUT is a Lithium iron phosphate Rechargeable Battery Cell.	N/A
38.3.4	**Procedure**		
	Each cell and battery type must be subjected to tests 1 to 8. Tests 1 to 5 must be conducted in sequence on the same cell or battery. Tests 6 and 8 should be conducted using not otherwise tested cells or batteries. Test 7 may be conducted using undamaged batteries previously used in Tests 1 to 5 for purposes of testing on cycled batteries.	The sequence Test 1 to Test 5 tests were conducted on the same samples. Test 6 was conducted on the new component cell samples. Test 8 was conducted on the new component cell samples.	P
38.3.4.1	Altitude simulation	The cells were no mass loss, no leakage, no venting, no disassembly, no rupture and no fire and the OCV of batteries after testing was not less than 90% of its voltage before testing.	P

United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 5th, Amendment 1), Section 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
38.3.4.2	Thermal test	The cells were no mass loss, no leakage, no venting, no disassembly, no rupture and no fire and the OCV of batteries after testing was not less than 90% of its voltage before testing.	P
38.3.4.3	Vibration	The cells were no mass loss, no leakage, no venting, no disassembly, no rupture and no fire and the OCV of batteries after testing was not less than 90% of its voltage before testing.	P
38.3.4.4	Shock	The cells were no mass loss, no leakage, no venting, no disassembly, no rupture and no fire and the OCV of batteries after testing was not less than 90% of its voltage before testing.	P
38.3.4.5	External short test	The cells were no disassembly, no fire and no rupture, and the external temperature did not exceed 170 °C.	P
38.3.4.6	Impact	The cell is a prismatic type.	N/A
	Crush	The cells were no disassembly, no fire and no rupture, and the external temperature did not exceed 170 °C.	P
38.3.4.7	Overcharge	The EUT is a Lithium iron phosphate Rechargeable Battery Cell.	N/A
38.3.4.8	Forced discharge	The cells were no disassembly and no fire.	P

United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 5th, Amendment 1), Section 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.2.2	TABLE: List of critical Components				N/A
Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard	Marks of Conformity
--	--	--	--	--	--
supplementary information:					

38.3.4.1	Altitude simulation							P
Model / Sample No.	Sample Status	Before test		After test		Mass loss (%)	Residual OCV (%)	Other Event
		Weight (g)	OCV (V)	Weight (g)	OCV (V)			
G35145158 / 001	At first cycle	1440	3.59	1440	3.58	0	99	OK
G35145158 / 002	At first cycle	1460	3.60	1460	3.59	0	99	OK
G35145158 / 003	At first cycle	1440	3.60	1440	3.59	0	99	OK
G35145158 / 004	At first cycle	1440	3.60	1440	3.59	0	99	OK
G35145158 / 005	At first cycle	1420	3.58	1420	3.57	0	99	OK
G35145158 / 006	At first cycle	1440	3.58	1440	3.57	0	99	OK
G35145158 / 007	At first cycle	1420	3.59	1420	3.57	0	99	OK
G35145158 / 008	At first cycle	1440	3.59	1440	3.57	0	99	OK
G35145158 / 009	At first cycle	1440	3.59	1440	3.58	0	99	OK
G35145158 / 010	At first cycle	1440	3.60	1440	3.59	0	99	OK

Note(s):

Mass loss limit:

Mass M of cell or battery	Mass loss limit
M<1g	0.5%
1g<M<5g	0.2%
M>5g	0.1%

L-Leakage
V-Venting
D-Disassembly
R-Rupture
F-Fire
OK-No Leakage, No Venting, No Disassembly, No Rupture, No Fire

United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 6th), Section 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.2	**Thermal test**							P
Model / Sample No.	Sample Status	Before test		After test		Mass loss (%)	Residual OCV (%)	Other Event
		Weight (g)	OCV (V)	Weight (g)	OCV (V)			
G35145158 / 001	At first cycle	1440	3.58	1440	3.51	0	98	OK
G35145158 / 002	At first cycle	1460	3.59	1460	3.51	0	98	OK
G35145158 / 003	At first cycle	1440	3.59	1440	3.52	0	98	OK
G35145158 / 004	At first cycle	1440	3.59	1440	3.50	0	98	OK
G35145158 / 005	At first cycle	1420	3.57	1420	3.51	0	98	OK
G35145158 / 006	At first cycle	1440	3.57	1440	3.50	0	98	OK
G35145158 / 007	At first cycle	1420	3.57	1420	3.49	0	98	OK
G35145158 / 008	At first cycle	1440	3.57	1440	3.51	0	98	OK
G35145158 / 009	At first cycle	1440	3.58	1440	3.50	0	98	OK
G35145158 / 010	At first cycle	1440	3.59	1440	3.54	0	98	OK

Note(s):

Mass loss limit:

Mass M of cell or battery	Mass loss limit
M<1g	0.5%
1g<M<5g	0.2%
M>5g	0.1%

L-Leakage
V-Venting
D-Disassembly
R-Rupture
F-Fire
OK-No Leakage, No Venting, No Disassembly, No Rupture, No Fire

United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 6th), Section 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

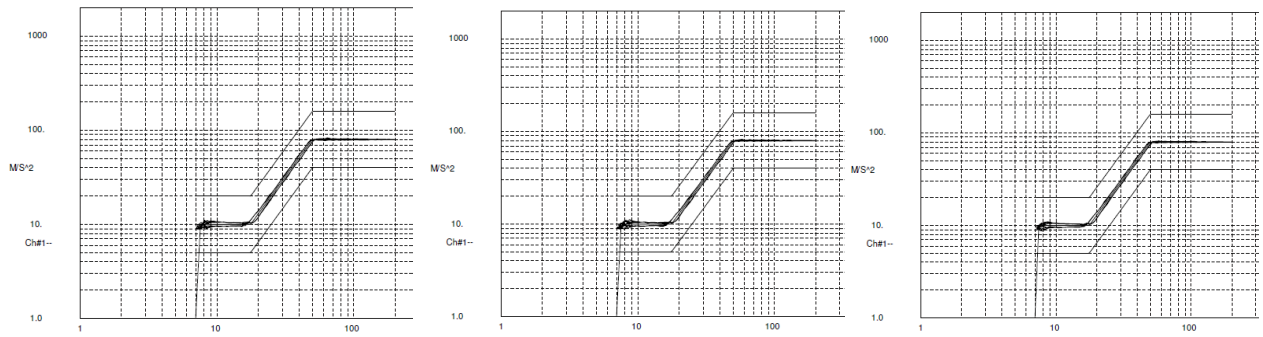
38.3.4.3	**Vibration**							P
Model / Sample No.	Sample Status	Before test		After test		Mass loss (%)	Residual OCV (%)	Other Event
		Weight (g)	OCV (V)	Weight (g)	OCV (V)			
G35145158 / 001	At first cycle	1440	3.49	1440	3.45	0	99	OK
G35145158 / 002	At first cycle	1460	3.49	1460	3.44	0	99	OK
G35145158 / 003	At first cycle	1440	3.50	1440	3.46	0	99	OK
G35145158 / 004	At first cycle	1440	3.48	1440	3.45	0	99	OK
G35145158 / 005	At first cycle	1420	3.49	1420	3.44	0	99	OK
G35145158 / 006	At first cycle	1440	3.47	1440	3.45	0	99	OK
G35145158 / 007	At first cycle	1420	3.48	1420	3.44	0	99	OK
G35145158 / 008	At first cycle	1440	3.49	1440	3.45	0	99	OK
G35145158 / 009	At first cycle	1440	3.48	1440	3.45	0	99	OK
G35145158 / 010	At first cycle	1440	3.50	1440	3.46	0	99	OK

Note(s):

Mass loss limit:

Mass M of cell or battery	Mass loss limit
M<1g	0.5%
1g<M<5g	0.2%
M>5g	0.1%

L-Leakage
V-Venting
D-Disassembly
R-Rupture
F-Fire
OK-No Leakage, No Venting, No Disassembly, No Rupture, No Fire



X axis Y axis Z axis

United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 6th), Section 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

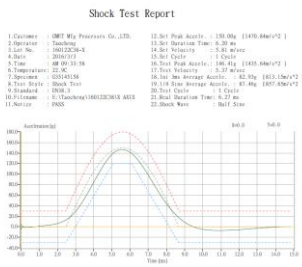
38.3.4.4	**Shock**							P
Model / Sample No.	Sample Status	Before test		After test		Mass loss (%)	Residual OCV (%)	Other Event
		Weight (g)	OCV (V)	Weight (g)	OCV (V)			
G35145158 / 001	At first cycle	1440	3.44	1440	3.43	0	99	OK
G35145158 / 002	At first cycle	1460	3.43	1460	3.42	0	99	OK
G35145158 / 003	At first cycle	1440	3.45	1440	3.53	0	99	OK
G35145158 / 004	At first cycle	1440	3.45	1440	3.43	0	99	OK
G35145158 / 005	At first cycle	1420	3.43	1420	3.40	0	99	OK
G35145158 / 006	At first cycle	1440	3.43	1440	3.42	0	99	OK
G35145158 / 007	At first cycle	1420	3.41	1420	3.40	0	99	OK
G35145158 / 008	At first cycle	1440	3.44	1440	3.41	0	99	OK
G35145158 / 009	At first cycle	1440	3.44	1440	3.42	0	99	OK
G35145158 / 010	At first cycle	1440	3.45	1440	3.43	0	99	OK

Note(s):

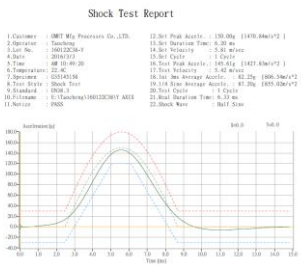
Mass loss limit:

Mass M of cell or battery	Mass loss limit
M<1g	0.5%
1g<M<5g	0.2%
M>5g	0.1%

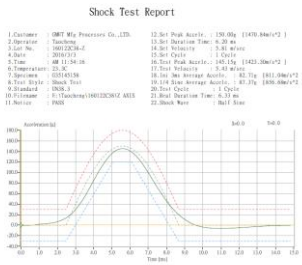
L-Leakage
V-Venting
D-Disassembly
R-Rupture
F-Fire
OK-No Leakage, No Venting, No Disassembly, No Rupture, No Fire



X axis



Y axis



Z axis

United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 6th), Section 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.5	**External short circuit**		P
Model / Sample No.	**Sample Status**	**Max. External temperature of EUT surface(°C)**	**Other Event**
G35145158 / 001	At first cycle	91.2	OK
G35145158 / 002	At first cycle	104.3	OK
G35145158 / 003	At first cycle	96.8	OK
G35145158 / 004	At first cycle	82.9	OK
G35145158 / 005	At first cycle	96.4	OK
G35145158 / 006	At first cycle	100.9	OK
G35145158 / 007	At first cycle	92.5	OK
G35145158 / 008	At first cycle	98.9	OK
G35145158 / 009	At first cycle	87.5	OK
G35145158 / 010	At first cycle	97.0	OK

Note(s):
D-Disassembly
R-Rupture
F-Fire
OK- No Disassembly, No Fire, The external temperature of cell not exceeds 170°C.

United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 6th), Section 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.6	Impact			N/A
Model / Sample No.	**Sample Status**	**Max. External temperature of EUT surface(°C)**	**Other Event**	
--	--	--	--	
Note(s): The component cell is a prismatic type				

38.3.4.6	Crush			P
Model / Sample No.	**Sample Status**	**Max. External temperature of EUT surface(°C)**	**Other Event**	
G35145158 / 011	At first cycle 50% of the design rated capacity	22.3	OK	
G35145158 / 012	At first cycle 50% of the design rated capacity	23.6	OK	
G35145158 / 013	At first cycle 50% of the design rated capacity	24.1	OK	
G35145158 / 014	At first cycle 50% of the design rated capacity	24.6	OK	
G35145158 / 015	At first cycle 50% of the design rated capacity	25.3	OK	
Note(s): D-Disassembly F-Fire OK- No Disassembly, No Fire, The external temperature of cell not exceeds 170°C.				

38.3.4.7	Overcharge		N/A
Model / Sample No.	**Sample Status**	**Other Event**	
--	--	--	
Note(s): EUT is a lithium ion battery cell			

United Nations, Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (Rev. 6th), Section 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.8	**Forced discharge**		P
Model / Sample No.	**Sample Status**	**Other Event**	
G35145158 / 016	At first cycle	OK	
G35145158 / 017	At first cycle	OK	
G35145158 / 018	At first cycle	OK	
G35145158 / 019	At first cycle	OK	
G35145158 / 020	At first cycle	OK	
G35145158 / 021	At first cycle	OK	
G35145158 / 022	At first cycle	OK	
G35145158 / 023	At first cycle	OK	
G35145158 / 024	At first cycle	OK	
G35145158 / 025	At first cycle	OK	
G35145158 / 026	After 50 cycles	OK	
G35145158 / 027	After 50 cycles	OK	
G35145158 / 028	After 50 cycles	OK	
G35145158 / 029	After 50 cycles	OK	
G35145158 / 030	After 50 cycles	OK	
G35145158 / 031	After 50 cycles	OK	
G35145158 / 032	After 50 cycles	OK	
G35145158 / 033	After 50 cycles	OK	
G35145158 / 034	After 50 cycles	OK	
G35145158 / 035	After 50 cycles	OK	

Note(s):
D-Disassembly
F-Fire
OK- No Disassembly, No Fire

List of test equipment used:
(Note: This is an example of the required attachment. Other forms with a different layout but containing similar information are also acceptable.)

Clause	Measurement / testing	Testing / measuring equipment / material used	Range used	Calibration date

香港商立德國際商品試驗有限公司桃園分公司
Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch 【Bureau Veritas ADT】

File No:
Project No:

INSTRUMENTATION RECORD DATA SHEET
TEST INSTRUMENTS

Page 1 of 3
Issued Date: 05-27-08
Revised: 03-04-2016

Test	Function Check	Instr No. S/N.	Range Used	* Instruments, Type	Maker	Model	Calibration Date	Calibration Due
Thermal abuse	V	1. 970210		Test Oven	TAICHY	MCKR-200	Jun-08-2015	Jun-07-2016
Mechanical shock	V	2. 0K97		Shock Tester	VISOURCE	SHOCK-2	Jun-16-2015	Jun-15-2016
Crushing of cells	V	3. 9701		Hydraulic Ram Apparatus	Asia Qtech	AT-1	May-16-2015	May-15-2016
Low pressure	V	4. 0801		Vacuum Chamber	Asia Qtech	A-1	Oct-23-2015	Oct-22-2016
Heating		11. 41VA0567	-40-400℃, 30CH	Hybrid Recorder	Yokokawa	HR 2500E	Apr-15-2015	Apr-14-2016
	V	13. 43VH0086	-40-400℃, 20CH	Hybrid Recorder	Yokogawa	HR 1300	Dec-11-2015	Dec-10-2016
	V	14. 48JE0043	-40-400℃, 20CH	Hybrid Recorder	Yokogawa	DR130	Jun-10-2015	Jun-09-2016
		15. 42VF0429	-40-400℃, 30CH	Hybrid Recorder	Yokogawa	HR 2300	Mar-09-2015	under calibration
Input / Leakage /		22. 805020222	250V/10A, 300W *1	Electric Load	Prodigit 3302	3302	Sep-02-2015	Sep-01-2016
Heating / Abnormal		23. 805020223	250V/10A, 300W *1	Electric Load	Prodigit 3302	3302	Oct-28-2015	Oct-27-2016
		24. 805020220	150V/8A, 300W *1	Electric Load	Prodigit 3302	3251	Jan-21-2016	Jan-20-2017
Enclosure Push		31. 080353	0 - 30 Kg.	Push - Pull Meter	Aikoh	AE-30	Nov-06-2015	Nov-05-2016
General	V	39. 70360742	R, V, A. Full Range	Digital Multimeter	Fluke	87-III	Jul-03-2015	Jul-02-2016
		40. 70360755	R, V, A. Full Range	Digital Multimeter	Fluke	87-III	Jul-17-2015	Jul-16-2016
	V	45. W981030	-42 ~150 Degree C	STANDARD TEMPERATURE &HUMIDITY CHAMBER	WIT	TH-4S-C	Jun-09-2014	Jun-08-2015
	V	46. —	Real Time	Timer (Clock)	Chyau Jye	Chyau Jye	Nov-10-2015	Nov-09-2016
		46-1. 8330R	Real Time	Timer (Clock)	ORIENT	QUARTZ	Jun-23-2015	Jun-22-2016
Insulation		53. 1420073	30-1000V, 0.1-50GΩ	Insulation Tester	Extech	8205	Sep-08-2015	Sep-07-2016
		57.12WB22613	-40-400℃, 60CH	Recorder	Yokokawa	DR230	Jun-25-2015	Jun-24-2016
Heating		66. DU200-32	-40-400℃, 30CH	Recorder	Yokokawa	DR230	Nov-30-2015	Nov-29-2016
Input / Leakage /		71. 204020068	500V/5A, 200W*1	Electric Load	Prodigit 3324	3302	Mar-12-2015	under calibration
		73. 204020077	250V/10A, 300W*1	Electric Load	Prodigit 3312C	3302	Oct-28-2015	Oct-27-2016
Heating		77. 12A933583	-40-400℃, 20CH (T	Hybrid Recorder	Yokogawa	DR130	Mar-09-2015	under calibration
		78. 12B615473	-40-400℃, 40CH	Recorder	Yokokawa	DR230	Aug-17-2015	Aug-16-2016
		86. 12B419024	-40-400℃, 20CH	Recorder	Yokokawa	DR130-00-24-1	Jun-25-2015	Jun-24-2016
Vibration		87. 4292	10Hz-100Hz, 0.2-1.5mm	Vibration Test	VISOURCE	VS-5060L	Dec-10-2015	Dec-09-2016

File No:
Project No:

INSTRUMENTATION RECORD DATA SHEET
TEST INSTRUMENTS

Issued Date: 05-27-08
Revised: 03-04-2016

Test	Function Check	Instr No. S/N.	Range Used	* Instruments, Type	Maker	Model	Calibration Date	Calibration Due
		101. 27CA14591	-40-400℃, 30CH	Hybrid Recorder	Yokogawa	DR-230	Jan-21-2016	Jan-20-2017
		102. 27CA14592	-40-400℃, 30CH	Hybrid Recorder	Yokogawa	DR-230	Aug-25-2015	Aug-24-2016
		103. 27CA14593	-40-400℃, 30CH (T	Hybrid Recorder	Yokogawa	DR-230	May-06-2015	May-05-2016
		104. 27CA14594	-40-400℃, 30CH	Hybrid Recorder	Yokogawa	DR-230	Sep-11-2015	Sep-10-2016
		105. 27CA14595	-40-400℃, 30CH	Hybrid Recorder	Yokogawa	DR-230	Sep-22-2015	Sep-21-2016
Input / Leakage /		106. 30801A016	60V/60A	Electronic Load	Prodigit	3301A	May-12-2015	May-11-2016
Heating / Abnormal		107. 30801A017	60V/60A	Electronic Load	Prodigit	3301A	Jan-03-2011	stop use
		108. 30801A019	60V/60A	Electronic Load	Prodigit	3301A	May-12-2015	May-11-2016
		109. 30801A020	60V/60A	Electronic Load	Prodigit	3301A	Dec-18-2015	Dec-17-2016
		110. 30901A021	60V/60A	Electronic Load	Prodigit	3301A	Jul-17-2015	Jul-16-2016
General		113. 033290010	R, V, A full range	DC+AC 100kHz TRMS DMM	BRYMEN	BM859CF	Sep-02-2015	Sep-01-2016
		114. 033290030	R, V, A full range	DC+AC 100kHz TRMS DMM	BRYMEN	BM859CF	Nov-11-2015	Nov-10-2016
Temperature cycling		116. 920904	-70℃~100℃, 20%~98% RH	THERMO-HYGROMETER	TAICHY	MHU-480SU	Nov-16-2015	Nov-15-2016
Moulded case stress at high ambient temperature		117. 920905	0-200℃	TEMPERATUER OVEN	TAICHY	CK-500	Nov-16-2015	Nov-15-2016
General		122. 680594	0-500V, 20A	Digital Power Meter	Idrc	CP-320A	Dec-14-2015	Dec-13-2016
		123. 680595	0-500V, 20A	Digital Power Meter	Idrc	CP-320A	Sep-25-2015	Sep-24-2016
Free fall		128. —	0-5m	tape measure	KDS	5.5mm	Jun-24-2015	Jun-23-2016
Heating		135. 27E214538 504	-40-400℃, 30CH	Data Acquisition Unit	Yokogawa	MX100-E-1D	Jan-21-2016	Jan-20-2017
General		137. 40905090004	0.03μH~9999H, 0.003pF~80.00mF, 0Ω~500MΩ	LCR Meter	Motech	MT4090/I-S1	Jan-22-2016	Jan-21-2017
Incorrect installation of a cell		154. —	—	1ohm Resistor	Yen Sheng	—	—	—
		160. 9100201	—	Crush Tester Equipment	Asia Qtech	IB-5	Sep-24-2015	Sep-23-2017
		161. 9100202	—	Projectile Tester Equipment	博紳	PROJ-8	Sep-24-2015	Sep-23-2017
		162. 064A812043	0-600g	Electronic Scale	HENGX	HXB-600	Dec-15-2015	Dec-14-2016

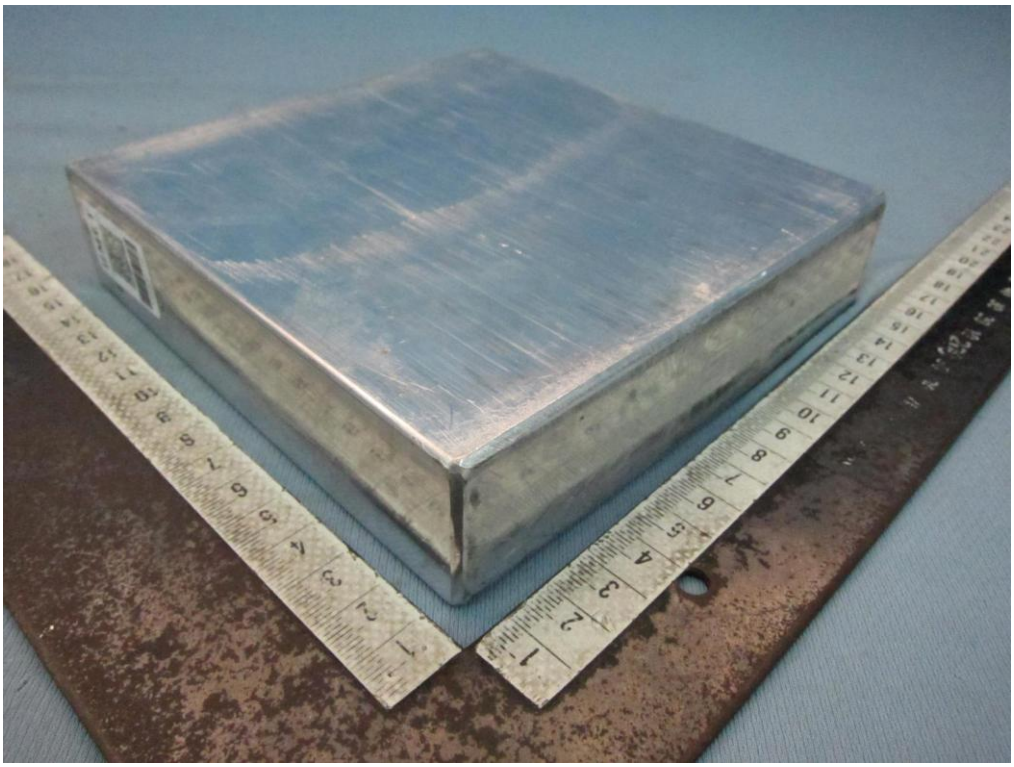
File No:
Project No:

INSTRUMENTATION RECORD DATA SHEET
TEST INSTRUMENTS

Issued Date: 05-27-08
Revised: 03-04-2016

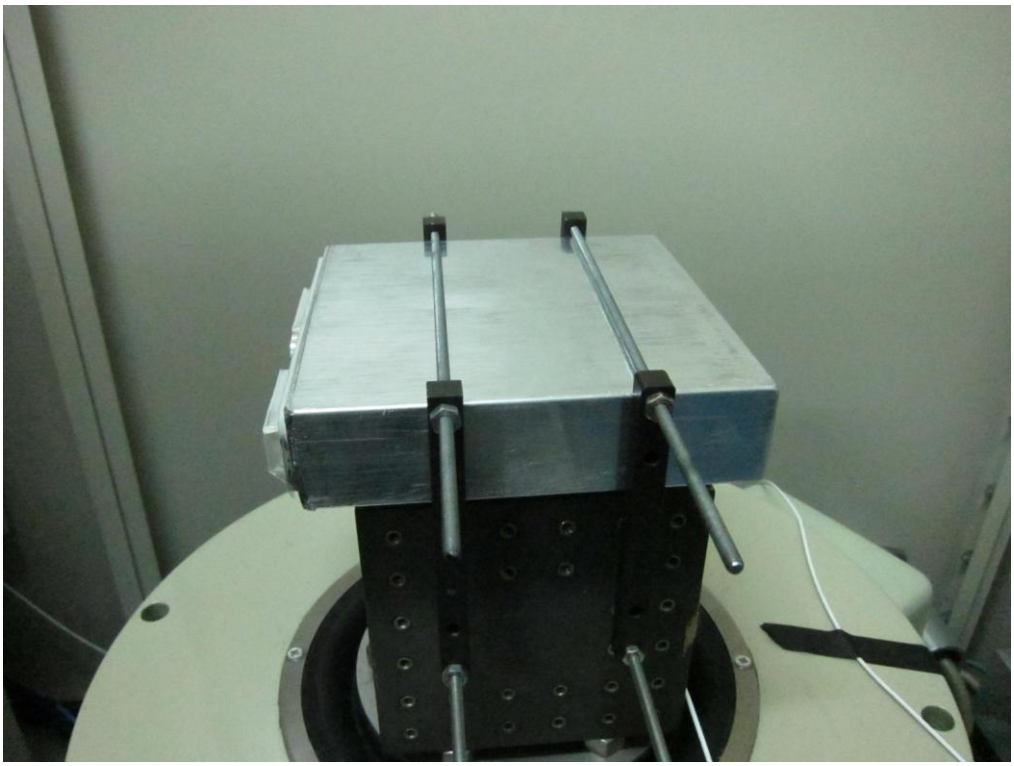
Test	Function Check	Instr No. S/N.	Range Used	* Instruments, Type	Maker	Model	Calibration Date	Calibration Due
	V	166. 3302F-01-00602FD0434	60V/60A/300W	Electronic Load	Prodigit	3302F-01-11F	Jul-03-2015	Jul-02-2016
	V	167. 3302F-01-00602FD0441	60V/60A/300W	Electronic Load	Prodigit	3302F-01-11F	Jul-17-2015	Jul-16-2016
	V	168. 3302F-01-00602FD0436	60V/60A/300W	Electronic Load	Prodigit	3302F-01-11F	Jul-03-2015	Jul-02-2016
	V	169. 3302F-01-00602FD0435	60V/60A/300W	Electronic Load	Prodigit	3302F-01-11F	Jul-03-2015	Jul-02-2016
	V	170. 500156	30V,25A	Programable DC Source	IDRC	DSP-030-025HD	Jul-17-2015	Jul-16-2016
	V	171. 500157	30V,25A	Programable DC Source	IDRC	DSP-030-026HD	Jul-17-2015	Jul-16-2016
	V	172. 500155	30V,25A	Programable DC Source	IDRC	DSP-030-027HD	Jul-17-2015	Jul-16-2016
	V	173. 500158	30V,25A	Programable DC Source	IDRC	DSP-030-028HD	Jul-17-2015	Jul-16-2016
Vibration	V	214. 6293	1Hz-200Hz, 0.2-1mm	Vibration Test	振儀科技	VS-100	Jan-26-2016	Jan-25-2017
	V	222. 131113325	0-1MΩ, 0-60V	Internal resistance meter	HIOKI	BT3562	Feb-02-2016	Feb-01-2017
		223. Q829392	Temp. : 0~50℃ Humi.: 0~100%	Thermo-Hygro Graph	CAESAR	CEHT-3009	Feb-02-2016	Feb-01-2017
		224. C2PK22022V	0-600V, 0-20A	DIGITAL POWER METER	Yokogawa	WT310	Dec-18-2015	Dec-17-2016
		225. 130612	30V,25A	Programable DC Source	IDRC	DSP-030-025HR	Dec-18-2015	Dec-17-2016
		226. 39108378	300~1200 hPa	atmospheric pressure gauge	testo	testo 511	Jun-11-2015	Jun-10-2016

Photos:

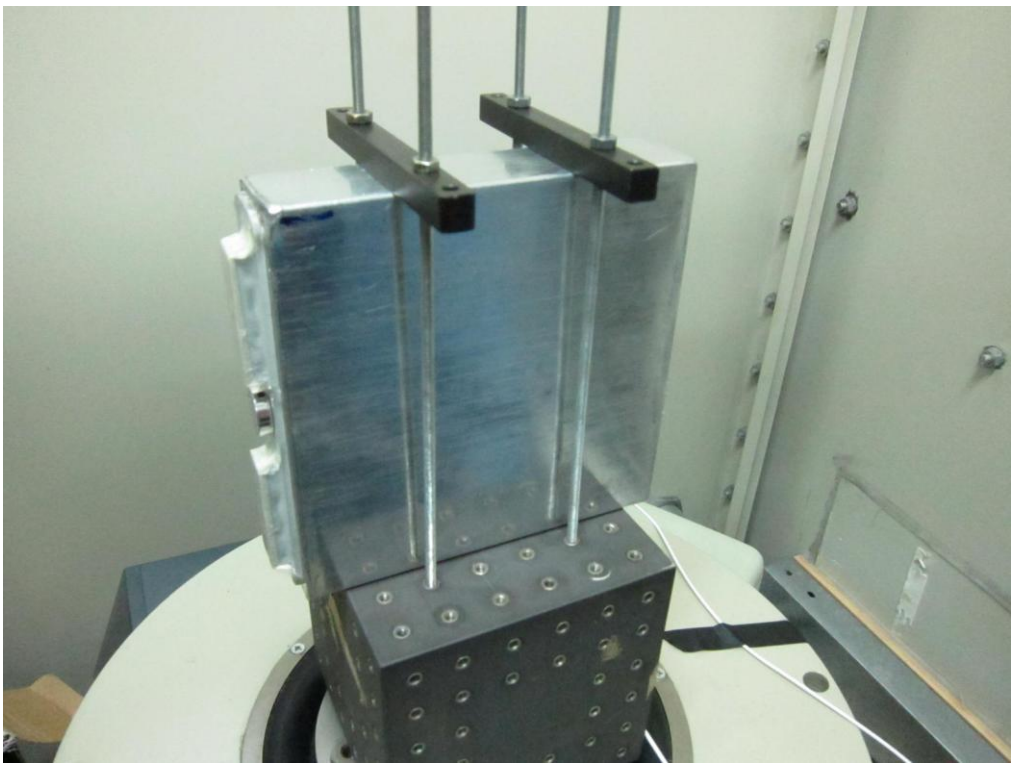


Top view of cell

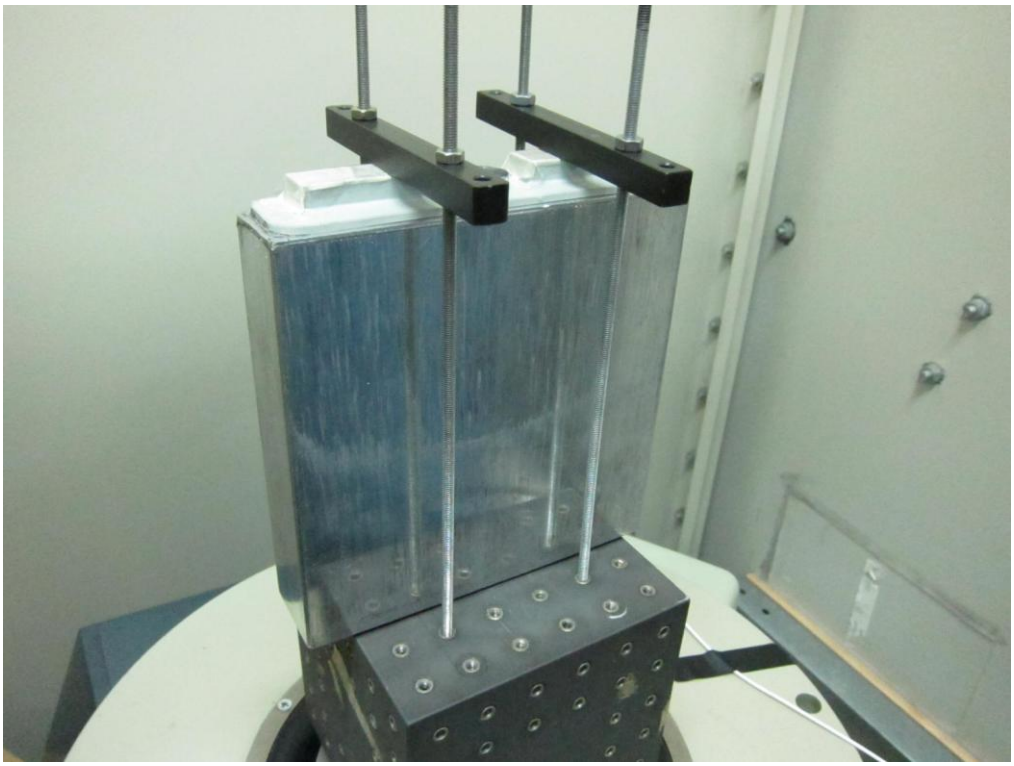
Bottom view of cell



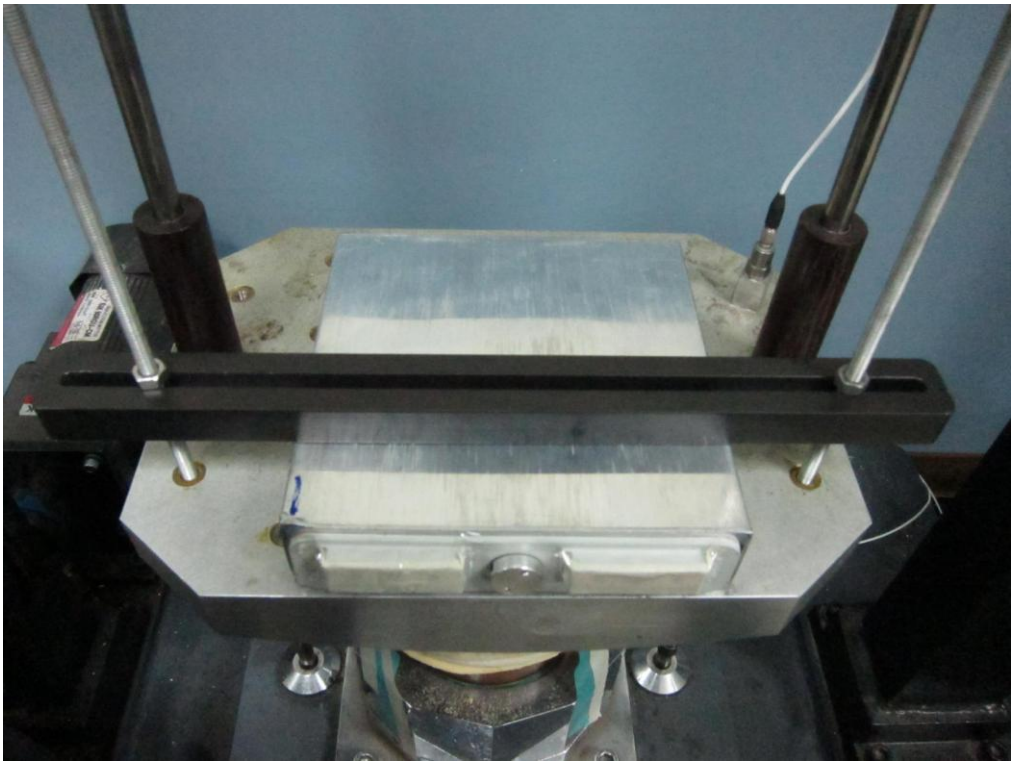
Vibration test condition -1 (X axis direction)



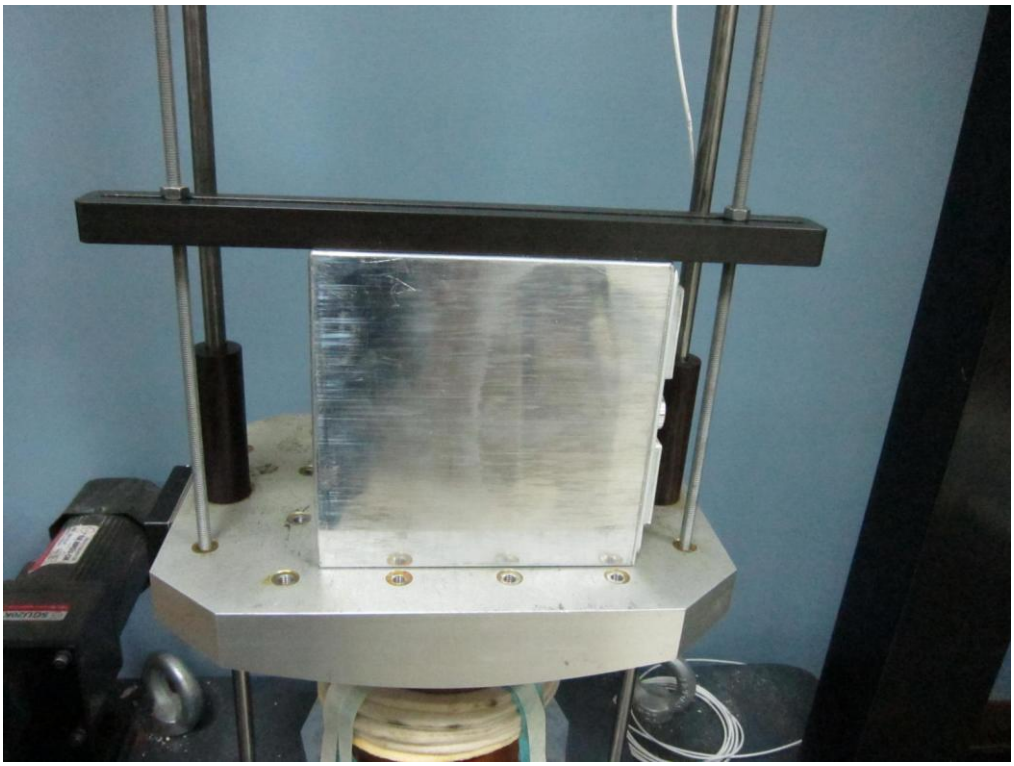
Vibration test condition -2 (Y axis direction)



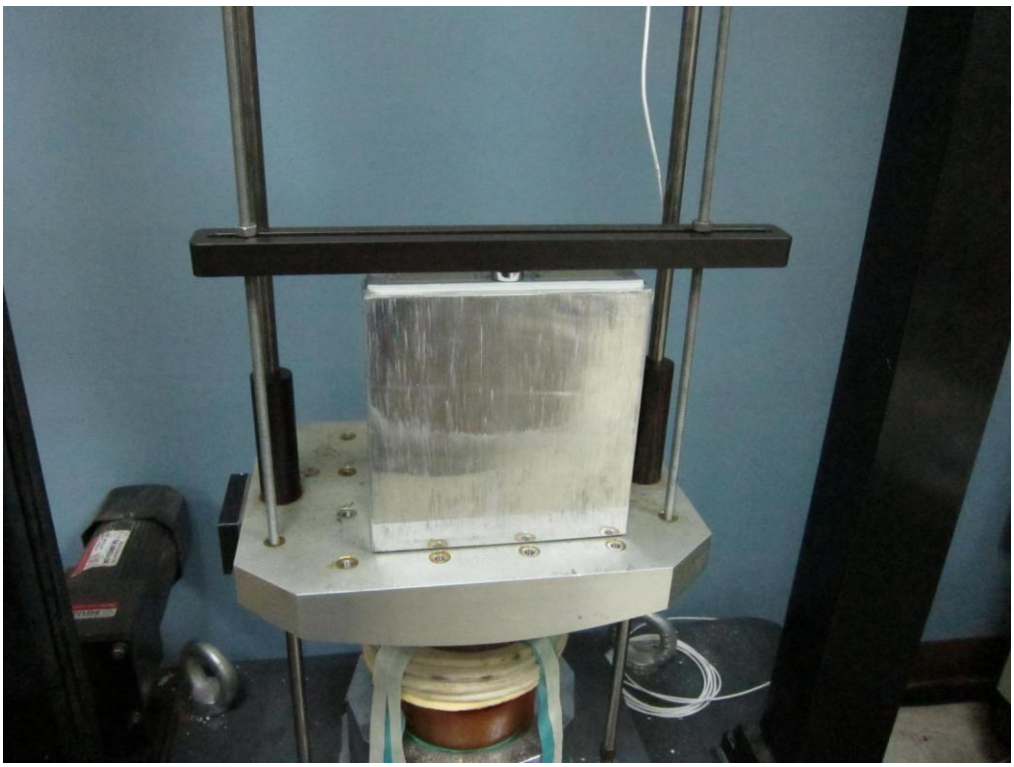
Vibration test condition -3 (Z axis direction)



Shock test condition -1 (X axis direction)



Shock test condition -2 (Y axis direction)



Shock test condition -3 (Z axis direction)