TECHNICAL SPECIFICATION

Product name: **Lithium-Thionyl Chloride Battery**

Client name:

Model:

Sample date

Client confirm:

Supplier confirm:

LITHIUM BATTERY TYPE

CATALOG

LITHIUM BATTERY TYPE

1. Overview

Description below is for full sealed lithium thionyl chloride cylindrical battery provided by XKTD (hereinafter referred to battery).

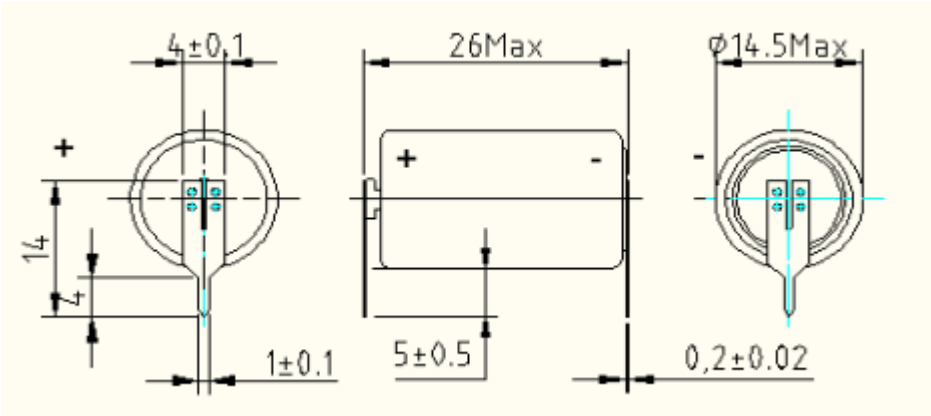
2. Structure and appearance:

2.1 Structure:Lithium thionyl chloride electrolyte and cathode, the activated carbon is anode carrier, diaphragm, stainless steel (shell) and glass-insulation cover group

2.2 Appearance:Visual ER14250 battery shall not have depression, bumps, rust or leakage. Mark must be clear.

3. Electrical characteristics:

No.	Item	Characteristics
3.1	Model	ER14250
3.2	Nominal voltage	3.6V
3.3	Nominal capacity	1.2Ah（Conditions:0.5mA,+20℃，end voltage 2.0V） Notes:Battery capacity will be different according to the discharge current,environment temp. and end voltage
3.4	Max.constant current	25mAh(+20℃Capacity will be 50% as per nominal capacity，end voltage 2.0V。Can provide more higher current,details consult with XKTD）
3.5	Max.pulse current	50mA[discharge according to pulse characteristics frequency,continue time）temperature,battery state(storage before use)and it is different as the lowest voltage accepted by device]
3.6	Max.dimension	φ14.5mm×25.2mm（actual）
3.7	Operating temp.	-55℃~+85℃
3.8	Approx.weight	11g
3.9	Battery volume	4.81 cm^3
3.10	Storage lifetime	10 years



4、 Technical index and safety characteristics：

4．1 Technical index:

NO.	Item	Test condition	Index
4.1.1	OCV	20±2℃	3. 64V
4.1.2	Load voltage	20±2℃，330Ω	Within 5S≥3.32V
4.1.3	Capacity	0.5mA constant discharge current	1100-1200mAh
		10mA constant discharge current	800-1000mAh
		10mA constant discharge current after storage 72 hours in 85℃	800-950mAh
4.1.4	Leakage characteristic	Test in 1-4	No electrolyte leakage
4.1.5	Deformation	Test in 1-4	Cell size not over standard

4.2 Safety characteristics：

No.	Item	Test method	Standard

4.2.1	Temp.cycle	Battery is put on alternately temp.- 30 ℃ and + 60 ℃ 5 times, continue 4 hours towards each kind of temperature. While ready to move the battery from one temperature environment into another temperature environment, put in room temperature for 8 hours. Battery under +25 ℃ temperature, discharge at rated speed when stably, keeping record of battery voltage situation during discharge. There is not change in battery voltage and battery capacity,and battery without leakage phenomenon.	related test in UL***
4.2.2	Free drop	Each side drop 2 times (total 6 times, sample can put literally), drop from 1 m high fall to ground, no explosion or catch fire in the experiment.	Related to test of IEC***
4.2.3	Short-circuit performance in room temp.	Battery do spot welded with nickel in positive and negative side,then short circuit discharge for 24 hours, the effective resistance is about 0.005Ω,checking the battery during this period,there is no explosion, fire. Battery surface instantaneous temperature shall not exceed 150 + 2 ℃	Related to the test of UL*
4.2.4	Reverse charging performance	Put battery with wire in explosion protection box, the tester is setting in 200mA, reverse constant current charging the battery for 24 h. Checking the situation during 24 hours,there is no explosion, fire. Tester:Well brand.	Related to test of UL* and IEC***

5.Transportation

ER14250 battery is in accordance with the United Nations"transport dangerous goods rules" (Ref. ST/SG/AC. 10/1 rev. 12-2001), the lithium content is less than 1 g, rated as non-dangerous goods transportation.

6.OQC inspection

Before shipment,100% inspection to ER14250 battery open circuit voltage (OCV) and load voltage, appearance and size. Sampling inspection to battery capacity..

7. ER14250 battery finished products inspection standard.

7.1 Appearance

1.The steel case without ballooning at the bottom of cell, battery (especially pay attention to the positive core and the sealing) without leakage phenomenon.

2.At the bottom of the steel case without any dimple phenomenon.

3.At the bottom of the steel case, no rust, welding scar.

4.Product identification is clear, no ghosting or blur.

7.2 Dimension

Use vernier caliper (accuracy of 0.02 mm) measuring battery dimension. The maximum diameter is 14.5 mm , the maximum height is 25.2 mm.

7.3 Performance checking

The performance of the battery test with four and a half digital multimeter. Reference as following standard.

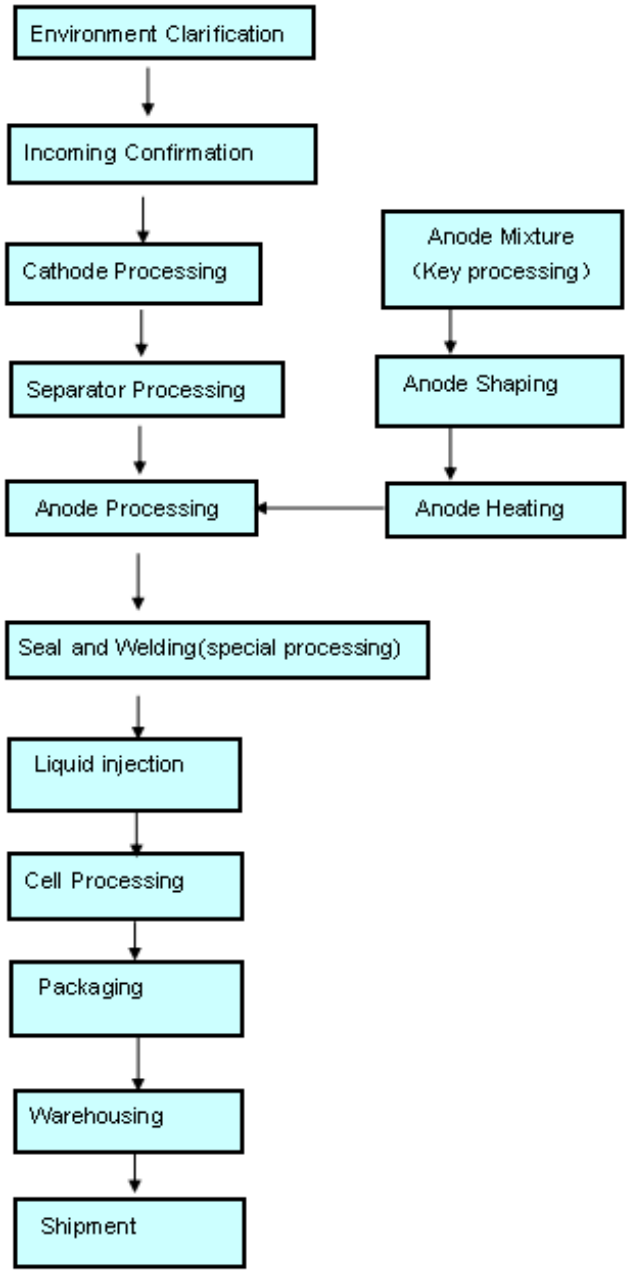
1.OCV≥3.6V

2.Load voltage:Resistance 330Ω,load voltage≥3.32V.

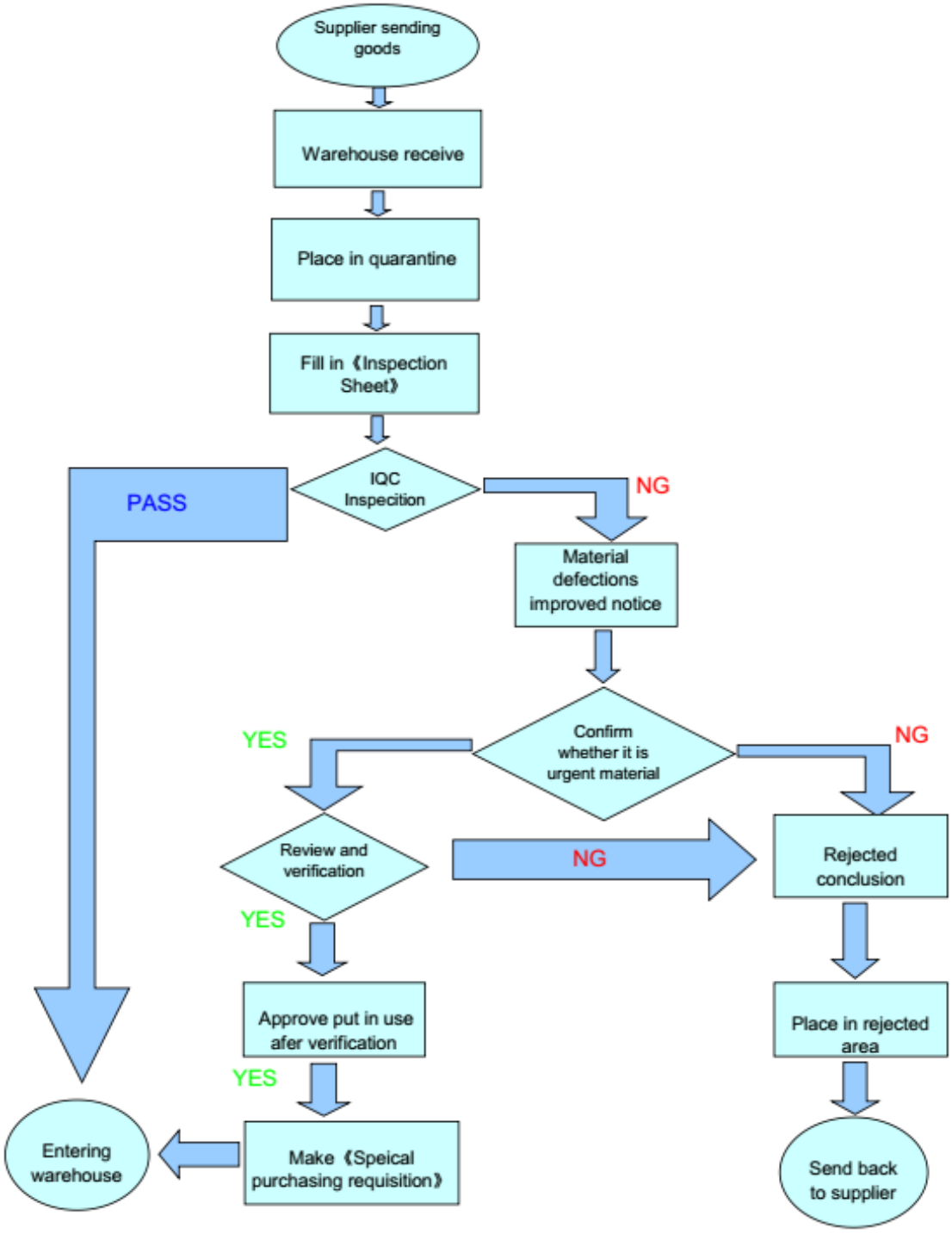
3.Room temp.23±2℃,10mA(330Ω)discharge,end voltage 2.0V,capacity≥800mAh.

8. Appendix

8.1 Battery production process(ER series)

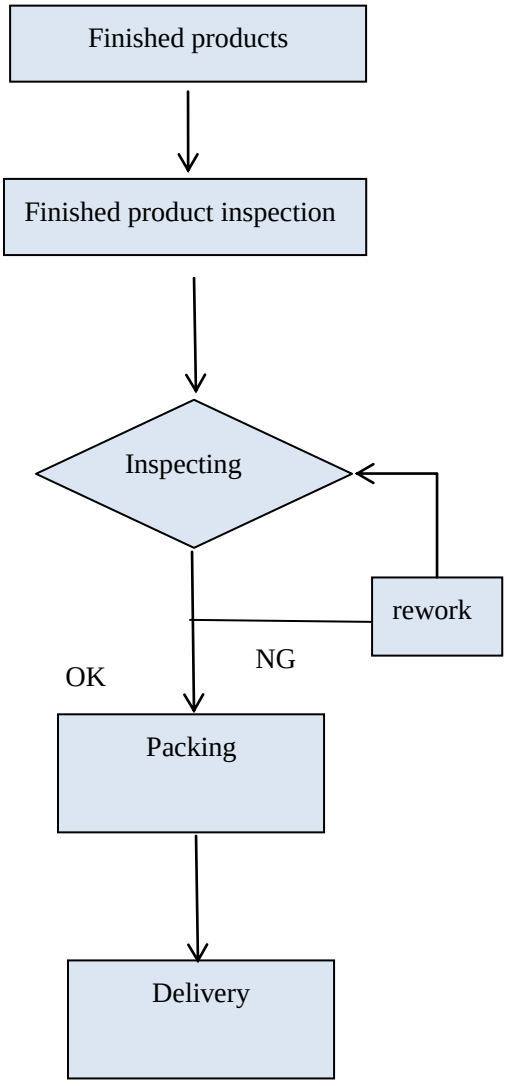


8.2 Material incoming inspection procedure

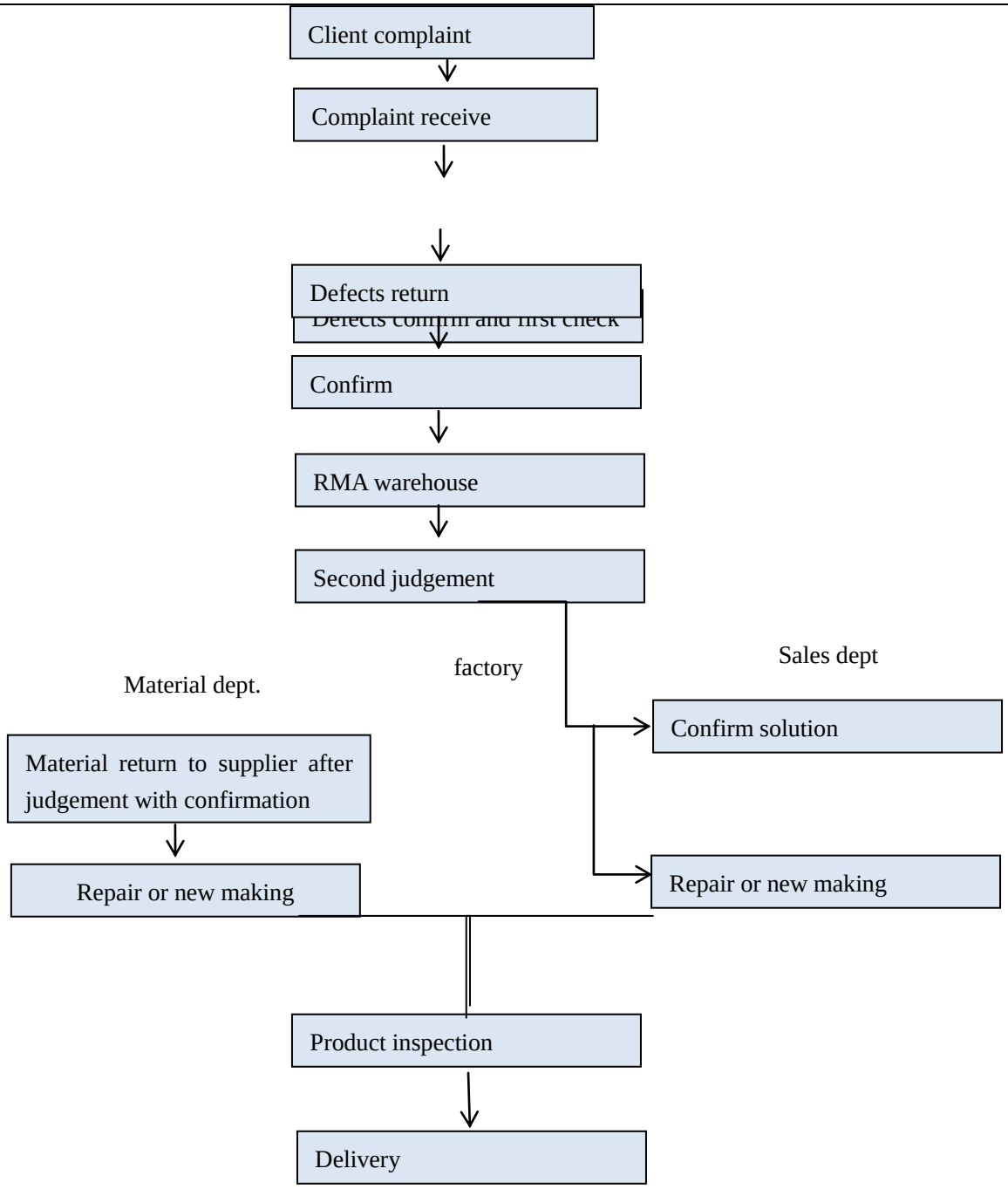


8.3 Finished products inspection

Finished product inspection is the final quality control of the product before out of the factory, and the product will be displayed in front of the user. Our company will do the sampling inspection about appearance,performance,drop on finished products according to standard GB2828. Full inspection on unqualified batch,in order to eliminate all defects.Drop test to finished packed products to make sure the product performance will not be changed during transportation and handling.



8.4.RMA process


Client complaint
Complaint receive
Defects return
Confirm
RMA warehouse
Second judgement
factory
Sales dept
Material dept.
Confirm solution
Material return to supplier after judgement with confirmation
Repair or new making
Repair or new making
Product inspection
Delivery

8.5.Packing

1.Plastic plate:1000pcs/plate

2.10 plates/carton

3.Carton dimension:280*235*320

4.G.W.:12KGS/carton

9.WARNING

Safety

•Do not remove the cells from their original packing before use.

• Do not store the cells in bulk in order to avoid accidental short circuit.

• Do not disassemble.

• Do not recharge.

• Do not solder directly in the cell.

• Do not mix new and used cells or cells from different origins.

• Respect the polarities of the cell.

Sentences on cell Fire, explosion, and severe burn hazard. Do not recharge, crush, disassemble, heat above 212°F (100°C) or incinerate. Keep battery out of reach of children and in original package until ready to use.

Dispose of used batteries promptly

Test samples from XKTD:10mAconstant current， capacity is 850mAh