

# Walk in Battery Explosion Proof High & Low Temperature Chamber





**Energy Conservation** 

Remote network system

**Circuit System** 

Why does battery heat, fire and explosion? What will happen under such phenomenon?



Burn somebody directly or decrease the insulation performance of components security and make the flammable liquid ignition.



Burn somebody directly, or may cause products with battery fire.

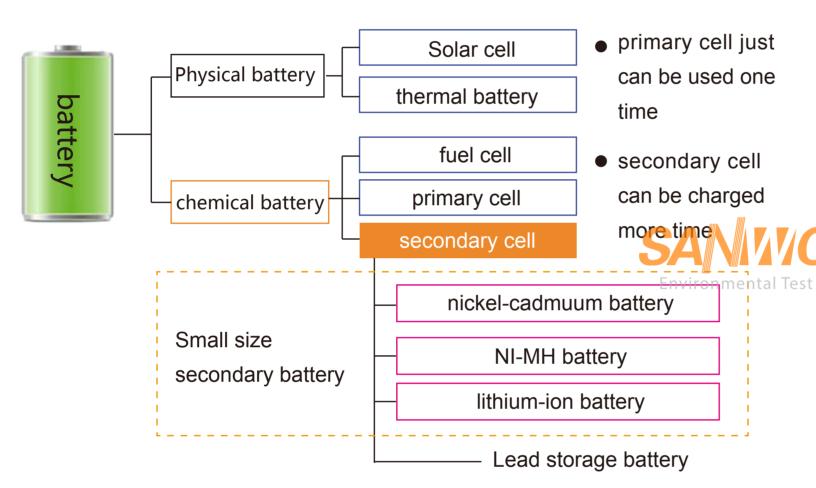


Harm somebody directly or damage equipment

# What test should be battery made?

## Secondary battery environmental test

# Battery type



# Lithium-ion batter advantages:

#### Small size

• portabilityenergy density, with same capacity, its weight is only half of the nickel cadmium battery and nickel metal hydride batteries, its volume just 20 to 50% of them.

• Its action voltage is 3 times to nickel cadmium battery and nickel metal hydride battery, the machine just nedd equipped with a few batteries, small size and portablity.

#### Continuous charge

• can be charged and discharged under any condition and stock reservoir which will not reduce energy

capacity to continuous charging.

#### Safety and environmental protection

- Over-charging ability and over-thermal safety.
- No cadmium, lead, mercury, etc.

# Environmental test necessity and test method

## The necessary reason for environmental test

With econdary battery widely
used, the environment
will also be changed as
mobile phones, computers,
household appliances,
electric tools, automobile
such area change

## **Necessary test**

Secondary battery applied in chemical reaction, and chemical reation affected by environment (especially the temperature) a lot

	Low/High Temp. Performance Test	preservation test	Charge/discharge test	Transport test
	charge or discharge under different environmental temperature to check secondarybattery performance under such temperature condition	Under specific environment to long-time use battery and test battery leakeage and safety performance	under specific environment to charge/discharge battery repeatedly and check every battery performance	Simulate air transport, road transport (UN) specification
	Temperature requirement: any point from-30~30C (according to the temperature range of battery type and usage)	Environmental Test Cham Temperature requirement: any point from -10~70C (according to the temperature range of battery type and usage)	Temperature requirement: any point from-30~30C (according to the temperature range of battery type and usage)	Vibration requirement: 7~18Hz/1G、18~200Hz/8G、 1.6,mmp-p、X、Y、Z 3 hour) Impact and shock requierment: accelaration 150G and maintain 6s on peak value



environmental test chambers



### • Options



VAnti heat accumulation device





**Explosion-proof** pressure relief



Hydrogen sensing device



**Explosion-proof** door lock





pressure relief device

CO2 tank

#### • Specifications

	Model	SMC-080-CC-WT	SMC-120-CC-WT	SMC-160-CC-WT	SMC-250-CC-WT	SMC-340-CC-WT	SMC-400-CC-WT		
	Temperature range	-65	-65℃~80℃(+15℃) (A:0℃~80℃;B: -20℃~80℃; C: -40℃~80℃;D:-65℃~80℃)						
	Temperature fluctuation	±0.5℃							
Tomporatura	Cooling rate	80.0 $^\circ$ C $\sim$ -65.0 $^\circ$ C Within 110mins (Liner or nonlinear: $1.0^\circ$ C $\searrow$ $3.0^\circ$ C $\searrow$ $5.0^\circ$ C $\searrow$ $10.0^\circ$ C $\checkmark$ $15.0^\circ$ C/min)							
Temperature	Heating rate	-65.0℃~80.0℃ Within 70mins (Liner or nonlinear: 1.0℃、3.0℃、5.0℃、10.0℃、15.0℃/min)							
	Temperature uniformity	±2.0°C (-40.0°C~80.0°C)							
	remperature uniformity	±2.5℃ (-40.0℃~-65.0℃)							
	Humidity control range	20.0%RH~95.0%RH							
Humdiity	Humidity fluctuation	±1.5% RH							
	Humidity uniformity	±3.0%RH							
	Internal material	Stainess steel(SUS304)							
	External material	Cold rolled steel sheet / powder spraying							
	Heat insulating material	100mm thickness polyurethane plate $\pm$ 10mm thickness mineral wool							
	Fan	Centrifugal blower							
Material	Compressor	Semi-closed Germany Bock, Germany Bitzer							
Material	Condenser	Environmental Test Chambers							
	Refrigerant	R404A、R23、R508							
	Evaporator	Fin - and - Tube Heat Exchanger							
	Heater	Nickel chromium alloy heating wire							
	Humidifier	Steam humidifier							
	Standard configuration		2 <b>Φ</b> 100 <b>Μ</b>	IM pressure relief po	ort, 4 explosion-proo	d chains			
	Multipoint temperature	Adopts Sanwood developed controller, which can be used to acquire surface temperature points of multiple products							
Options	C02 fire extinguisher	Automatic fire extinguishing and automatic shutdown of the machine to protect the equipment from burning							
	C0, H2 gas detector	When the battery will produce gas, it will detect gas solubility and discharge to outdoor when it exceeds the standard							
	Exhaust valve		When the test sample produces harmful gas, ventilate and exhaust internally						
	Interior size(mm)	1970*2100*1970	3020*2100*1970	4070*2100*1970	3020*2100*4070	4070*2100*4070	5120*2100*4070		
Size	Outer size(mm)	2170*2350*3500	3220*2350*3500	4270*2350*3500	4650*2350*4270	5720*2350*4270	5320(*2350*6150		
	Volume (m <sup>3</sup> )	8.0m³	12.0m³	16.0m³	25.0m³	34.0m³	40.0m <sup>3</sup>		
P	ower supply	380V AC 50/60Hz	380V AC 50/60Hz	380V AC 50/60Hz	380V AC 50/60Hz	380V AC 50/60Hz	380V AC 50/60Hz		
	Controller	Standard: South Korea TEMI-1500 Optional: South Korea TEMI-2500, South Korea TEMI-2700							

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