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No. B.V-7-C/2025-26-C(L-Bty)-QR Cell

Dated, the 27 Nov'2025

Subject: - REQUEST FOR COMMENTS OF STAKEHOLDERS /OEM/FIRMS ON DRAFT QRs/TDs OF "LITHIUM BATTERY FOR HAND-HELD RADIO SET" REGARDING.

1. The Draft QRs/TDs of "Lithium Battery for Hand-Held Radio Set" is attached as **Appendix 'A'**. The OEMs/Vendors are requested to forward information of the product, which they can offer and also forward correct specifications of their system against each parameter. Only complied or not complied remarks will not be accepted. The firms are also requested to furnish the following details: -

- Whether you are OEM/Vendor?
- If vendor details of OEM.
- Authorization certificate from OEM.

2. The required information/details may please be forwarded at the following addresses by 19 **November'2025**.

Communication Directorate, CRPF

East Block-7, Sec-1, R.K. Puram, New Delhi-110066

Email: comncell@crpf.gov.in

3. An early response is requested.

(Megh Raj)

DIG (Equipment)
Communication & IT Branch
Directorate General, CRPF

DRAFT QRs/TDs OF LITHIUM BATTERY FOR HAND-HELD RADIO SET

SLNo	Parameters	Specification	Trial Directives
1	Application	Use with VHF/UHF Hand Held Radio Set (Type & Model of Radio Set for which battery required will be decided by user organization during procurement)	The BOOs will check physically and practically by fitting in required radio set & its charger and will ensure that battery is as per their requirement
2	Electrical		
	a) Type of Battery Chemistry	Lithium-Ion/Polymer (Chemistry of battery will be decided by user organization during procurement)	The BOOs will check physically that type of chemistry of battery produced by the firm is as per tender specification and firm will submit OEM Certificate.
	b) Rated Capacity	Minimum 2000 mAH or higher capacity (as per user requirement)	The BOOs will check practically capacity of battery with the help of standard testing instruments and will ensure that it is as per tender requirement
	c) Voltage	Should be compatible with radio sets	The B.O.Os will ensure that voltage of battery as per specification by measuring with the help of standard measuring instrument
3	Minimum charging cycle	500 or more	Firm will provide OEM Certificate
4	Mechanical		
	a) The battery casing should be made of high strength Polycarbonate/ABS blend		The BOOs will check it physically as well as firm will provide certificate of Govt / NABL/ STQC approved Lab about used material in power pack casing.
	b) The Battery casing should be bonded by ultrasonic /Laser/ Vibration welding.		The BOOs will check physically.
	c) The Cell are inter connected by spot-welded through necessary circuit.		Firm will provide a loose battery during sample evolution for checking the internal connection
	(d) Easy insertion of Battery with radio set/charger with proper latching		The BOOs will check it physically by inserting it in Radio set as well as in battery charger.
	e) The Battery should be equipped with rust proof spring loaded belt clip.		The BOOs will check it physically.
5	Protection :- Battery should be equipped with protection circuit to protect from – Over Temperature, Short Circuit , Reverse Polarity , Over voltage & low voltage etc.		The BOOs will check practically that battery is provided with safety circuit for all parameters. As well as firm will provide certificate of Govt / NABL/ STQC approved Lab
6	Description :- i) The sleeve of cells used should preferably indicate the following: - Part Number/Month & Year of Manufacturer/ Voltage of cell/ Capacity of cell/ Country of cell. ii) The Label of the battery should be self-destructive type and specified the following: - Battery Voltage/Capacity/Chemistry of cell/Part number of Battery/Suitable Model of Radio Set/Serial number of battery/Month & Year of Manufacturer iii) Trade Mark Logo of the firm to be embossed/heat stamped. iv) Clear Instruction shall be given “To Charge the		The BOOs will check physically that description mentioned at para 6 i) to iii) is available on battery.

	battery on suitable chargers”	
7	The Battery should pass the following Environment Tests mentioned as under as per JSS 55555 or any equivalents Indian standard followed by Capacity Test @ C/5 Rate. 1. Equipment shall be suitable for operation in the following environmental conditions : a) Operating Temp Range : -10°C to +55°C b) Storage Temp Range : -40°C to +70°C c) Relative Humidity : 95% Max at +40°C non-condensing 2. Tests to be conducted & Conditions of tests as per JSS 55555 a) Damp Heat (Cyclic) (Test No 10): 40°C ± 2°C with a RH 93±3 % for 16 hours b) High Temp (Test No. 17) under test condition K : 55°C ±3°C followed by storage at 70°C ±3°C c) Low Temp (Test No 20) Under test condition H :- -10°C± 3C° for 24 hrs for operation and Under test condition (L) -40°C± 3C° for storage. d) Drop Test (Test No 13): under condition (F) drop height 1000mm e) Vibration Test (Test No 28): Sinusoidal vibration with a freq range of 5 to 350Hz at either 2g acceleration or a ± 6mm Displacement for 2 hours in each direction 3. Environmental test Report with equivalent or superior conditions would be acceptable 4. The functional and permissible degradation shall be as under: - No degradation in battery capacity when measured at c/5 Rate.	The BOOs will check the Environmental test certificate submitted by the firm and will ensure that these test have been carried out as per specification in Govt / NABL approved /STQC accredited Lab about
8	BIS Certification: Required as per IS 16046 (Part-2): 2018/IEC 62133-2:2017 or as per latest update/Standards	Certificate from BIS recognized/ Empaneled Lab.