

भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
ब्लाक संख्या . 10, सीजीओ काम्पलैक्स, लोधी रोड, नई दिल्ली-03
(Email-comdtord@bsf.nic.in)
(Fax: 011-24367683)

संख्या. पी-63013/60/2022/मोड-1/सीसुबल

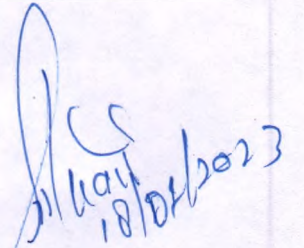
दिनांक 18 जनवरी 2023

विषय : Thermal Weapon Sight- Revision के ड्राफ्ट गुणात्मक आवश्यकता/परीक्षण निर्देशों पर हितधारकों/निर्माताओं/विक्रेताओं की टिप्पणी के लिए अनुरोध।

1. Thermal Weapon Sight- Revision के प्रस्तावित गुणात्मक आवश्यकता और परीक्षण निर्देशों को परिशिष्ट 'ए' के रूप में संलग्न किया गया है। हितधारकों/निर्माताओं/विक्रेताओं से अनुरोध किया जाता है कि वे उस उत्पाद की विस्तृत एवं स्टीक जानकारी दें। साथ ही प्रत्येक पैरामीटर के अनुरूप अपने उत्पाद के सही विवरणों को प्रस्तुत करें। सिर्फ 'अनुपालना' या 'अनुपालना नहीं' वाली टिप्पणी स्वीकार नहीं की जाएगी।
2. आवश्यक जानकारी/विवरण 03 फरवरी 2023 तक निम्नलिखित पते पर भेजे जा सकते हैं।

रसद निदेशालय, सीमा सुरक्षा बल
लेवल-8, ब्लाक-10,
केन्द्रीय कार्यालय परिसर, लोधी रोड,
नई दिल्ली-110003
ईमेल:- comdtord@bsf.nic.in

3. शीघ्र प्रतिक्रिया का अनुरोध किया जाता है।


(दिनेन्द्र सिंह पौवार)
उप कमांडेण्ट (आधुनिकीकरण)

Government of India
Ministry of Home Affairs
Directorate General Border Security Force
(Prov Dte: Mod Cell)
Block No.10, CGO Complex, Lodhi Road, New Delhi-03
(Fax: 011-24367683, Email-comdtord@bsf.nic.in)

No. P-63013/2022/Mod-I/BSF/

Dated, the 18 Jan 2023

Subject : Request for comments of stakeholders/OEM/Firms on QRs (Qualitative Requirements) & TDs (Trial Directives) of "HHTI-Uncooled"

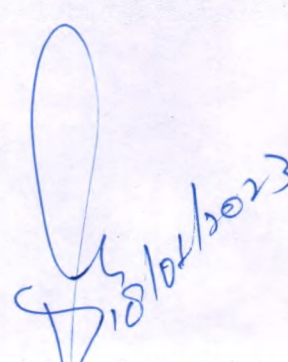
1. The revised QRs/TDs "Thermal Weapon Sight- Revision" is attached as Appendix 'A'. The OEMs/Vendors are requested to forward information of the product, which they can offer and also forward correct specifications of their system against each parameter. Only complied or not complied remarks will not 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.
- Original catalogue of the product
- Brochure/Literature of the product

2. The required information/details may please be forwarded at the following addresses by 03 Feb 2023

Directorate General BSF,
Level-8, Block No. 10,
CGO Complex, Lodhi Road,
New Delhi-110003
Email: comdtord@bsf.nic.in

3. An early response is requested.


(Digendra Singh Panwar)
Dy. Commandant (Mod)

DRAFT QRs/TDs OF THERMAL WEAPON SIGHT- REVISION

S/N	Parameters	Qualitative Requirements	Trial Directives	Result expected/desired	Complied/ Not complied.
1.	General	A Thermal weapon sight (Un-cooled) is a light weight and military standard rugged sight.	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
2.	Options for TWS (User will define the weapon and caliber for which they are procuring the TI sight at the time of tender.)	(i) LMG version (ii) Rifle version	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
3.	Non Uniformity correction (NUC)	Sight should have manual and automatic (shutter less technology) feature in it.	Firms to provide OEM certificate in this regard and BOO to physically check the NUC feature.	It should be as per specification mentioned in the QRs	
4.	Size dimension	(i) LMG version-225 (L) x 100(W) x 90(H) (ii) Rifle version – 180 (L) x 100(W) x90(H)	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
5.	Field of View	(i) LMG version –Entire range between 10.6° x 8° and 2.65°x 2° (ii) Rifle version – Entire range between 12° x 9° and 4° x 3°	OEM to provide certificate in respect of the same. BOO to physically check the parameter at SIW, BSF or any other Indian government agency.	It should be as per specification mentioned in the QRs	
6.	FPA Resolution	640 x 480 or better with 12 micron or better.	OEM of micro bolometer to provide certificate in respect of the same. BOO to check the certificates.	It should be as per specification mentioned in the QRs	
7.	Range	(i) LMG version Detection- 1000m (minimum) Recognition- 600m (ii) Rifle version	Human target must be detected from a distance of 1000m minimum clearly and should be recognized from a distance of 600	It should be as per specification mentioned in the QRs	

S/N	Parameters	Qualitative Requirements	Trial Directives	Result expected/desired	Complied/ Not complied.
		Detection- 800m (minimum) Recognition- 400m (minimum)	meter minimum clearly. (For LMG version) Human target must be detected from a distance of 800m minimum clearly and should be recognized from a distance of 400 meter minimum clearly. (For Rifle version) BOO to physically check the same.		
8.	Weight	(i) LMG version - Maximum weight should not be more than 1 kg with battery and mounting adapter, OG cover and Eye cup. (ii) Rifle version - Maximum weight should not be more than 750 gm with battery and mounting adapter, OG cover and Eye cup.	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
9.	Diopter Adjustment	-4D to +2D or better	To be physically checked by BOO at SIW, BSF or any other Govt. agency.	It should be as per specification mentioned in the QRs	
10.	OLED Resolution	800 x 600 or better	OEM certificate in respect of the same. BOO to check the certificates.	It should be as per specification mentioned in the QRs	
11.	Spectral Range	8 to 14 μ m.	OEM certificate in respect of the same. BOO to check the certificates.	It should be as per specification mentioned in the QRs	
12.	Sensor/ Detector	12 micron detector or better. (Micro bolometer or better technology)	OEM of micro bolometer to provide certificate in respect of the same. BOO to check the certificates.	It should be as per specification mentioned in the QRs	

S/N	Parameters	Qualitative Requirements	Trial Directives	Result expected/desired	Complied/ Not complied.
13.	Frame Rate	50 fps or better.	Firm to provide OEM certificate in respect of the same.	It should be as per specification mentioned in the QRs	
14.	Eye Relief	Not less than 50mm	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
15.	Electronic Zoom	Should have following modes 1x, 2x and 4x.	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
16.	Reticule (User will define the weapon and caliber for which they are procuring the TI sight at the time of tender.)	(i) Fine cross hair with Centre Dot and stadimetric scale capable to zero the weapon in azimuth & elevation with resolution up-to cm level on target. There should be facility of changing the color of the reticule. (ii) The reticule pattern 200m, 400m and 600 meters should be provided for LMG version. (iii) The reticule pattern for 100m, 200m and 400 meters should be provided for rifle version.	Switch on the equipment and observe for reticule pattern confirmation with the facility of changing colour. Three different reticules i.e. 100, 200 and 400 meter should be physically checked by BOO for rifle version and 200, 400 and 600 meter for LMG version.	It should be as per specification mentioned in the QRs	
17.	Firing Accuracy (a) Wpn types will be informed by User at Tender stage. (b) Amn to be provided by User for Zeroing & Test fire.	a) Zero the sight with the weapon at 100 m . Reasonable time to be given to firms for zeroing. b) After zeroing, sights to be checked by firing at 100, 200 and 400 meter range for rifle version by using respective reticules. For LMG version, sights to be to be checked at 200, 400 and 600 meter range.	To be physically checked by BOO.	It should be as per specification mentioned in the QRs	

S/N	Parameters	Qualitative Requirements	Trial Directives	Result expected/desired	Complied/ Not complied.
		<p>c) Their accuracy shall be checked by firing 10 Rds at 4x4 target at 100, 200 and 400 meter range for rifle version by using respective reticules. For LMG version, sights to be to be checked at 200, 400 and 600 meter range.</p> <p>d) The weapon should be able to hit min 80% shots from 100 meter range, 60% shots from 200 meter range and 50% shots from 400 meter range on 4x4 target. For LMG to hit min 80% shots from 200 meter range, 60% shots from 400 meter range and 50% shots from 600 meter range.</p> <p>To be physically checked by board of officers.</p>			
18.	Focusing	10 m to Infinity	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
19.	Reticule polarity	Sight should have dual colour (Black/White) digital reticule or better.	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
20.	Locking Mechanism (Picatinny rail)	<p>(a) It should have locking arrangement for quick attachment and detachment. Time < 1 min without any extra tools.</p> <p>(b) It should have a rugged locking mechanism compatible with Mil Std 1913 rail. (Optional)</p> <p>(c) If user also wants the locking attachments of sight on their existing weapons additionally,</p>	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	

S/N	Parameters	Qualitative Requirements	Trial Directives	Result expected/desired	Complied/ Not complied.
		same may be mentioned at the time of indent. (optional)			
21.	Features and Operational Switches	Brightness & contrast control, Black hot & White hot, NUC, reticule toggle option, Power On/Off.	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
22.	Carrying Case	(a) <u>Soft Carrying Case</u> :- Firm to provide a soft carrying case complied to IPx5 along with each sight. (b) <u>Hard Carrying Case</u> :- Firm to provide a rugged hard carrying case, which will sustain a drop test from 2m height on a hard surface. No deformation and breakage of box is acceptable. Sight to be checked for operational use post drop test.	Firm to provide National/NABL accredited lab cert for Soft carrying case and BOO to physically conduct the Drop Test for Hard carrying case.	It should be as per specification mentioned in the QRs	
23.	Black Hot White Hot Mode	The equipment must work effectively and be successfully be able to show image in Black hot and white hot mode.	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
24.	Ruggedness	QR:- (a) Weapon system should be ruggedized as per latest- mil Std 810 H or JSS 5555/JSS 5855 for following test: - Shock test. -Vibration. -Bump. -Thermal shock. -Humidity. -Low pressure (altitude)	Certificate from by Indian Govt lab/National accredited lab certificate. BOO to physically check the (c) point with the weapon at firing range by firing 100 rounds in burst mode with small and long burst. If sights went off during firing. It should be treated as major defect and	It should be as per specification mentioned in the QRs	

S/N	Parameters	Qualitative Requirements	Trial Directives	Result expected/desired	Complied/ Not complied.
		<p>(b) Should be IP-67 complied.</p> <p>(c) Should be able to withstand sustained firing with the weapon without any effect on zeroing optics of sight after firing 100 rds in burst mode.</p>	consider as failed.		
25.	Initialization Time	Time < 30 Second	To be physically checked by board of officers. Equipment shall be ready to engage target in less than 30 seconds.	It should be as per specification mentioned in the QRs	
26.	Visibility	Must be able to penetrate through fog, smoke and complete darkness	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
27.	Battery	Commercially available rechargeable lithium based battery with min endurance time of 6hrs on single/set of battery.	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
28.	Bty Charger	<ul style="list-style-type: none"> • A universal charger operating between 100V to 270 V AC main and 12 to 48 V DC (entire range). • Should be able to charge battery fully in less than 4 hrs. • The charger should be able to show the charging status of battery along-with an auto-cut system to avoid over charging. • 	To be physically checked by board of officers.		
29.	Low Battery Indicator	Low Battery indication status to be displayed on OLED/screen.	To be physically checked by BOO.	It should be as per specification mentioned in the QRs	

S/N	Parameters	Qualitative Requirements	Trial Directives	Result expected/desired	Complied/ Not complied.
30.	Spare Battery	For multi-day/long operation, it must provide 03 set of spare batteries to be provided by the firm.	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
31.	Operating Temperature	-20 ⁰ C to +50 ⁰ C ($\pm 3^0$ C)	Test Certificate from Indian Govt lab/National accredited lab certificate.	It should be as per specification mentioned in the QRs	
32.	Storage Temperature	-30 ⁰ C to +55 ⁰ C ($\pm 3^0$ C)	Test Certificate from Indian Govt lab/National accredited lab certificate.	It should be as per specification mentioned in the QRs	
33.	Warranty min 02 years & shelf life of 10 years.	An undertaking in this regard must be obtained by the firm.	Warranty of min 02 year and shelf life of 10 years.	It should be as per specification mentioned in the QRs	
34.	Technical Literature	User Hand-book, operating manual and technical manual to be provided.	To be physically checked by board of officers.	It should be as per specification mentioned in the QRs	
35.	Spare part list	Illustrated spare part list along with photograph and cat part number to be provided.	To be physically checked by BOO.	It should be as per specification mentioned in the QRs	
36.	Training : Operational & Repairs	(a) Operational user training for 3 days to be provided for at-least 50 persons at location decided by indenter. (b) Base level Repair and maintenance training should be provided at-least to 5 technicians for 1 week at firm premises.	Firm to provide OEM certificate for the same.	It should be as per specification mentioned in the QRs	
37.	Minimum Temperature (MRTD) Resolvable Difference	Value to be specified by the OEM of the equipment.	OEM to provide CoC (Certificate of Confirmation) for the same	It should be as per specification mentioned in the	

S/N	Parameters	Qualitative Requirements	Trial Directives	Result expected/desired	Complied/ Not complied.
			and BOO to check correctness of the certificates.	QRs	
38.	Misc (To be specified by User if required)	(a) Purging kit to be provided by the firm. (Quantity to be decided by User at tender stage) (b) Acceptance Test station for Base level repair to be provided by Firm. (Quantity to be decided by User at tender stage)		It should be as per specification mentioned in the QRs	

तकनीकी विशेषज्ञों के उप समूह द्वारा यह निश्चित किया गया है कि उक्त गुणात्मक आवश्यकता को अधिक बेहतर बनाने के लिए गृह मंत्रालय एवं सीमा सुरक्षा बल की वेबसाईट पर विक्रेताओं/फर्मों के सुझाव प्राप्त करने हेतु 15 दिनों के लिए अपलोड किया जाए।

नोट - सभी विक्रेताओं/फर्मों से निवेदन है कि अपने सुझावों के साथ निम्नलिखित कागजात संलग्न कर ई-मेल पता comdtord@bsf.nic.in पर भेजने का श्रम करें:-

1. उत्पाद की वास्तविक विवरण पुस्तिका।
2. उत्पाद की साहित्यिक रचना का ब्यौरा।
3. गुणात्मक आवश्यकताओं के उपर व्यापक टिप्पणीयों।

(दिगेन्द्र सिंह पेंवार)
उप कमांडेण्ट (आधुनिकीकरण)