

संख्या. पी-63013/171/01/2022/मोड-1/सीसुबल 814-23

भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
(Email-comdtord@bsf.nic.in)
(Fax: 011-24367683)

ब्लाक संख्या . 10,
सीजीओ काम्प्लैक्स,
लोधी रोड, नई दिल्ली-03

दिनांक 14 मार्च 2023

सेवा में,

महानिदेशक :- आसाम राईफल (through LOAR) , केन्द्रीय ओद्यौगिक सुरक्षा बल,
केन्द्रीय रिजर्व पुलिस बल, भारतीय तिब्बत बोर्डर पुलिस, सशस्त्र सीमा सुरक्षा बल,
राष्ट्रीय सुरक्षा गार्ड एवं पुलिस अनुसन्धान एवं विकास ब्योरो

विषय :- अनुमोदित गुणात्मक आवश्यकता/ परीक्षण निर्देशों का प्रेषण।

तकनीकी विशेषज्ञों के उप समूह द्वारा किए गये पुनः सूत्रीकरण एवं महानिदेशक सीमा सुरक्षा बल द्वारा अनुमोदित " PNV Goggles" उपकरण के पुनः सूत्रीकरण गुणात्मक आवश्यकता/परीक्षण निर्देशों को आपकी अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।

3. दे. सिंह
14/3/23

(इन्द्र देव सिंह)
उप महानिरीक्षक (रसद)

प्रतिलिपि:-

1. तकनीकी निदेशक : आपसे अनुरोध है कि उक्त उपकरण के पुनः सूत्रीकरण
The Technical Director गुणात्मक आवश्यकता/परीक्षण निर्देशों को गृह मंत्रालय की
राष्ट्रीय सूचना-विज्ञान केन्द्र, नोर्थ वैबसाईट [MHA website Division of MHA+ -Police
ब्लाक, गृह मंत्रालय, नई दिल्ली Modernization Division- Qualitative Requirements-
NIC, North Block, MHA Qualitative Requirements of Machinery & Eqpt Items
New Delhi (द्वारा ई-मेल) with Surveillance item] पर अपलोड करें एवं उक्त
(ई-मेल पता: mpsugandhi@nic.in) उपकरण के पुराने गुणात्मक आवश्यकता/ परीक्षण निर्देशों
जोकि गृह मंत्रालय की वैबसाईट [MHA website
Division of MHA+ - Police Modernization Division -
Qualitative Requirements- Qualitative Requirements of
Machinery & Eqpt Items with Surveillance item] कम
संख्या-119 पर अपलोड है को हटाने का श्रम करे।
2. SO (IT), North Block, MHA : कृपया उपरोक्तानुसार कार्यवाही करने का श्रम करे।
(Through E-mail)
(E-mail address: soit@nic.in)
3. तकनीकी विंग, सीमा सुरक्षा बल : आपसे अनुरोध है कि उक्त उपकरण के गुणात्मक
आवश्यकता/ परीक्षण निर्देशों को सीमा सुरक्षा बल की
वैबसाईट पर अपलोड करने का श्रम करें।
4. फाईल

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Appendix-"A"

QRS & TDS OF PNV GOGGLES- REVISION

S/ No	Parameter	Specification	Procedure suggested for Trial	Result expected / Desired																
1.	Weight	Maximum 600gm including cell/ batteries	Measure the weight of the Goggle including cells or battery with the help of calibrated weighing machine	Should not be more than 600 gm including cells/batteries.																
2.	Image Intensifier Tube (II Tube)	<p>All parameters of II Tube mentioned below should be supported by certificate of II tube manufacturer and data sheet of each II Tube must be provided: -</p> <p>a) Resolution: 68 lp/mm or better b) Signal to Noise Ratio (SNR) 25 or better at 108 p lux. c) Mean Time to failure (MTTF): Minimum 10,000 operational hours. d) It should have inbuilt AGC/BSP. f) Permissible black spot level</p> <table border="1"> <thead> <tr> <th>Size of spot (in inches)</th> <th>Zone 1 (6m m)</th> <th>Zone 2 (6mm-15mm)</th> <th>Zone 3 (15mm-18mm)</th> </tr> </thead> <tbody> <tr> <td>0.003 to 0.006</td> <td>0</td> <td>1 (Max)</td> <td>2 (Max)</td> </tr> <tr> <td>0.006 to 0.009</td> <td>0</td> <td>1 (Max)</td> <td>1 (Max)</td> </tr> <tr> <td>>0.009</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Size of spot (in inches)	Zone 1 (6m m)	Zone 2 (6mm-15mm)	Zone 3 (15mm-18mm)	0.003 to 0.006	0	1 (Max)	2 (Max)	0.006 to 0.009	0	1 (Max)	1 (Max)	>0.009	0	0	0	<p>Send the equipment to verify/check the QRs part 2 (a), (b) & (f) to IRDE Dehradun or any other institution where such testing facilities is available and check the report submitted by the IRDE or other institution.</p> <p>The firm should submit OEM certificate/report in respect of QRs Para 2 (c) to (d) from original manufacturer of II tube.</p>	<p>The certificate/reports from IRDE Dehradun or any other institution and OEM must confirm the QRs Para 2 (c) to (d).</p>
Size of spot (in inches)	Zone 1 (6m m)	Zone 2 (6mm-15mm)	Zone 3 (15mm-18mm)																	
0.003 to 0.006	0	1 (Max)	2 (Max)																	
0.006 to 0.009	0	1 (Max)	1 (Max)																	
>0.009	0	0	0																	
3	Mount	Must be capable of being used as a hand-held viewer, face & helmet mounted. Light weight and rust proof adaptor should be provided with each equipment.	Fix the equipment on face with the help of mask/strap or head mount adaptors provided with the equipment. Again, fix the equipment on helmet with the help of helmet mounts	Equipment should be easily mounted on the face mask or strap or head mount and user friendly for hands free operation. It should also have the facility to																

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20/2/23

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S/ No	Parameter	Specification	Procedure suggested for Trial	Result expected / Desired
				be mounted on helmet with supplied/provided adaptor or mount and should be user friendly & comfortable
4	Ingress protection	IP 67 or better certificate.	Tighten the battery cover properly. The equipment should be immersed in one meter depth of water excluding the height/width of the equipment, for half an hour. Take out the equipment from the water container and switch ON after drying it. Firm will also submit NABL accredited lab certificate.	Wipe the equipment with a soft cleaning cloth and dry it externally. Check by opening the battery compartment and other external open able parts for ingress of water content inside. If it is found OK then insert the battery and switch ON the equipment. It should run properly and no water contents/wipes should be appearing on the view
5	Range (in star lit conditions without moon)	For Human being Detection- 250 meters or better Recognition- 150 meters or better For light commercial vehicle: Detection- 400 meters or better Recognition- 300 meters or better	Place two or three men in camouflage at the range of 250 meters and 150 meters in extended line formation and move them. (Light conditions should be checked by Lux Meter and value of light level is less than or equal to 10^{-3}) Again, place a light commercial vehicle at different angles at a distance of 400 meters & 300 meters for detection & recognition respectively. (Light conditions should be checked by Lux Meter and value of light level is less than or equal to 10^{-3})	Movement of human target should be detected at the range of 250 meters and recognized at 150 meters clearly. Similarly, Movement of vehicle should be detected at the range of 400 meters and recognized at 300 meters clearly. Note: Detection means presence of something is there, whereas recognition means what type of target is there and the type of movement.
6	Power source	i) Should be operable independently on primary and rechargeable cells and battery. The	i) Switch 'ON' the equipment by inserting two primary cells & two	i) The equipment should be operated independently on

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S/ No	Parameter	Specification	Procedure suggested for Trial	Result expected / Desired
		equipment is to be supplied with one set of commercially available primary & rechargeable battery. ii) The battery should run at least 10 hrs with IR and 20 hours on normal mode. iii) One commercially available charger with each goggle required with charging facility both AC volt and DC volt (2-in-one facility).	rechargeable cells in it one by one separately. Physically check the supplied/provided set of primary & rechargeable battery. ii) Switch 'ON' the equipment after inserting new cells or battery for 20 hours in normal ON mode. After this again switch ON the equipment for at least 10 hours in IR mode with fresh batteries. iii) Charger provided for charging batteries should be easily available in commercial market. Connect the charger on AC mains supply of 220 volt as well as on DC supply.	primary & rechargeable cells and battery. ii) Goggle should run at least 10 hours with IR and 20 hours on normal mode. iii) Rechargeable cells or battery should be charged with the charger provided on both AC Mains 220 Volt supply and on 12/24/36 volt DC supply.
7.	Must have Eye safe IR LASER illuminator for use in totally dark environment for recognition at a range of 125 meters or better.		Switch 'ON' the Goggle in IR LASER Mode in totally dark environment. Firm to provide NABL certificate for Class-I Eye safe.	A human target must be easily recognized in totally dark environment up to the range of 125m in IR mode.
8	Low battery indication	Low battery indication should be provided inside the Field of view (FOV)	Switch 'ON' the equipment on power supply and reduce the supply voltage linearly for low battery indication confirmation.	Low battery indication should be provided inside the FOV.
9.	Magnification	1 x or better	Fix the equipment on instrument testing scale of integrated test equipment and measure the magnification of the Goggle as per the procedure.	Magnification should be 1x or better.
10	Field of View.	40° or better	Fix the equipment on instrument testing scale of integrated test equipment and measure the Field of View as per the procedure	FOV should be 40 minimum

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S/ No	Parameter	Specification	Procedure suggested for Trial	Result expected / Desired
11	Diopter adjustment.	-4.5d to +4diopre or better	Measure the Diopter adjustment with the help of Diopter kit or apparatus	The Goggle should have Diopter adjustment from -4.5 to +4d or better.
12	Vision	Binocular vision with single II tube	Check the supporting documents provided by the firm.	Physically checked by BOO.
13	Operating temperature	-30° C to +55° C (should comply with MIL STD 810G)	Check the supporting documents provided by the firm.	An NABL lab certificate/report should be submitted by the firm.
14	Storage temperature	-30° C to +60° C	Check the supporting documents provided by the firm.	An NABL lab certificate/report should be submitted by the firm.
15	Carrying case	a) Each equipment should be supplied with a suitable hard carrying case.	a) Check physically the hard carrying case. Firm to produce accredited lab certificate for IP 65.	It should be contained in a hard carrying case (Hard) and Firm to produce accredited lab certificate for IP 65.
		b) Soft carrying case should be light weight water resistant	b) Soft carrying case to be light weight water resistant.	Must be soft carrying and to be light weight water resistant.
16	Environmental requirement	Goggle should confirm to JSS 55555 or Mil Std 810-G latest for humidity, shock, vibration, rain test etc. to be supported by NABL accredited laboratory certificate	Check the supporting documents provided by the firm.	An NABL accredited lab certificate/report should be submitted by the firm which confirms JSS 55555 or Mil Std 810-G for humidity, shock, vibration, rain test etc.
17.	Miscellaneous:	i) Purging kit be provided at the time of supply (quantity be specified by the user)	Not applicable at the time of technical / physical evaluation	Not applicable at the time of technical/physical evaluation
		ii) One additional set of battery be provided.		
		Cleaning kit be provided with each of the equipment	Not applicable at the time of technical / physical evaluation	Not applicable at the time of technical/physical evaluation
		Supplier to submit undertaking to provide spare parts for next 10 yrs. minimum from the date of supply.	Not applicable at the time of technical / physical evaluation	Not applicable at the time of technical/physical evaluation
		Technical manual/operational manual including repair manual of PNV Goggle.	Not applicable at the time of technical / physical evaluation	Not applicable at the time of technical/physical evaluation

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S/ No	Parameter	Specification	Procedure suggested for Trial	Result expected / Desired
		Repair & maintenance training should be arranged for at least 02 persons or 02 persons on 100 equipment for 01 week. The training should be conducted at field location for 02 days.	Not applicable at the time of technical / physical evaluation	Not applicable at the time of technical/physical evaluation

<i>R...</i> (B K Mehta), ADG (Log), BSF	<i>Happy Verma</i> 20/2/23 (Happy Verma), Comdt Ordnance, BSF	<i>Ak</i> (Ajeet Kumar), Comdt. (SIW), BSF	<i>Raveesh Kumar</i> (Dr. Raveesh Kumar), PSO(W), BPR&D
<i>Vans...</i> 20/02/2023 (K Saha), Aast. Director,DCPW	<i>Abhijit</i> (Abhijit Chakraborty) IRDE,DRDO,Dehradun, attended through VC	<i>Vinay Verma</i> (Vinay Verma), DC, CRPF	<i>Vijay Kumar</i> (Vijay Kumar), DC/E, CISP
<i>G...</i> 20/02/23 (Gajendra Saun), DC, ITBP	<i>Laxman</i> (Laxman), TC, NSG	<i>Gaurav Drall</i> (Gaurav Drall), AC, SIW, BSF	<i>Ajay Dhyani</i> 20/2/23 (Ajay Dhyani), AC/ATO, BSF
<i>Manish Raj</i> (Inspr/RM Manish Raj), SIW, BSF	<i>D P Mishra</i> (Nb/Sub D P Mishra). Assam Rifle	<i>R K Swami</i> (ASI/Comn R K Swami), SSB	

Approved/ Not approved

[Signature]
Director General
Border Security Force