

संख्या. पी-63013/40/2020/मोड-1/सीसुबल / 4055-57
भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
(Email-comdtord@bsf.nic.in)
(Fax: 011-24367683)

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

दिनांक 13 सितम्बर 2021

वरिष्ठ तकनीकी निदेशक

The Senior Technical Director
राष्ट्रीय सूचना-विज्ञान केन्द्र, नोर्थ ब्लाक,
गृह मंत्रालय, नई दिल्ली
NIC, North Block, MHA
New Delhi
(द्वारा ई-मेल)

(ई-मेल पता : mpsugandhi@nic.in)

Sub: **Request for comments of stakeholders/OEM on draft QRs.**

कृपया गृह मंत्रालय के पत्र संख्या IV-24011/12/2011-Prov-I(part)(CFN 3300890)-1710 दिनांक 31st Aug 2015 के सन्दर्भ में।

2. उपरोक्त विषयान्तर्गत यह सूचित किया जाता है कि तकनीकी विशेषज्ञों के उप समूह द्वारा **“PNV Monocular & Binocular”** के गुणात्मक आवश्यकता/परीक्षण निर्देशों का प्रारूप दिनांक 07 सितम्बर 2021 में आयोजित सभा के दौरान तैयार किया गया था जिसको इस आशय से प्रेषित किया जा रहा है कि उक्त गुणात्मक आवश्यकता/परीक्षण निर्देशों को गृह मंत्रालय की वेबसाइट पर 15 दिन के लिए अपलोड करने का श्रम करें।

संलग्न : उपरोक्तनुसार

(दिगेंद्र सिंह पेंवार)
उप कमाण्डेंट (मोड)

प्रतिलिपि :-

1. SO (IT), North Block, MHA
(Through E-mail)
(E-mail address: soit@nic.in) : उपरोक्त समस्त गुणात्मक आवश्यकता का मसौदा आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु।
2. IT Wing, FHQ BSF : i) उपरोक्त समस्त गुणात्मक आवश्यकता का मसौदा सीमा सुरक्षा बल की वेबसाइट पर 15 दिन यानि 28 सितम्बर 2021 तक अपलोड करने के लिए प्रेषित की जा रही है। उक्त मसौदे को सीमा सुरक्षा बल की वेबसाइट से दिनांक 29 सितम्बर 2021 को हटाने का श्रम करें। आपसे अनुरोध है कि उक्त मसौदे को निम्नलिखित पतों पर ई-मेल करने का भी श्रम करें:-
(a) Technical Director, NIC, North Block, MHA
(E-mail : mpsugandhi@nic.in)
(b) SO (IT), North Block, MHA
(E-mail : soit@nic.in)

PROPOSED QUALITATIVE REQUIREMENT AND TRIAL DIRECTIVE OF PNV MONOCULAR FOR REVISION

PROPOSED QUALITATIVE REQUIREMENT AND TRIAL DIRECTIVE OF PNV MONOCULAR FOR REVISION							
S No.	PARAMETER	SPECIFICATION				Procedure suggested for trial for Board of Officers	Result expected / desired
1.	Weight	Maximum 315 Gms including Cells/batteries				Measure the weight of the Monocular including cells or battery with the help of weighing machine.	Should not be more than 315 gms including cells/batteries.
2.	Image Intensifier Tube (II Tube)	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:-				<div>➤ 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.</div> <div>➤ The firm should submit OEM certificate/report in respect of QRs Para 2 (c) to (d) from Original manufacturer of II tube.</div>	The certificate/reports from IRDE Dehradun or any other institution and OEM must confirm the QRs Para 2 (c) to (d).
		a) Resolution: 72 lp/mm or better					
		b) Signal to Noise Ratio (SNR) 26 or better at 108μ lux.					
		c) Mean Time to failure (MTTF): Minimum 10,000 operational hours.					
		d) It should have inbuilt AGC/BSP.					
		f) Permissible black spot level					
		Size of spot (in inches)	Zone 1 (6mm)	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.	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 monocular on face with the help of mask/strap or head mount adaptors provided with the equipment. Again fix the monocular on helmet with the help of helmet mounts	Monocular 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 be mounted on helmet with supplied/provided adaptor or mount and should be user friendly & comfortable.	
4.	Ingress protection	IP 67 or better				Tighten the battery cover properly. The equipment should be immersed in one meter depth of water excluding the	Wipe the equipment with a soft cleaning cloth and dry it externally. Check by opening the battery compartment and

			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.	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- 200 meters Recognition- 125 meters	Place two or three men in camouflage dress at the range of 200 meters and 125 meters in extended line formation and move them. (Light conditions should be checked by Lux Meter)	Movement of human target should be detected at the range of 200 meters and recognized at 125 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 equipment is to be supplied with one set of commercially available primary & rechargeable battery. ii) The battery should run at least 08 hrs with IR and 15 hours on normal mode. iii) One commercially available charger with each PNV Monocular required with charging facility both AC volt and DC volt (2-in-one facility).	i) Switch 'ON' the equipment by inserting two primary cells & two 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 25 hours in normal ON mode. After this again switch ON the equipment for at least 15 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.	i) The equipment should be operated independently on primary & rechargeable cells and battery. ii) Monocular should run at least 15 hours with IR and 25 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 Monocular in IR LASER Mode in totally dark environment. Firm should submit eye safe certificate.	A human target must be easily recognized in totally dark environment up to the range of 125 mtrs 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 Monocular as per the procedure.	Magnification should be 1x or better.
10.	Field of View	40° minimum @ 1x Magnification	Fix the equipment on instrument testing scale of integrated test equipment and	FOV should be 40° minimum @ 1x magnification.

			measure the Field of View as per the procedure.	
11.	Diopter adjustment	-4.5d to +4 dioptre or better	Measure the Diopter adjustment with the help of Diopter kit or apparatus.	The Monocular should have Diopter adjustment from -4.5 to +4d or better.
12.	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.
13.	Carrying case	Each equipment should be supplied with a suitable hard carrying case and soft carrying case. Soft carrying case should be light weight water resistant.	Check physically the hard carrying case. Firm to produce accredited lab certificate for IP 65.	It should be contained in a water proof carrying case and then hard transportation case.
14.	Environmental requirement	Monocular 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.
15.	Miscellaneous:			
a)	i) Purging kit be provided at the time of supply (quantity be specified by the user) ii) One additional set of battery be provided.		Not applicable at the time of technical/physical evaluation	Not applicable at the time of technical/physical evaluation
b)	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
c)	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
d)	Technical manual/operational manual including repair manual of PNV Monocular.		Not applicable at the time of technical/physical evaluation	Not applicable at the time of technical/physical evaluation
e)	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
f)	Spare list, photograph with CAT parts number be provided.		Not applicable at the time of technical/physical evaluation	Not applicable at the time of technical/physical evaluation

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 वेबसाइट पर विक्रेताओं/फर्मों के सुझाव प्राप्त करने हेतु 15 दिनों के लिए अपलोड किया जाए। 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 टिप्पणीयाँ।

(दिनेन्द्र सिंह पेंवार)
उप कमांडेंट (आधुनिकीकरण)

PROPOSED QUALITATIVE REQUIREMENT AND TRIAL DIRECTIVE OF PNV BINOCULAR FOR REVISION

S No.	PARAMETER	SPECIFICATION				Procedure suggested for trial for Board of Officers	Result expected / desired
1.	Weight	Maximum 900 Gms including Cells/batteries.				Measure the weight of the Binocular including cells or battery with the help of weighing machine.	Should not be more than 900 gms including cells/batteries.
2.	Image Intensifier Tube (II Tube)	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>➤ Send the equipment to verify/check the QRs part 2 (a), (b) & (e) 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) & (d) from Original manufacturer of II tube.</p>	The certificate/reports from IRDE Dehradun or any other institution and OEM must confirm the QRs Para 2 (a) to (e).
		a) Resolution: 72 lp/mm or better					
		b) Signal to Noise Ratio (SNR) 28 or better at 108μ lux.					
		c) Mean Time to failure (MTTF): Minimum 10,000 operational hours.					
		d) It should have inbuilt AGC & BSP.					
		e) Permissible black spot level					
		Size of spot (inches)	Zone 1 (6mm)	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.	Ingress Protection	IP 67 or better				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	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

4.	Range (in star lit conditions without moon)	<p>i) For Human being:- Detection- 400 meters Recognition- 300 meters</p> <p>ii) For light commercial vehicle: Detection- 500 meters Recognition- 400 meters</p>	<p>accredited certificate.</p> <p>Place two or three men in camouflage uniform at the range of 400 meters and 300 meters in extended line formation and move them horizontally (Light conditions should be checked by Lux Meter). The light condition should be starlit condition. Again place a light commercial vehicle at different angles at a distance of 500 meters & 400 meters for detection & recognition respectively.</p>	<p>appearing on the view.</p> <p>Movement human target should be detected at the range of 400 meters and recognized at 300 meters clearly. In case of light commercial vehicle, the detection range should be 500 meters & recognition range should be 400 meters.</p> <p>Note: Detection means ability to detect vehicles, structures (man made/normal) and any movement of man or animal.</p>
5.	Power source	<p>i) Should be operable independently on primary and rechargeable cells and battery. The equipment is to be supplied with one set of commercially available primary & rechargeable battery.</p> <p>ii) One commercially available charger with each PNV Binocular required with charging facility both AC volt and DC volt (2-in-one facility).</p>	<p>i) Switch 'ON' the equipment by inserting two primary cells & two rechargeable cells in it one by one separately.</p> <p>ii) 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.</p>	<p>i) The equipment should be operated independently on primary cells & rechargeable battery.</p> <p>ii) 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. (as specified by the supplier)</p>
6.	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.
7.	Magnification	4x or better	Fix the equipment on instrument testing scale of integrated test equipment and measure the magnification of the Binocular as per the procedure at laboratory/workshop.	Magnification should be 4x minimum.
8.	Field of View	6° 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 6° minimum.
9.	Inter pupillary distance (IPD)	Should be between 55mm to 71mm.	Check the equipment for IPD by adjusting the each eyepiece physically.	The Binocular should have the adjustment facility of IPD.
10.	Diopter adjustment	-6d to +4 dioptre or better should be provided.	Measure the Diopter adjustment with the help of Diopter kit or apparatus.	The Binocular should have Diopter adjustment from -6 to +4d or better.

11.	Operating temperature	-30° C to +55° C (should comply with MIL STD 810G or JSS 55555)	The firm should provide NABL accredited lab certificate (check the supporting documents provided by the firm)	A NABL accredited lab certificate/report submitted by the firm in r/o operating temp i.e. -30° C to +55° C should confirm the same.
12.	Carrying case	Each equipment should be supplied with a suitable hard carrying case and soft carrying case. Soft carrying case should be light weight water resistant	Check physically the hard carrying case. Firm to provide IP 65 certificate for soft carrying case.	A National/International accredited lab certificate/report submitted by the firm.
13.	Environmental requirement	Binocular 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 submitted by the firm should confirm JSS 55555 or Mil Std 810-G for humidity, shock, vibration, rain test etc.
14.	Miscellaneous:			
a)	i) Purging kit be provided at the time of supply (quantity be specified by the user) ii) One additional set of battery be provided.		Not applicable at the time of technical/physical evaluation	Not applicable at the time of technical/physical evaluation
b)	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
c)	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
d)	Technical manual/operational manual including repair manual of PNV Binocular		Not applicable at the time of technical/physical evaluation	Not applicable at the time of technical/physical evaluation
e)	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
f)	Spare list, photograph with CAT parts number be provided.		Not applicable at the time of technical/physical evaluation	Not applicable at the time of technical/physical evaluation

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 वेबसाइट 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:-

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3. गुणात्मक आवश्यकताओं के उपर व्यापक टिप्पणीयों।

(दिगेन्द्र सिंह पेंवार)
उप कमांडेंट (आधुनिकीकरण)