ं मुख्यालय राष्ट्रीय सुरक्षा गारद (संभरण शाखा :ऑर्डनेंस अनुभाग)

## ब्लास्टिंग मशीन/पोगल सेट (BLASTING MACHINE/POGAL SET) के परिशोधित ाुणात्मक आवश्यकता (क्यूआर) और परीक्षण निर्देशों (टीडी) के मसौदे को गृह मंत्रालय की वेबसाइट पर डालना

कृपया गृह मंत्रालय, पीएम डिविजन के पत्र सं. IV-24011/12/2011-Prov.l दिनांक 05 अक्तूबर 2016, पत्र सं. IV-24011/12/2011-Prov.l दिनांक 13 जून, 2012 और पत्र सं. 11012/02/2009-Fin-l/Prov-l-17 दिनांक 02 जनवरी, 2018 का संदर्भ लें।

2. ब्लास्टिंग मशीन/पोगल सेट के परिशोधित गुणात्मक आवश्यकता (क्यूआर) और परीक्षण निर्देशों (टीडी) में संशोधन के लिए तकनीकी विशेषज्ञों के उप समूह की बैठक मुख्यालय राष्ट्रीय सुरक्षा गारद में दिनांक 21 जून 2024 को 1100 बजे आयोजित हुई।

3. बैठक के दौरान उप समूह ने कहा कि विक्रेताओं की टिप्पणियों/सुझावों को आमंत्रित करने के लिए ब्लास्टिंग मशीन/पोगल सेट के परिशोधित गुणात्मक आवश्यकता (क्यूआर) और परीक्षण निर्देशों (टीडी) के मसौदे को 15 दिनों के लिए राष्ट्रीय सुरक्षा गारद के साथ-साथ गृह मंत्रालय की वेबसाइट पर डाला जाए।

4. पीएम डिवीजन के उपर्युक्त संदर्भित पत्रों के अनुसार ब्लास्टिंग मशीन/पोगल सेट के गुणात्मक आवश्यकता (क्यूआर) और परीक्षण निर्देशों (टीडी) का मसौदा संलग्न परिशिष्ट के अनुसार गृह मंत्रालय की वेबसाइट पर डालने हेतु प्रिटेंड कॉपी तथा सॉफ्ट कॉपी में भेजा जा रहा है।

(पी0सी0 शर्मा)

ग्रुप कमांडर (क्रय)

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संलग्नक : उपर्युक्त

## अनुभाग अधिकारी, रूम न0 10, (IT Cell), एनआईसी, नार्थ ब्लॉक, नई दिल्ली soit@nic.in

पी/604/22/389/ब्लास्टिंग मशीन/ E-128640/संभरण(ऑर्डनेंस)/एनएसजी/ 1861 दिनांक: अ जुलाई 2024

## ब्लास्टिंग मशीन/पोगल सेट के परिशोधित गुणात्मक आवश्यकता (क्यूआर)/ परीक्षण निर्देशों (टीडी) के मसौदे पर विक्रेताओं की टिप्पणियों का आमंत्रण

1. आपको सूचित किया जाता है कि ब्लास्टिंग मशीन/पोगल सेट के परिशोधित गुणात्मक आवश्यकता (क्यूआर) और परीक्षण निर्देशों (टीडी) के मसौदे पर फर्मों/विक्रेताओं की टिप्पणियां आमंत्रित है। सभी फर्मों से निवेदन है कि नीचे दिए गए प्रारूप में वे अपनी टिप्पणियां भरकर ओ0ई0एम0 प्रमाणपत्र सहित ई-मेल पता scord@nsg.gov.in या gcproc@nsg.gov.in पर भेजें।

QRS	IDs	Comments by Firm	

2. आपसे अनुरोध है कि वेबसाइट पर प्रदर्शित होने की तारीख से 15 दिनों के भीतर अपनी टिप्पणियां भेजें। उप समूह कमेटी की बैठक में उपर्युक्त उपकरण/हथियार के गुणात्मक आवश्यकताओं/परीक्षण निर्देशों को अंतिम रूप देने पर विचार किया जा रहा है।

दिनांक: अ जुलाई 2024

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## DRAFT REVISED QRs/TDs OF BLASTING MACHINE/POGAL SET: 21 JUN 2024

SI.No	Parameters	Qualitative Requirements (QRs)	Trial Directives (TDs)
1.	General	The blasting machine is a handheld device which is used for firing of electric detonators, electric igniters (such as IES electric) and electric cartridges with maximum safety	-
2.	Design	<ul> <li>(a) Size of Blasting machine (without carrying case) should be compact and not weighing more than 700 gms including the rechargeable battery.</li> </ul>	To be physically checked by BOO using digital scale
		(b) Size of the machine should not exceed in dimensions by 24cm x 12 cm x 5 cm (LxBxH).	A box with inner dimensions of 24cm x 10cm x 5cm to be made. The blasting machine should completely fit inside this box.
		(c) The machine enclosure conducting medium (such as metal body) or non conducting medium (in case of conducting medium, the internal side of the enclosure should be duly electrically insulated by a non conducting medium and the equipment should be capable of operation	(a) OEM to furnish self declaration certificate for the same mentioning the material of the enclosure and whether it is conducting/non conducting (at rated voltage and current).
		(firing, continuity test and resistance test) in rainy conditions).	(b) In case of metal body, BOO to check by spraying water and firing a single No 33 detonator/ISF electric using a maximum of 50m (50m is for the pair of cable- Total length being 100m) firing cable/ telephone cable/1 sqmm (minimum) electric cable, while water is being sprayed.
		(d) The machine (and resistance checking unit, if supplied separately) should be water resistant and machine should have IP 65 rating (except the external electrical terminals).	Suitable National (accredited lab of NABL/ILAC) Cert to verify the IP rating needs to be produced by firm.
r., 1		(e) It should have weather proof carrying case and the same should come with attached web belt for outdoor/long operation application. The carrying case should have IP 66 rating.	Suitable National (accredited lab of NABL/ILAC) Cert to verify the IP rating needs to be produced by firm.
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SI.No	Parameters	Qualitative Requirements (QRs)	Trial Directives (TDs)
3.	Firing Ability	<ul> <li>(a) The device should be able to provide: <ul> <li>(i) A min of 10 J of firing energy</li> <li>(ii) A min potential difference of 300 VDC</li> <li>(iii) Fire across a min of 150 Ω</li> </ul> </li> <li>(b) It should be able to fire atleast 65 Nos of No 33 electric detonator (Indian ordnance pattern) at a time.</li> <li>(c) It should provide average current of atleast 2 amps of firing current during first 5 milliseconds of energy discharge (when operated within 150 Ω resistance).</li> </ul>	OEM to provide test certificate by National (NABL/ILAC accredited) lab/ by MSHA. (Current flowing out of the terminals shall be measured for the purposes of certificate)
4.	Operability	<ul> <li>(a) A single unit should be able to do the following:-</li> <li>(i) Check continuity of circuit.</li> <li>(ii) Fire the detonators as above</li> </ul>	To BOO to physically check the continuity of the circuits & resistance with detonators/ ISF electric and electric cable. The same to be cross checked by using digital ohmmeter/multimeter (having continuity test function) on the detonators/ ISF electric.
		both series & parallel circuits. The equipment should be capable of firing electric detonators in a circuit having detonators in both series and parallel also.	same.
		(c) It should be able to carry out an operational test using a separate external tester/test set piece prior to brining the blasting machine into the blast area. In case a consumable test set is given, consumables for atleast 1000 tests are to be provided.	The BOO to physically check the operational test of the machine with the provided tester.

SI.No	Parameters	Qualitative Requirements (QRs)	Trial Directives (TDs)
		(d) The equipment should be capable of operation in	A National (NABL/ILAC) accredited) lab certificate to
		temperatures from -15°C to 60°C and in relative humidity	be provided for the operational temperature range
		upto 95%.	and storage temperature range.
		(e) The equipment should be capable of being stored in temperatures from -20°C to 65°C.	
		(f) The equipment should be capable of being operated	BOO to conduct a drop test of the equipment from
		in a rugged environment as expected out of military/	1m height, such that a random part of the equipment
		paramilitary operations.	will hit the ground. This test should be carried out
			before other tests are carried out.
5.	Safety	(a) During continuity test maximum current that can pass	A National (NABL/ILAC accredited) lab certificate to
		is 5mA. A 50mA (maximum) fuse is to be available in the	be provided certifying that
		testing circuit within the equipment. The same (3mA	(a) The max current during testing is not more
		maximum current and 50mA (maximum) fuse) parameters	than 5mA
		are also applicable for the separate resistance check unit.	(b) A 50mA (max) fuse is present in the circuit
		(b) It should have facility of separate lights/display each	To be physically verified by the BOO.
		for indicating the continuity of firing circuit and ready to fire	8
1		indicator, when the capacitor reaches the design voltage.	
		There should be low battery indicator also.	
		(c) The voltage between firing line terminals (firing and	A National (NABL/ILAC) accredited) lab certificate to
		test terminals- can be same or different) should be zero	be provided for the same
		after 1 second of the firing operations.	The second second
		(d) It should have separate switches for testing the	To be physically verified by the BOO
		continuity of circuit, priming and firing of charges.	
		(e) The firing button should become effective only when	A National (NABL/ILAC) accredited) lab certificate to
		accompanied by another button (can be priming button)	be provided for the same.
		and when the voltage has reached atleast 300V.	
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SI.No	Parameters	Qualitative Requirements (QRs)	Trial Directives (TDs)
6.	Battery	(a) The blasting machine should be operational on commercially available off the shelf rechargeable battery. Examples of commercially available off the shelf batteries include AAA size, AA size, C type, 18650, etc There shall be no dependence on the OEM/vendor for the battery.	Physically checked by BOO. OEM to furnish self- declaration certificate for the same.
		(b) It should not take more than 8 seconds to prime with a freshly charged battery/set of batteries.	Physically checked by BOO while firing a single detonator/ISF electric.
		(c) A standard, freshly charged battery should provide a minimum of 200 blasting cycles (and additional 400 continuity testing cycles), without further requirement for recharge.	Physically checked by BOO by connecting a resistor (of rating between $1.5\Omega$ to $50\Omega$ ) between the terminals. If the resistor is damaged, the same may be replaced with a fresh resistor/s (5watt/10watt resistors are recommended to avoid damage to resistors)
		(d) The device should have a low battery indicator/ battery level indicator	Physically checked by BOO
7.	Training	(a) OEM to provide detailed operational training to min 05 Bomb technicians/individuals	OEM to furnish undertaking for the same
		(b) OEM to provide user level maintenance training to 05 bomb technicians/individual	OEM to furnish undertaking for the same
8.	Manual	OEM to provide detailed user manual and maintenance manual in English/Hindi.	BOO to physically check the same. OEM/vendor undertaking/warranty certificate to be
9.	Warranty	The equipment should be provided with an all covered warranty of a period as specified in the tender. All parts of the equipment to be covered by warranty.	provided for the same.

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10.	Accessories	The tester/ test set as mentioned above should be	BOO to check the availability of the same.
		provided with the equipment. A battery charger for charging the rechargeable battery to be provided.	
11.	Clarification	All mentions of detonators/ISF in QR/TD are electric detonators and electrics Igniters respectively. The detonators/ ISF/ electric cartridges mentioned in the QR/TD has a firing/triggering current of not more than 1.5A for a time not more than 5 milliseconds.	All tests on detonators are to be conducted on No. 33 electric detonators (ordnance pattern), all tests on

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