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No. P-63013/34/2019/Mod-I/BSF
Government of India Ministry of Home Affairs
Directorate General Border Security Force
(Prov Dte: Mod Cell)
(Fax: 011-24367683)

Block No.10, CGO Complex,
Lodhi Road, New Delhi-03

Dated, the 25 Sep 2019

To,

DGs: AR (through LOAR), CISF, CRPF, ITBP, SSB, NSG & BPR&D

Sub: **Forwarding of QRs and Trial Directives of 40 KVA DG SET**

Find enclosed herewith QRs and Trial Directives of "40 KVA DG SET" as per appendix 'A' and 'B' duly finalized by Sub group of technical experts and approved by DG BSF for your information and necessary action please.

Encl : As above


25/9/19

(Bhagat Singh Tolia)

Dy. Inspector General (Tpt/Prov)
FHQ BSF, New Delhi

Copy to :-

1. SO (IT),
North Block MHA,
New Delhi : You are requested to host the above QRs and TDs on MHA website please.
2. IT Cell
FHQ BSF,
New Delhi : You are requested to host the above QRs and TDs on BSF website please.
3. Comn & IT Dte
Eqpt Section : W.r.t. your UO No. 2047 dated 25th July 2019.

o/c

DIRECTOR GENERAL BORDER SECURITY FORCE
(PROVISIONING DIRECTORATE (MOD CELL))

EXPRESSION OF INTEREST

DIG (Prov)
HQ DG BSF, Prov Dte (Ord Sec)
Block No. 10, CGO Complex
Lodhi Road, New Delhi
(Tele/Fax No. 011-24367683)
Mail id : comdtord.bsf.nic.in

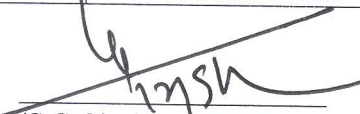
The Sub-group of technical experts on surveillance equipment constituted by MHA vide their letter No. IV-17017/18/2001-Prov-I dated 05 Jul 2002, letter No. IV-24011/12/2011-Prov.I dated 13th June 2012 and O/No. 11012/02/ 2009-Fin-I/Prov.I-17 dated 02nd January 2018 held its meeting at BSF HQ 29th July 2019 to formulate the QRs of **40 KVA DG Set**.


2. After detailed deliberation the referred Sub-group of technical experts has finalized the QRs and TDs of 40 KVA DG Set on 12th September 2019 which are as under:-


SRL NO	PARAMETER	SPECIFICATION
1	Diesel Generating Set Complete with Diesel Engine, Alternator and AMF/Manual Control Panel Fitted in Acoustic Enclosure. Pressure charged Diesel Engine and Alternator shall be closely coupled or provided with flexible coupling and mounted on a base plate of robust in construction.	
2	Nominal rated Capacity(KVA)	40 KVA
3	No. of phase	Three Phase
Engine		
4	No of strokes(Nos)	4
5	Number of cylinder (Nos)	3/4
6	Rated RPM of Engine (RPM)	1500
7	Types of Engine cooling	Air cooled/ Liquid (Coolent) cooled
8	Types of Governer	Mechanical
9	Class of Governer	A0/A1/A2/A3
10	Starting Voltage	12 Volt/24 Volt
11	Battery type & Specification	Low maintenance free to IS :14257 for high cranking performance/Normal Lead Acid to IS:7372
12	Overload capacity for one hour for every 11 hours continuous running at full load(%)	10
Alternator		
13	Rating of AC Generator (KVA)	40
14	Frequency	50 Hz
15	Power Factor	0.8
16	Efficiency at rated Power Factor at 75% full load	80 and above

6/17/19
 [Handwritten signatures and initials in blue ink]


17	Voltage Regulation Grade	VG1/VG2/VG3
18	Type of alternator	Brushless
19	Class of insulation	H
20	Alternator IP Rating	IP 23 or better
Control Panel		
21	Control panel	AMF
22	IP Rating of Control Panel	IP 53/IP 55/
Acoustic Enclosure		
23	Sheet thickness	1.2 to 1.6 Millimeter
24	Thickness of foam	25 to 40 Millimeter
25	Density of foam for sound insulation	28 to 50
26	Noise level at 1 meter(db)	70 to 80
Test Report		
27	Availability of Type of test report for engine from Central Govt NABL/ ILAC accredited laboratory (As per Trial Directives)	Yes
28	Availability of Type of test report for Alternator from Central Govt NABL/ ILAC accredited laboratory (As per Trial Directives)	Yes
29	DG set meet requirements of environmental (Protection) rules 1986, in respect of noise and emission norms, as described in STC	Yes
Warranty/installation & commissioning		
30	Warranty	01 year or more
31	Installation and commission	With installation



(S S Chahar), VSM
ADG (Log), BSF

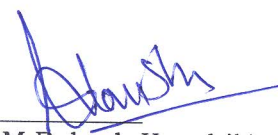

(Bhupender Singh), DIG
SIW BSF


(K K Sinha), SSA(LS)
BPR&D



(Gagan Bhardwaj), AC
SIW, BSF


(P S Meena), AC
SSB

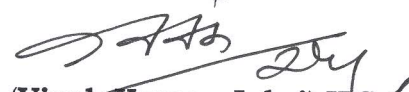

(Insp Ashwani Kumar),
SIW, BSF


(Insp/RM Rakesh Kaushik)
BSF


(SI/Tech Arvind Kr Mishra) (WO Madan Lal)
CRPF AR


Rajendra Kumar Meel
DC/CSF






✓
APPROVED/ NOT APPROVED


(Vivek Kumar Johri) IPS
DIRECTOR GENERAL
BORDER SECURITY FORCE

TRIAL DIRECTIVES FOR 40 KVA DIESEL GENERATOR SET

Sr1 No	PARAMETER	SPECIFICATION	Trial procedure suggested for BOO	Result expected/ desired	Remarks
1	Diesel Generating Set Engine, Alternator and Panel Fitted in Acoustic Enclosure. Pressured Diesel Engine and Alternator shall be closely coupled or provided with flexible coupling and mounted on a base plate of robust construction.	Complete with Diesel AMF/Manual Control	To be checked by the BOO	The DG Set must be as per the requirements mentioned in the QRs.	
2	Nominal rated Capacity(KVA)	40 KVA	To be checked by the BOO	Nominal rated Capacity must be as per the requirements mentioned in the QRs.	
3	No. of phase	Three Phase	To be checked by the BOO	Number of phases must be as per the requirements mentioned in the QRs.	
Engine					
4	No of strokes(Nos)	4	To be checked by the BOO	Number of strokes must be as per the requirements mentioned in the QRs.	
5	Number of cylinder (Nos)	3/4	To be checked by the BOO	Number of cylinder must be as per the requirements mentioned in the QRs.	
6	Rated RPM of Engine (RPM)	1500	To be checked by the BOO	RPM must be as per the requirements mentioned in the QRs.	
7	Types of Engine cooling	Air cooled/ Liquid (Coolent) cooled	To be checked by the BOO	Engine cooling must be as per the requirements mentioned	

8	Types of Governor	Mechanical	Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	in the QRs. Types of governor must be as per the requirements mentioned in the QRs.
9	Class of Governor	A0/A1/A2/A3	Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	Class of governor must be as per the requirements mentioned in the QRs.
10	Starting Voltage	12 Volt/24 Volt	To be checked by the BOO	Starting Voltage must be as per the requirements mentioned in the QRs.
11	Battery type & Specification	Low maintenance free to IS :14257 for high cranking performance/ Normal Lead Acid to IS:7372	To be checked by the BOO	Battery type & specification must be as per the requirements mentioned in the QRs.
12	Overload capacity for one hour for every 11 hours continuous running at full load(%)	10	Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	Overload capacity must be as per the requirements mentioned in the QRs.
Alternator				
13	Rating of AC Generator (KVA)	40	To be checked by the BOO	Rating of generator must be as per the

					requirements mentioned in the QRs.
14	Frequency	50 Hz		To be checked by the BOO	Frequency must be as per the requirements mentioned in the QRs.
15	Power Factor	0.8		Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	Power factor must be as per the requirements mentioned in the QRs.
16	Efficiency at rated Power Factor at 75% full load	80 and above		Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	Efficiency at rated power factor must be as per the requirements mentioned in the QRs.
17	Voltage Regulation Grade	VG1 / VG2 / VG3		Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	Voltage Regulation Grade must be as per the requirements mentioned in the QRs.
18	Type of alternator	Brushless		To be checked by the BOO	Types of alternator must be as per the requirements mentioned in the QRs.
19	Class of insulation	H		Firm has to submit National / International accredited Lab certificate.	Class of insulation must be as per the requirements mentioned in the QRs.











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					requirements mentioned in the QRs.
26	Noise level at 1 meter(db)	70 to 80		Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	Noise level at 1 meter must be as per the requirements mentioned in the QRs.
Test Report					
27	Availability of Type of test report for engine from Central Govt NABL/ ILAC accredited laboratory (As per Trial Directives)	Yes		Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	Availability of Type of test report for engine must be as per the requirements mentioned in the QRs.
28	Availability of Type of test report for Alternator from Central Govt NABL/ ILAC accredited laboratory (As per Trial Directives)	Yes		Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	Availability of Type of test report for Alternator must be as per the requirements mentioned in the QRs.
29	DG set meet requirements of environmental(Protection) rules 1986, in respect of noise and emission norms, as described in STC	Yes		Firm has to submit National / International accredited Lab certificate. If no such lab available in India then, firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	DG set must meet requirements of environmental(Protection) rules 1986, in respect of noise and emission norms, as described in STC.
Warranty/installation & commissioning					

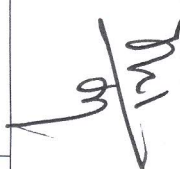












30	Warranty	01 year	To be checked by the BOO	Warranty of the DG Set must be as per the requirements mentioned in the QRs.
31	Installation and commission	With installation	To be checked by the BOO	Installation and commission must be as per the requirements mentioned in the QRs.



 (S S Chahar), VSM
 ADG (Log) BSF



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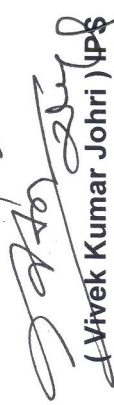

 (Insp Ashwani Kumar)
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 (Insp/RM Rakesh Kaushik),
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 (SI/Tech Arvind Kr Mishra)
 CRPF


 (WO Madan Lal)
 Assam Rifles


 Insp/RM Rakesh Kaushik
 R&D, BSF


APPROVED/ NOT APPROVED

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