# SEPARATE QUOTATIONS REQUIRED FOR ATTACHED 25 x IT SPECIFICATIONS

#### IT NO : 35/01/2024-25 PMSS KASHMIR

1,	System	PIPELINES & ISOLATING VALVES Fuel Tanks
2.	Sub system	Fuel supply/ return Pipeline & Isolating Valves
3.	-	
<u>3.</u> 4.	Assembly Make	Propulsion & Auxiliary Machinery
4. 5.	Make	Misc
6.		Misc 1 - 00 Lines
0.	Quantity	1 09 Lines 2 03 x Isolating valve
7.	Justification	2 03 x Isolating valve
8.	Work Required/ Defect	Replacement/ fabrication of bronze & stainless steepipelines and repair/ replacement of isolating valves
9.	Scope of Work	<ul> <li>a. Dismantling/ Fabrication of fuel 9 x fuel pipeline a per para 10</li> <li>b. Installation of fuel pipes</li> </ul>
		<ul> <li>c. Repair/ replacement of isolating valves as per ter</li> <li>10</li> </ul>
		<ul> <li>d. Material to be used as specified and material certification to be provided</li> </ul>
		e. Argon welding to be carried out for joining
		flanges with pipelines
		f. Growth work will be bear by firm
10.	Technical Specification	S Description Size/ Type Qty
		a. Fuel transfer line Length: 20 ft 02 between tank 2, 4 & Dia: 5 in
		b. Fuel transfer line from Length: 9.5 03
		tanks to header tanks ft (bronze) Dia: 6 in
		c. Fuel receiving line with Length: 12 ft 03 flanges (bronze) Dia: 6 in
		d. Header tank return Length: 7 ft 01 line(SS) with glass Dia: 4 in
		e. Isolating valve of fuel Size: 06 in 03 tank 9, 8 & 5 with Type: Globe
		electrical mechanism with
		electrical
		operation
11.	Eligibilities	a. Have experience to work for ships (preferate PMSA ships)
		b. Company must be certified with HQ PMSA
		c. Company must be Income and Sales tax register
		d. Company must have good experience of repairs
12.	EDC	and fabrication of mechanical and electrical parts
		15 days after award of contract
13.		1 x year
14.	Acceptance Criteria	a. Certificate of material (SS 316L & Bronze 35D) to be provided.
		b. Pressure testing of pipelines to be carried out
		to ascertain strength of welded joints.
		c. Leakages in welded joints (if any) must be
	· · · · · · · · · · · · · · · · · · ·	catered to ensure zero leakage in the fuel lines
		system.
		d. Item will be accepted upon satisfactory
		pressure testing up to 150% working pressure for
1.5		07 days.
15.	Any other relevant information	Firm must visit onboard to verify exact scope of wo
		SS contact (0321-3000503)

#### IT NO : 35/02/2024-25

#### IT SPECIFICATION FOR PURCHASE OF DISTEMPER FOR PMSS NAZIM/ PMSA BASES ORMARA, RISHAD AND GWADAR

S No			11 21	PECIFICATION		
1.	System	Self				
2.	Sub System	N/A	N/A			
3.	Make	Nippon	/ Everg	green		
4.	Model	N/A	•••			
5.	Quantity				_	
			S No	Description	Den	Qty
			a.	Distemper Off White	69	2160
			b.	Distemper White	69	2160
		1				· · · · · · · · · · · · · · · · · · ·
6.	Scope of Work	Purcha	se of D	Distemper		
7.	Eligibilities			ld Registered in PMSA	& NTN /	GST registered
8.	EDD			Issuance of order		
		· · · · · · · · · · · · · · · · · · ·				
9.	Warranty / Guarantee	U1 Yea	r atter	delivery		
10.	Acceptance Criteria	Accepte	ed by E	End User		

#### IT NO : 35/03/2024-25

#### IT SPECIFICATION OF REPAIR/MAINTENANCE/OVERHAULING OF REVERSE OSMOSIS PLANT PMSS RAFAQAT

		EM35 KAPADAT
1	Parent Equipment	Reverse Osmosis plant
2	Sub Equipment	Reverse Osmosis plant
3	Assembly Component	Membranes and filters
4	Make	Marine village
5	Model	PW-1200
6	Qly	01
7	Justification i.e. PMS /Failure / FWT etc	Reverse Osmosis plant
8	Work Required/Defect	Ropair/Overhauling of Reverse Osmosis plant
9	Detailed scope of work	Repair/Overhauling of Reverse Osmosis plant includes under mentioned jobs.
		Repair and overhaufing of Reverse Osmosis plant.
		Repair/Replace of membranes and filters.
		Some Any damage occurs during the course of removal and installation work was be done by firm without any liability/ responsibility on part of the ship PMSA
		io. All material, spares, tools, special equipment/ tools, accessories, etc. required for suid work are to be arranged by the contractor.
		v. Requirement of external services, if any will be responsibility of the from without any liability on the part of ship.
		vi. Spare filters set provided to SS.
10	Lechnical specification	24 V/00 450 V 3 Phase,60 HZ.
	Eligibility Criteria	<ol> <li>The firm should visit onbeard and carry out inspection to establish the extent of required work.</li> </ol>
		ii. The firln should have experience of the same kind of work.
44	EDC EDC	iiiThe fir n should be NTN/GST registored. C7 days
- 4 - 4 - 4	- Warranty	C1 year
10	Acceptance Criteria	
ाम संद	and the second	<ol> <li>Functionally operational successful trials.</li> </ol>
- 0	Any other relevant information	INI:
_		a a a second

	<u>IT NO : 35/0</u>			
IT SPECIFICATION FOR CAL	IBRATION OF PRESSUR	E AND TEMPERATU	RE GAUGES - PN	ASS NUSRAT
1 Ship's Name	PMSS NUSRAT			
2 Parent Equipment	Miscellaneous			
3 Sub system	_Gauges			!
4. Assembly	Pressure and Tempera	luie Gauges		
5. Make	· · · · · · · · · · · · · · · · · · ·			
5. Make				
7. Quantity	90			· _
8. Justification i.e PMS/	Calibration due in Feb	25		
9. Work Required/	Calibration required	· ·		
9. Work Required/				to bo
10 Scope of Works		under mentioned	gauges is requ	uired to be
	undertaken. Replace d			i o tu l
	S Description	Location/system	RANGE	ΩΤΥ
	i (1) Lub oil pressure	EVAC/Sea Orane	0-6000 PS	01
		I	1 0-400 BAR	. 01 .
	(2). Air pressure	AER/ LP Air System	0-350 PSI 0 25 BAR	
	(3). Air pressure	AER/ LP Air System	0-230 PSI	1 ce 1
		FER/AER/ Fireman	-30 n hg-150 PSI	C2
	(4). Sea water pressure	Pump	760mm hg-10 <u>6 k</u>	g/cm²
	(5). Sea water	FER/AER/ Fireman	0 150 PSI	62
	(6)   Fresh water	Pump FER/Fresh Water		01
	(6)   Fresh water   pressure	Pump	0-60 kg/cm <sup>2</sup>	
	(7). Fresh water	EVAC/fresh water	0 150 PS <sup>1</sup> 0-10 kg/cm <sup>2</sup>	01
	(8) Temp Gauge	ASP/Steering System	ັ 0-250 Č <sup>o</sup>	02
			0 480 F	0.1
	(9). Fuel pressure	FER/Fue <sup>:</sup> Transfer System	-1-1 BAR -15-15 PSI	01
	(10) Lub oil pressure	FER/AER/LCP Main	0-10 BAR	04
1		FFR/AER/LCP Main	0-150 PSI	
1	(*1) G/box lub oil pressure	Engine '	0.350 PSI	
- · · ·	(12) Temperature	FER/AER/LCP Main	40-120 C <sup>o</sup>	08
	Gauge (13) RPM meter	Engine FER/AFR/LCP Main	120-260 F <sup>or</sup> 0-25X(100)	. 08
		Engine/Bridge		
	(14) Shatt Bearing Temp	FER/AER	0-150 C <sup>0</sup> 32-300 F <sup>0</sup>	06
	(15) Lub oil Pressur	e FER/AER/LCP	0-10 BAR	03
		SSDGs	. 0 150 PSI 0-120 C <sup>o</sup>	
	(16) Temperature Gauge	FER/AER/LCP SSDGs	32-250 E <sup>o</sup>	
	(17) Voltage meters	FER/AFR/LCP	18-32 VDC	-03
	(18) RPM/Hz	SSDGs	C-1950 RPM	03 1
:		SSDGs	C-65 Hz	
	(19) Lub oil pressur	e ASP/Steering System	n 0-3500 PSI	04
			0 250 BAR	·
	200 Valt Motor	EER/Charoing Pariel	0.50 VDC	- U1
	(20) Volt Meter (21) Volt meter	FER/Charging Panel MCR/Charging Pane	I 0-100 V	01
			0-100 V	
	(21) Volt meter (22) Amp meter	MCR/Charging Pane	I 0-100 V I 100-0-100 AMP	01 01 01
	(21) Volt meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier	0-50 V 0-100 AMP	01 01 01 01
	(21) Volt meter (22) Amp meter (23) Volt meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro	I 0-100 V I 100-0-100 AMP	01 01 01
	(21) Volt meter (22) Amp meter (23) Volt meter (24) Amp meter (24) Amp meter (25) RPM meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel	0-100 V 0-50 V 0-100 AMP 0-100 AMP 0-25000 RPM	01 01 01 01
	(21) Volt meter (22) Amp meter (23) Volt meter (24) Amp meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro	0-50 V 0-100 AMP	01 01 01 01 04
	(21) Volt meter (22) Amp meter (23) Volt meter (24) Amp meter (24) Amp meter (25) RPM meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main	0-100 V 0-50 V 0-100 AMP 0-100 AMP 0-25000 RPM	01 01 01 01 04
	(21)         Volt meter           (22)         Amp meter           (24)         Amp meter           (24)         Amp meter           (25)         RPM motor           (26)         Amp meter           (27)         Volt meter           (27)         Volt meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Sw tchboard Sw tchboard	0-100 V 100-0-00 AMP 0-100 AMP 0-25000 RPM 0-400 AMP 0-500 V 0-500 V	01 01 01 04 04 04
	(21)         Volt meter           (22)         Amp meter           (23)         Volt meter           (24)         Amp meter           (25)         RIPM motor           (26)         Amp meter           (27)         Volt meter           (27)         Volt meter           (27)         Volt meter           (27)         Volt meter           (28)         Freq/RPM	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Sw tohboard MCR/Main Sw tohboard MCR/Main	0-100 V 1 100-0- 00 AMP 0-100 AMP 0-25000 RPM 0-400 AMP	01 01 01 04 04
	(21)         Volt meter           (22)         Amp meter           (24)         Amp meter           (24)         Amp meter           (25)         RPM motor           (26)         Amp meter           (27)         Volt meter           (27)         Volt meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Sw tchboard Sw tchboard	0-100 V 0-500 V 0-500 V 0-25000 RPM 0-400 AMP 0-400 AMP 0-500 V 45 65 Hz	01 01 01 04 04 04
	(21)         Volt meter           (22)         Amp meter           (23)         Volt meter           (24)         Amp meter           (25)         RPM motor           (26)         Amp meter           (27)         Volt meter           (27)         Volt meter           (27)         Volt meter           (28)         Freq/RPM           meter         (29)           K/W meter         (29)	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard	0-100 V 0-50 V 0-500 RPM 0-25000 RPM 0-400 AMP 0-400 AMP 0-500 V 45 65 Hz ^350 1950 RPM 0-200 KPM	01 01 01 04 04 04 04 04
	(21)         Volt meter           (22)         Amp meter           (23)         Volt meter           (24)         Amp meter           (25)         RIPM meter           (26)         Amp meter           (27)         Volt meter           (28)         Freq/RPM           meter         meter           (28)         Freq/RPM           meter         (29)           (30)         Insulation	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main	0-100 V 0-00 AMP 0-50 V 0-25000 RPM 0-400 AMP 0-400 AMP 0-500 V 45 65 Hz 350 1950 RPM	$\begin{array}{c} 01 \\ 01 \\ 01 \\ 04 \\ 04 \\ 04 \\ 04 \\ 04 \\$
	(21)     Volt meter       (22)     Amp meter       (23)     Volt meter       (24)     Amp meter       (25)     RPM motor       (26)     Amp meter       (27)     Volt meter       (27)     Volt meter       (28)     Freq/RPM       meter     (29)       K/W meter     (30)       insulation     meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard	0-100 V 0-00 AMP 0-2500 RPM 0-25000 RPM 0-400 AMP 0-400 AMP 0-400 AMP 0-500 V 45 65 Hz 1350 1950 RPM 0-200 KW 0-α MΩ	$\begin{array}{c} 01 \\ 01 \\ 01 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.$
	(21)     Volt meter       (22)     Amp meter       (23)     Volt meter       (24)     Amp meter       (25)     RPM meter       (26)     Amp meter       (27)     Volt meter       (28)     Freq/RPM       meter     (29)       K/W meter     (30)       insulation       meter       (30)     Insulation       meter       b     The firm will arrai	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main	0-100 V 0-00 AMP 0-2500 RPM 0-25000 RPM 0-400 AMP 0-400 AMP 0-400 AMP 0-500 V 45 65 Hz 1350 1950 RPM 0-200 KW 0-α MΩ	$\begin{array}{c} 01 \\ 01 \\ 01 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.$
	(21)     Volt meter       (22)     Amp meter       (23)     Volt meter       (24)     Amp meter       (25)     RPM motor       (26)     Amp meter       (27)     Volt meter       (28)     Freq/RPM       meter     (29)       K/W meter     (30)       insulation     meter       (30)     Insulation       meter     (30)       b     The firm will arrai       for the same work	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main	0-100 V           100-0-200 AMP           0-100 AMP           0-100 AMP           0-25000 RPM           0-400 AMP           0-500 V           45 65 Hz           350 1950 RPM           0-200 KW           0-a MΩ           0-a MΩ	$\begin{array}{c} 01 \\ 01 \\ 01 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.4 \\ 0.$
	(21)       Volt meter         (22)       Amp meter         (23)       Volt meter         (24)       Amp meter         (25)       RPM meter         (26)       Amp meter         (27)       Volt meter         (28)       Freq/RPM         meter       (29)         (29)       K/W meter         (30)       Insulation         meter       (30)         b.       The firm will arrai         for the same work       c.         c.       The firm will be ready	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard Switchboard	0-100 √           1000-0-00 AMP           0-100 AMP           0-100 AMP           0-25000 RPM           0-400 AMP           0-500 √           45 65 Hz           ^350 1950 RPM           0-200 KW           0-a MΩ	01 01 01 04 04 04 04 04 03 03 01 04 04 04 03 01 04 04 04 03 03 01 01 04 04 04 04 04 04 04 04 04 04 04 04 04
	(21)       Volt meter         (22)       Amp meter         (23)       Volt meter         (24)       Amp meter         (25)       RPM meter         (26)       Amp meter         (27)       Volt meter         (28)       Freq/RPM         meter       (29)         (29)       K/W meter         (30)       Insulation         meter       (30)         b.       The firm will arrai         for the same work       c.         c.       The firm will be ready	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main	0-100 √           1000-0-00 AMP           0-100 AMP           0-100 AMP           0-25000 RPM           0-400 AMP           0-500 √           45 65 Hz           ^350 1950 RPM           0-200 KW           0-a MΩ	01 01 01 04 04 04 04 04 03 03 01 04 04 04 03 01 04 04 04 03 03 01 01 04 04 04 04 04 04 04 04 04 04 04 04 04
	(21)       Volt meter         (22)       Amp meter         (23)       Volt meter         (24)       Amp meter         (25)       RPM meter         (26)       Amp meter         (27)       Volt meter         (28)       Freq/RPM         meter       (29)         (29)       K/W meter         (30)       Insulation         meter       (30)         b.       The firm will arrai         for the same work       c.         c.       The firm will be ready	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard Switchboard	0-100 √           1000-0-00 AMP           0-100 AMP           0-100 AMP           0-25000 RPM           0-400 AMP           0-500 √           45 65 Hz           ^350 1950 RPM           0-200 KW           0-a MΩ	01 01 01 04 04 04 04 04 03 03 01 04 04 04 03 01 04 04 04 03 03 01 01 04 04 04 04 04 04 04 04 04 04 04 04 04
	(21)       Volt meter         (22)       Amp meter         (23)       Volt meter         (24)       Amp meter         (25)       RPM meter         (26)       Amp meter         (27)       Volt meter         (28)       Freq/RPM         meter       (29)         (29)       K/W meter         (30)       Insulation         meter       (30)         b.       The firm will arrai         for the same work       c.         c.       The firm will be read         d.       The firm will be read         end user       The firm will be read	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard	0-100 √           1000-0-00 AMP           0-100 AMP           0-100 AMP           0-25000 RPM           0-400 AMP           0-500 √           45 65 Hz           ^350 1950 RPM           0-200 KW           0-a MΩ	$\begin{array}{c} 01\\ 01\\ 01\\ 04\\ 04\\ 04\\ 03\\ 03\\ 01\\ 03\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01$
	(21)       Voit meter         (22)       Amp meter         (23)       Voit meter         (24)       Amp meter         (25)       RPM motor         (26)       Amp meter         (27)       Voit meter         (28)       Freq/RPM         meter       (27)         (28)       Freq/RPM         meter       (30)         insulation       meter         (30)       Insulation         meter       (30)         b.       The firm will arrai         for the same work       c.         c.       The firm will be re         end user       end user	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard Switchboard composible for require esponsible for require	0-100 V           100-0-200 AMP           0-100 AMP           0-100 AMP           0-25000 RPM           0-400 AMP           0-500 V           45 65 Hz           350 1950 RPM           0-200 KW           0-a MΩ	$\begin{array}{c} 01\\ 01\\ 01\\ 04\\ 04\\ 04\\ 03\\ 03\\ 01\\ 03\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01$
	(21)       Volt meter         (22)       Amp meter         (23)       Volt meter         (24)       Amp meter         (25)       RPM meter         (26)       Amp meter         (27)       Volt meter         (28)       Freq/RPM         meter       (29)         (29)       K/W meter         (30)       Insulation         meter       (30)         b.       The firm will arrai         for the same work       c.         c.       The firm will be read         d.       The firm will be read         e.       The firm will be read         e.       The firm will be read         for the same work       for the firm will be read	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard Switchboard composible for require esponsible for require	0-100 V           100-0-200 AMP           0-100 AMP           0-100 AMP           0-25000 RPM           0-400 AMP           0-500 V           45 65 Hz           350 1950 RPM           0-200 KW           0-a MΩ	$\begin{array}{c} 01\\ 01\\ 01\\ 04\\ 04\\ 04\\ 03\\ 03\\ 01\\ 03\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01$
	(21)       Voit meter         (22)       Amp meter         (24)       Amp meter         (25)       RPM meter         (26)       RPM meter         (27)       Voit meter         (26)       Amp meter         (27)       Voit meter         (28)       Freq/RPM         meter       meter         (29)       K/W meter         (30)       insulation         meter       meter         b.       The firm will arrai         for the same work       c.         c.       The firm will be read         d.       The firm will be read         e.       The firm will be read         installation work during any re-work       any re-work	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard Switchboard cosponsible for require esponsible for require esponsible for require esponsible for require	0-100 V           100-0-200 AMP           0-100 AMP           0-25000 RPM           0-2500 V           0-400 AMP           0-500 V           45 65 Hz           1350 1950 RPM           0-200 KW           0-a MO           0-a MO           and accessories e           ement of external           calibration certifier           emoval, transpor           period c aims and	$\begin{array}{c} 01\\ 01\\ 01\\ 04\\ 04\\ 04\\ 03\\ 03\\ 01\\ 03\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01\\ 01$
	(21)       Volt meter         (22)       Amp meter         (23)       Volt meter         (24)       Amp meter         (25)       RPM motor         (26)       Amp meter         (27)       Volt meter         (28)       Freq/RPM         meter       (27)         (28)       Freq/RPM         meter       (29)         (30)       Insulation         meter       (30)         b.       The firm will arrait         for the same work       c.         c.       The firm will be ready on the firm will be r	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard mge all spares, tools a esponsible for require esponsible for rovide e responsible for r		$\begin{array}{c} 01\\ 01\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$
	(21)       Voit meter         (22)       Amp meter         (24)       Amp meter         (25)       RPM meter         (26)       RPM meter         (27)       Voit meter         (26)       Amp meter         (27)       Voit meter         (28)       Freq/RPM         meter       (27)         (28)       Freq/RPM         meter       (29)         (30)       Insulation         meter       (30)         b.       The firm will per re         c.       The firm will be re         end user       e.         e.       The firm will be re         installation work during any re-work       f.         f.       The firm will be re         occur during the cours       f.	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard composible for require esponsible for require esponsible for require esponsible for rany da e of removal, repair		$\begin{array}{c} 01\\ 01\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$
	(21)       Voit meter         (22)       Amp meter         (23)       Voit meter         (24)       Amp meter         (25)       RPM motor         (26)       Amp meter         (27)       Voit meter         (28)       Freq/RPM         meter       (29)         K/W meter       (30)         (30)       Insulation         meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard composible for require esponsible for require esponsible for require esponsible for rany da e of removal, repair		$\begin{array}{c} 01\\ 01\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$
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	(21)       Voit meter         (22)       Amp meter         (23)       Voit meter         (24)       Amp meter         (25)       RPM meter         (26)       Amp meter         (27)       Voit meter         (28)       Freq/RPM         meter       (27)         (28)       Freq/RPM         meter       (29)         (29)       K/W meter         (30)       Insulation         meter       (30)         b.       The firm will array         for the same work       c.         c.       The firm will be red         end user       e.         e.       The firm will be red         f.       The firm will be red         any re-work       f.         f.       The firm will be red         a.       The firm should be red         a.       The firm should be red         a.       The firm should be red         b.       The firm should be red         b.       The firm should be red         a.       The firm should be red         b.       The firm should be red         a.       The firm should be red	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Engine Contro Panel MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN Switchboard MCR/MAIN S	0-100 V         1         0-100 AMP         0-100 AMP         0-25000 RPM         0-400 AMP         0-500 V         45 65 Hz         1350 1950 RPM         0-200 KW         0-a MΩ         and accessories e         amage, defect and         and installation         -         <	01 01 01 04 04 04 03 03 01 04 03 03 01 04 03 03 01 04 03 03 01 04 10 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03
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12 Eligibilities Criteria	(21)       Voit meter         (22)       Amp meter         (23)       Voit meter         (24)       Amp meter         (25)       RPM meter         (25)       RPM meter         (26)       Amp meter         (27)       Voit meter         (28)       Freq/RPM meter         (29)       K/W meter         (30)       Insulation meter         (30)       Insulation         meter	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard	0-100 V         1         0-100 AMP         0-100 AMP         0-25000 RPM         0-400 AMP         0-500 V         45 65 Hz         1350 1950 RPM         0-200 KW         0-a MΩ         and accessories e         amage, defect and         and installation         -         <	01 01 01 04 04 04 03 03 01 04 03 03 01 04 03 03 01 04 03 03 01 04 10 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03
12 Eligibilities Criteria	(21)       Voit meter         (22)       Amp meter         (22)       Amp meter         (24)       Amp meter         (25)       RPM meter         (26)       Amp meter         (27)       Voit meter         (26)       Amp meter         (27)       Voit meter         (28)       Freq/RPM         meter       (29)         (29)       K/W meter         (30)       insulation         meter       (20)         b.       The firm will arrai         for the same work       c.         c.       The firm will be re         ed.       The firm will be re         ed.       The firm will be re         occur during the cours       equipment will be repaidant will be repaid	MCR/Charging Pane MCR/Charging Pane MCR/Silicon Rectifier MCR/Silicon Rectifier MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard MCR/Main Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard Switchboard	0-100 V         1         0-100 AMP         0-100 AMP         0-25000 RPM         0-400 AMP         0-500 V         45 65 Hz         1350 1950 RPM         0-200 KW         0-a MΩ         and accessories e         amage, defect and         and installation         -         <	01 01 01 04 04 04 03 03 01 04 03 03 01 04 03 03 01 04 03 03 01 04 10 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03 03

#### IT NO : 35/05/2024-25 PMSS KASHMIR

#### IT SPECIFICATIONS - REPAIR / REPLACEMENT OF AIR STARTER MOTORS PINION

1.	Parent Equipment	Stbd & Port Main En	aines	
2	Sub Equipment	Air Starting Motor		
3.		Pinion		
	Assembly Component			
4.	Make	Ingersoll Rand USA		
5.	Model	SP699BP03R31	· i	
6.	Quantity	04		
7.	Justification i.e PMS/ Failure/ FWT etc	FWT		
8.	Work Required/ Defect	Repair / Replacemer	nt of air start motors' pinion	
9.	Detailed scope of work	<ul> <li>(i) Dismantling of a</li> <li>(ii) Replacement of &amp; SS8 15L1332</li> <li>(iii) Installation, STV</li> </ul>	f motors' pinion (ST600 1231 )	
10.	Technical specs	Make	Ingersoll Rand (IR)	
		Model	ST600 1231 SS8 15L1332	
		Max Inlet Press	90 PSI	
		Serial No.	SP160425023	
		Air Turbine Starter	ST 400 Series	
11.	Eligibility Criteria	(ii) Company mu registered	st be certified with HQ PMSA st be Income and Sales tax st have good experience of ne equipment	
12.	EDC/ EDD	15 Days after award		
13.	Warranty	1 Year	· · · · ·	
14.	Acceptance Criteria		ed after onboard inspection, ingines and satisfactory trials	
15.	Any Other Relevant Information	SS contact (0321-30	00503)	

#### IT NO : 35/06/2024-25 PMSA WAREHOUSE

#### IT SPECIFICATION FOR PURCHASE OF MILK POWDER NIDO (NESTLE) FOR ALL PMSA UNITS

S No		IT SPECIFICATION
1.	System	Milk Powder Full Cream (NIDO)
2.	Sub System	N/A
3.	Make	Nestle
4.	Model	N/A
5.	Quantity	600 Kg
6.	Scope of Work	Purchase of Milk Powder Full Cream (NIDO)
7.	Eligibilities	The firm should Registered in PMSA & NTN / GST registered
8.	EDD	15 Days after Issuance of order
9.	Warranty / Expiry	01 Year after delivery
10.	Acceptance Criteria	Accepted by Warehouse Staff

# IT NO : 35/07/2024-25

# IT SPECIFICATIONS – REPAIR/ REPLACEMENT OF BATTERIES PMSS HINGOL

S No	Description	
1. 2.	Parent Equipment Sub Equipment	GENSET GENSET Starting System
3. į	Assembly Component	Batteries
4.	Model	Phoenix
5.	Make	China
6.	Quantity/Item Details	S No Part/ NSN No Description Qty
1	Details	a. 6FM 200 VRLA 12V 200 A/H VRLA Batteries 08
7	Justification	Batteries unable to Hold Charge.
8.	Work required/Defect	Defect is to be rectified for satisfactory starting of GENSETs
9.	Scope of work	<ul> <li>a. Repair/ Replacement of 08 x Batteries of GENSET.</li> <li>b. Functional replacement can be undertaken for not available/obsolete components</li> <li>c. Satisfactory starting of GENSETs on Single push</li> <li>d. Any growth work during repair work will be borne by the contractor.</li> <li>e. Any damage to system during onboard testing will be borne by the contractor</li> </ul>
10.	Technical Specifications	As per OEM spec
11.	Eligibility Criteria	Security wise clear & reputable local contractor having working experience with PMSA
12.	EDC	3 days
13.	Warranty	1 year
14.	Acceptance Criteria	Successful test /trials of batteries on all 3 GENSETs
15.	Any Other Relevant Information	Nil

# IT NO : 35/08/2024-25

#### 575 IT SPECs: REPAIR/ REPLACEMENT OF FITTINGS ON UPPER DECKS -PMSS KASHMIR

1.	System	Upper deck fittings
2.	Sub system	MISC
3.	Assembly Component	
4.	Make	CSSC Huangpu Wenchong Shipbuilding Co. Ltd
5.	Model	MISC
6.	Quantity	34
7.	Justification	Upper deck fittings have undergone deterioration due to natur wear and tear. Henceforth, comprehensive repair ar replacement of worn out/ old fittings/ items is required
8.	Work Required/ Defec	t Repair/ Replacement of upper deck fittings
9.	Scope of Work	Welding/ repair work required:
		a. Repair of 16 x guardrail mechanical motors flight deck
		b. Repair of probe receiver base
		c. Repair of Roller fairlead top eyes
		d. Repair of 1 x Flood light base
		<ul><li>e. Repair of 2 x Guardrail port side at Q/Deck</li><li>f. Repair of 2 x water supply pipes in helo tower</li></ul>
		g. Repair of 2 x Fresh water valves
		h. Repair of 12.7mm RU locker
		j. Replacement of Auto telephone box Awnin
		stowage box hinges and door clips
		k. Repair of AIS antenna base
		I. Repair of Life buoy base
		m. Repair of Cover box artillery bell at 30mm gun deck
		n. Welding of Exhaust flapper hooks on bridge top
		<ul> <li>Repair of Stbd side pipe U clamp</li> </ul>
	1	q. Welding of Flag locker base
		r. Welding of Electric socket base (Port and Stbd)
		bridge wings
		s. Welding of Base of 02 x Electric switch box at
	1	Flight Deck
1		Cutting work required:
	2	a Cutting of Boat deck net hooks
	!	b. Cutting of Exhaust flap at Q Deck
		Replacement/ fabrication required for: a. Replacement of Capstan break rubber
 		<ul> <li>b. Replacement of 54 x drain covers with SS covers</li> <li>c. Replacement of 1 meter Air Trunking in Machine</li> </ul>
Ι		Gun Madazine
į		d. Replacement of worn-out 60 x Butterfly nuts
I		e. Replacement of 50 x worn-out guardrail securing
i		pins alongwith mousing chain
į		f. Fabrication of Steel tray for mushroom ventilation
Ι		oil leakage at Gun Deck
		g. Any other growth work
ļ		h. Spares to be provided by firm.
	Technical Specs	As per original installation onboard
1 <u>.</u>   [	Eligibility Criteria	a. Have experience to work onboard ships (preferably PMSA
	İ	ships) b. Have experience to work on water jet propulsion
		<ul> <li>Company must be certified with HQ PMSA</li> </ul>
		d. Company must be income and Sales tax registered
		15 days after confirmation of order
2		
2.		01 v Voar
3.	Warranty	01 x Year
3.	Warranty	01 x Year Satisfactory inspection/ testing of all work. Firm must visit onboard before providing quotation to verify exac

2

# <u>IT NO : 35/09/2024-25</u> <u>93 PMSA SQN</u>

# IT SPECIFICATION FOR SPARES/ CONSUMABLES REQUIRED FOR AIR CONDITIONING SYSTEM -DEFENDER AIRCRAFT

S No			· M		
1.	Ship's Name	93 PMSA Sqn	· · · · · · · · · · · · · · · · · · ·		
2.	Parent Equipment	Aircraft			
3.	Sub Equipment	Air Conditioning System			
4.		and purging of Air-Conditioni			
		S No Part No/ Model	Description Qty		
	Assembly Equipment	a. Robin Air No 15021-50	Vacuum Pump capable of 01 28.5 in Hg.		
	Assembly Equipment	b	Refrigerant Can Adaptor 01		
		C	R-12 Refrigerant Can 02		
		d. Robin Air CMN-4-3	R-12 Service Manifold Assy with 02 gauge set		
		e. Suniso 4GS or 5GS	Refrigerant Oil 1 Liter		
5.	Make	KEITH Products Inc. LISA or	any alternate available inland		
<u>6</u> .	Model	As per para 4	any anomate available mana		
7.	Quantity	As per para 4			
8.	!		quired for servicing and purging of Air-		
-	Justification	Conditioning System	danioa for controlling and parging of 7m		
9.	Work Required/ Defect	Spares/ consumables mentioned at para 4 required for servicing/ purging of air-conditioning system			
10.	Detail Scope of Work	As per para 9			
11.	<b>I</b>	Part No	Description		
	i	Robin Air No 15021-50	Vacuum Pump capable of 28.5 in Hg.		
	Item Description	- Refrigerant Can Adaptor			
			R-12 Refrigerant Can		
			R-12 Service Manifold Assy with		
		Robin Air CMN-4-3	gauge set		
		Suniso 4GS or 5GS	Refrigerant Oil		
12.	Technical Specs (If any)	N/A			
13.	Technical Specs (II ally)		sured in NEW CONDITION only from		
ω.		a. Items are to be procured in NEW CONDITION only, from OEM/ OEM authorized vendors or any inland registered firm			
		b. Firms must have at least 01 year experience of			
		procurement/ repair of aircraft air-conditioning system parts			
		c. Firms need to include freight/ insurance charges and custom			
		duties/ taxes, etc (as applicable) in quotation.			
	Eligibilities	d. Firms need to get import/ export licenses from respective			
		abroad firms/ agencies (if applicable).			
		e. In case of failure to	meet acceptance criteria or any defec		
		during physical/ operational testing of items post fitment with parent			
		equipment, firm is liable to get the items replaced on FoC basis in			
	:	shortest possible time			
14.	EDD/ EDC	04 weeks after award of cont	tract		
15.	Warranty	01 Year			
16.	1	a. Satisfactory physica	al condition, fitment with paren		
		equipment and operational c	heck of items.		
	Acceptance Criteria		should be identical or equivalent to the		
	(If any)	part numbers mentioned in I	r specification.		
	(ir airy)	c. Provision of import documents (if applicable)			
		d. R-12 Refrigerant is	required as per original specs. No		

17.	Growth Work	N/A	1
18.	Any other relevant	N/A	i
	information		

#### IT NO : 35/10/2024-25 PMSS KASHMIR

S No.		Description
1.	Parent Equipment	Security Monitoring CCTV Camera System
2.	Sub Equipment	Integrated Network HD PTZ Camera
3.	Make	China
4.	Model	DS-2DY92301W-CWX(316L)
5.	Qty	01
6.	Justification PMS/Failure/FWT	Failure: Existing Integrated Network HD PTZ Camera at fligh
7.	Work required/ Defect	deck is defective and same is required to be repair. Integrated Network HD PTZ Camera is defective as, camera is powered up, however, same is unable to show any video/ picture and neither train/ elevate. Therefore said CCTV Camera is required to be repaired.
8.	Detailed Scope of Work	Repair defective Integrated Network HD PTZ Camera is required for operationalization of Security Monitoring CCTV System i.e (CCTV coverage at Flight Deck onboard).
9.	Technical specs	<ul> <li>a. Resolution: 1920 * 1080</li> <li>b. Focal Length: 4.3-129mm, 30 * optical zoom</li> <li>c. Video Compression: H.265/H.264/MJPEG</li> <li>d. Range of Movement: horizontal 360 continues rotation, vertical -90 to 90 degree</li> <li>e. Preset Point: 128 points</li> <li>f. Patrol Path: 4 paths</li> <li>g. Communication Interface: One RJ 45 10M/100M adaptive LAN interface</li> <li>h. Degree of Protection: 1P68</li> <li>i. Power Supply: AC 220 60/50 Hz,70 W Max</li> <li>j. Material: Stainless Steel 3161</li> <li>k. Infrared Distance: 100 m</li> <li>l. Weight: 31.5 kg</li> <li>m. Dimension: 295mm * 502m * 393m</li> </ul>
0.	Eligibility Criteria	Reputable local contractor having working experience with PMSA/ OEM authorized reps will be given preference.
1. 7	EDD/EDC	10 days
2.	Warranty	12 x Months
3.	Acceptance Criteria	<ul> <li>a. Item will be accepted after satisfactory test/ trials onboard.</li> <li>b. OEM Technical documents/ warranty certificate of items required.</li> </ul>
	Any other relevant Information	Firm must visit onboard for clarification of any query and understanding of requirement before quoting.

# IT SPECIFICATION- INTEGRATED NETWORK HD PTZ CAMERA

# IT NO : 35/11/2024-25

#### IT SPECIFICATION FOR SERVICING/ OVERHAULING OF HP RELIEF VALVE AND REDUCER OF ME No 4 AIR BOTTLE SET -PMSS ZHOB

S.No		Description	
1.	Parent equipment	High Pressure Air System	
2	Sub equipment	Air Bottle Set Pressure Relief Valve 10 Bar	
3.	Assembly	2 X 10 Bar Controller Valves_(MKD –ZYK-06)	
	component		
4.	Model	MKD-MA-15X30-10-4	
5.	Make	M Whuan Mekand Equipment Co. Ltd 5	
6.	Quantity/Item	OEM NSN/Part No Description Qty	
	details	China Same as S.No 03 Air Reducer controller Valve (10 Bar) 2	
7.	Justification	a PMS No 3-5271-0000 MOP FL-005 b. Currently system is defective	
8.	Work required/ Defect	Servicing/ Overhauling of 10 Bar Controller Valves which Observed malfunctioning i.e unable to provide desired air pressure	
9.	Scope Of Work	<ul> <li>a. Removal/ reinstallation of pressure reducing controller valves</li> <li>b. Replacement of all worn out/ degraded components</li> <li>c. Replacement of all O-rings/ seals</li> <li>d. Repair of controller body(if required)</li> <li>e. Testing and adjustment of all valves at required pressure</li> <li>f. Any other unseen/ growth work will be responsibility of contractor</li> <li>g. Any damage occurred in fittings during trials of repaired valves will be provided by contractor</li> </ul>	
10	Technical specifications	As per OEM technical manual	
11	Eligibility criteria	<ul> <li>Must have relevant experience in caring out repairs/ servicing of 10 bar controller Valves</li> <li>Contractor must visit for understanding the defect</li> <li>Each component to be tested at test bench in presence of Ship staff</li> </ul>	
12	EDC/ EDD	As Soon As Possible (07 Days)	
13	Warranty	One Year for leakages/ defect free service	
14	Acceptance	a. Satisfactory installation, testing and operation of controller valves	
	criteria	b. After completion of complete work as mentioned in S. No 9 " a" to g	
15.	Any other Information	Contactor may contact SS/ visit onboard ship to resolve any query	

#### IT NO : 35/12/2024-25 PMSS HINGOL IT SPECIFICATIONS

S No	Description				
1.	Parent Equipment	Main Engine Contr	ol and Monitor	ing Syste	
2.	Sub Equipment	Forward and Aft M	Forward and Aft Monitoring and Control Panel		
3.	Assembly Component	24V DC Power Supplies			
4.	Model	QUINT-PS/3AC/24	QUINT-PS/3AC/24DC/40		
5.	Make	Phonix Contact (Qu			
6.	Quantity/Item Details	Part Number	Description	·	Boguirad Quantity
		QUINT-	24V DC	Power	Required Quantity
	1	PS/3AC/24DC/40		Fower	04
		QUINT-		Power	02
		PS/3AC/24DC/20		Lowel	02
7.	Justification	Repair/ Replaceme	nt of defective		
8.	Work required/Defect	a. Repair/ Repl	acement of ab	ove mon	tiopod itom
	i .	b. Satisfactory	installation and	triale or	aboard
<u> </u>	Scope of work	Repair Replacemer	t of above me	ntionod i	tom
10.	Technical Specifications	INPUT - 3x400-500	)V AC/50-60 H	7/222 1	
		OUTPUT - 24V DC	/40A (Boost 4)	50·2000	1.7 A (12 me)
		Temp25°C to 70°	с С	UN,200A	(12 (115)
11.	Eligibility Criteria			cleared	local contractor who
		has working experie	ence onboard		iocal contractor who
12	EDC == =	01 x Month		<u>vii v 3</u>	
13.	Warranty	01 Year OEM Warra	antv		,,
14.	Acceptance	a. OEM certified			
	Criteria		ecifications to	he nroviv	hed
		c. Satisfactory t	rials onboard s	shin	JEU
15.	Any Other Relevant Information	Nil			

# <u>IT NO : 35/13/2024-25</u>

1	Parent Equipment	
2 3.	Sub Equipment	A/C Conditioning Cooling System A/C Cooling Pump No 1
3.	Маке	
4.	Model	<u>GOULDS Pumps USA</u>
5.	Qty	
6.		e A/C Cooling Pump Motor hard in rotation, abnormal sound observed ar performance degraded.
7.	Work required/defect	
8.	Detail scope of work	Repair/ Maintenance of sea water cooling pump No 01 Repair/ Maintenance of sea water cooling pump No 1 includ undermentioned jobs:
		<ol> <li>Remove the sea water A/C cooling pump with motor from th ship.</li> </ol>
	ļ	II. Overhauling of sea water cooling pump
		III. Repair/ replacement Pump hody
		iv. Replacement of leaky mechanical seal
		V. Repair/ replace the pump impeller shaft and booring if require
		vii. All material, spares, tools, special equipment/ tolls, accessorie
		Service if any will be reasonable in any
	•	and the found of a factor of the part of the
9.	Technical specification	I is Repair detective items are same hand over to Detect our
		Following are the specification required:
		i. 440Volt 60Zh.
		ii. RPM: 1750.
		iii. Capacity: 5 to 3800 GPM
		iv. Head: 15 to 400 feet TDH.
10	1 	V: Working Pressure: 20 to 30 PSIG
10.	Eligibility criteria	<ol> <li>The firm should visit onboard and carry cut inspection to establish the extent of required work.</li> </ol>
		ii. The firm should have experience of the same kind of work
1.	EDC/EDD	07 x days
2.	Warranty	01 year
3.	Acceptance criteria	i. Use OEM certified parts.
		ii Satisfactory running trials
4.	<u> </u>	iii. Achievement of desired suction and discharge pressure
	Any other relevant information	Ni

# IT SPECIFICATION OF A/C COOLING PUMP NO 1- PMSS SABQAT

# <u>IT NO : 35/14/2024-25</u> <u>93 PMSA SQN</u>

#### IT SPECIFICATION FOR PROCUREMENT OF 04 X 07 MEN LIFE RAFT – DEFENDER AIRCRAFT

1.	Ship's Name	93 PMSA SQN
2.	Parent Equipment	Life Saving Equipment (LSE)
3.	Sub Equipment	Self
4.	Assembly equipment	Self
5.	Make	Ireland
6.	Model	RFD Aviation Air Droppable Self Inflatable 7 Men Life Raft with Survival Pack (Part No 00029021)
7.	Quantity	04
8.	Justification	Required for SAR operations
9.	Work Required/ Defect	Procurement of Air Droppable Self Inflatable 04 x 7 Men Life Raf with Survival Pack
10.	Detailed Scope of Work Required by Repair Agency	Procurement of 04 x 07 Men Life Raft
<u>11</u>	Technical specs (if any)	
12.	Eligibilities	a. Item procured to be in NEW CONDITION only from OEM of OEM authorized vendors.
		<ul> <li>Firms have to provide authorization letter of their principa firms.</li> </ul>
		c. Firms need to include freight/ insurance charges and custon duties/ taxes, etc. (as applicable) in quotation.
		<ul> <li>Firms need to get import/ export licenses from respective abroad firms/ agencies where applicable.</li> </ul>
		e. In case of failure to meet acceptance criteria, any defec during physical/ operational testing or occurrence of defect during warranty period, firm is liable to get the items replaced/ repaired or FoC basis in shortest possible time.
		f. Firm is to ensure and resolve all supply chain issues prio quoting and final signing of contract for procurement of life raft to PMSA.
13.	EDD	04 weeks after award of contract
14.	Warranty	01 Year
15.	Acceptance criteria (if any)	<ul> <li>a. As per standard acceptability criteria by OEM.</li> <li>b. Satisfactory physical condition and operational check of items (Where applicable)</li> </ul>
		c. Provision of log book/ card.
		d. Provision of Operator/ Maintenance Manual
		e. SOLAS/ USCG/ TSO certification for life raft or any equivalent approved certification
		f. Provisioning of certification/ validation for use on aircraft.
16.	Any other relevant information	

#### IT NO : 35/15/2024-25

# PMSS INDUS

	escription	<ul><li>a. Walk through gate</li><li>b. 02x Metal detectors</li></ul>
	System	Security/ Detection
	Make	CEIA
	Scope of Work	Repairing of aforementioned security equipment for Sat Ops
	Eligibilities	All reputable GST registered firms/ contractors/ suppliers.
5.	EDC	15 Days
\$	Warranty	01 Years
	Coeptance Criteria	Inspection by end user
	other relevant	In case of any query, contact EXO PMSS INDUS 021-48505455
	.e.ms of payment	100% After work Completion

#### IT NO : 35/16/2024-25

# IT SPECIFICATIONS – REPAIR/ REPLACEMENT OF MISC EQUIPMENTS - PMSS KASHMIR

¦ 1.	Parent Equipment	Crane, Dish Washer, Bilges Valve Mechanism ar
- <u> </u>	- +	Firefighting Hoses
2.	Sub Equipment	
3	Assembly Component	Misc
4.	Make	Misc — — — — — — — — — — — — — — — — — — —
5.	Model	
6.	Quantity	02
_7	Justification	FWT
8.	Work Required/ Defect	As per para 9
9.	Detailed scope of work	Following work to be undertaken:
		a. Repair of remote operating laver and l
		b. Repair of shin's galley dish washes
		a second of one of galley uish washer
		c. Repair of electrical mechanism of bilge valves
~		d. Replacement of level sensor of fresh water tan
		e. Replacement of 6 x gauges of misc parameters
		I. Replacement of 2 x firefighting bases
		g. Replacement of regent water hardness H1 & H2
		and Chloride CL 1,CL2 & CL2
		h. Replacement of 1 x hello crash FF suit
<u>10</u>	Technical specs	As per TPI
11.	Eligibility Criteria	(i). Have experience to work for ships (preferably
		PMSA ships)
	1	(ii). Company must be certified with HQ PMSA
	1	(iii). Company must be Income and Sales tax
	<u> </u>	registered
<u>12</u>	EDC/EDD	15 Days after award of contract
13.	Warranty — — — — — —	1 Year
14.	Acceptance Criteria	
	· · · · · · · · · · · · · · · · · · ·	After successful trials of both systems on designed temperatures
. 5.	Any Other Relevant	
	Information	SS contact (0321-3000503)

4		
1.	Parent Equipment	External Water Monitor System
2.	Sub Equipment	FIFI Gun
3.	Assembly Component	Misc
4.	Make	Shenzhen Sealuck Eqiupment Co., Ltd
5.	Model	PSKDC100
6.	Quantity	01
7.	Justification	FWT
8.	Work Required/ Defect	Defect rectification of Stbd FIFI Gun
	Detailed scope of work	<ul> <li>a. Dismantling of Stbd FIFI Gun</li> <li>b. Repair of motor</li> <li>c. Repair/ replacement of gear mechanism</li> <li>d. Repair of remote controller</li> <li>e. Installation of FIFI Gun</li> <li>f. Any other growth work</li> </ul>
10	Technical specs	As per TPI No3-3901-450-001
11.	Eligibility Criteria	<ul> <li>a. Have experience to work for ships (preferably PMSA ships)</li> <li>b. Company must be certified with HQ PMSA</li> <li>c. Company must be Income and Sales tax registered</li> <li>d. Company must have good experience of pumps</li> </ul>
<u>12</u>	EDC/ EDD	15 Days after award of contract
13.	Warranty	1 Year
14.	Acceptance Criteria	Satisfactory trials of FIFI Gun from Remote and Contro panel upto desired pressure for 07 days
15.	Any Other Relevant Information	SS contact (0321-3000503)

#### IT NO : 35/18/2024-25 PMSS KASHMIR

	CONDENSER	NG/ REPLACEMENT OF HEAT EXCHANGERS/ RS OF CHILL WATER PLANT
1.	Parent Equipment	Marine Light Water Chiller (Aft & Fwd)
2.	Sub Equipment	Heat Exchangers
3.	Assembly Component	Double Pipe & Plate Type Heat Exchangers
4.	Make	a. Yingte Heat-exchange Equipment Co., Ltd b. Alfalaval
5.	Model	a. ZS-50.5kW b. AC-70X-58M-F
6.	Quantity	<ul> <li>a. 14 x Cleaning and pressure testing condensers</li> <li>b. 03 x Replacement of condensers (double tube type)</li> </ul>
7.	Justification	PMS Routine
8.	Work Required/ Defect	Cleaning and replacement of heat exchangers condensers of chill water plant (fwd & Aft)
9.	Detailed scope of work	<ul> <li>a. Dismantling of Heat exchanger</li> <li>b. Cleaning of heat exchangers as per relevant TP with JLX-2.5 marine condenser cleaning device</li> <li>c. Replacement of 03 x deteriorated condenser double tube type</li> <li>b. Installation of heat exchangers</li> <li>c. Nitrogen gas pressure testing of complete circuit</li> <li>d. R404A gas charging (50kg) and satisfactory trials</li> <li>e. Replacement of heat exchangers (if required)</li> <li>e. Any other growth work</li> </ul>
10.	Technical specs	As per TPI 3-6184-0000
11.	Eligibility Criteria	<ul> <li>(i). Have experience to work for ships (preferably PMSA ships)</li> <li>(ii). Company must be certified with HQ PMSA</li> <li>(iii). Company must be Income and Sales tax registered</li> <li>(iv). Company must have good experience of repair maintenance of marine air conditioning systems</li> </ul>
12.	EDC/EDD	15 Days after award of contract
13.	Warranty	1 Year
14.	Acceptance Criteria	Satisfactory trials of both chillers for 02 x weeks
15.	Any Other Relevant	SS contact (0321-3000503)

#### IT NO : 35/19/2024-25 PMSS NAZIM & PMSS BARKAT

#### IT SPECIFICATION FOR PURCHASE OF PAINT FOR PMSS NAZIM & WESTERN MARITIME REGION

S No		IT SPECIFICATION		
1.	System	Self		
2.	Sub System	N/A		
3.	Make	Berger / ICI / Nelson / Gobis / Diamond		
4.	Model	N/A		
5.	Quantity			
		Description	Den	Qty
		Paint White Finishing For Weather Work	69	180
() sh				,
<del>6</del> .	Scope of Work	Purchase of Paint		
7.	Eligibilities	The firm should Registered in PMSA & NTN	/ GST	register
1.	EDD	15 Days after Issuance of order		
8.				
8. 9.	Warranty / Guarantee	01 Year after delivery		

#### IT SPECIFICATION FOR PROCUREMENT OF PAINT- PMSS BARKAT

•

S. NO		IT SPE	CIFICATIONS	
1.	Parent Equipment	Paint I	Finishing	
2.	Sub equipment	Paint \	Nhite & Grey,	
3.	Assembly component	-		
4.	Make	Berge	r/Master	
5.	Model	Latest		
6.	Quantity	S No		Qty
		a.	Paint White Finishing	40
		С.	Paint Grey	40
7.	Justification i.e PMS/	Paints	are essentially required in orde	er to
	Failure/FWT etc		nt ship hul from corrosion	
8.	Work Required/ Defect		Mentioned Paints are requ	
			perational requirement of ship.	
9.	Detailed scope of work	Paint s	should be manufactured in date	<del>)</del>
			ard OEM	
10.	Technical Specs (If		point 32C°	
	any		ng 20 Ltr for Paint White, & Gre	<u>у </u>
11.	Eligibility Criteria		ered Contractor	
12.	EDC	07Day	s after LPO	
13.	Warranty	01 Yea	ar	
14.	Acceptance Criteria (If	Satisfa	actory Trial onboard	
	any)			
15.	Any other relevant	Nil		
	information			

# IT NO : 35/20/2024-25 PMSS KASHMIR

#### IT SPECIFICATION- POWER AMPLIFIER MIXER

S No.		Description
1.	Parent Equipment	Conning System
2.	Sub Equipment	Power Amplifier Mixer
3.	Make	JAPAN
4.	Model	A-1724
5.	Qty	01
6.	Justification PMS/Failure/FWT etc	6 channel Power amplifier mixer is critically required onboard for smooth operation of conning system
7.	Work required/ Defect	Repairing/ Replacement of Power Amplifier Mixer for operationalization of all conning positions for smooth conduct of leave/ enter harbour/ other serials
8.	Detailed Scope of Work	Repairing/ Replacement of Power Amplifier Mixer for operationalization of all conning positions for smooth conduct of leave/ enter harbour/ other serials. In case of replacement 08/ 06 Channels Power Amplifier Mixer may be given precedence for resolution of said issue.
9.	Technical specs	<ul> <li>a. Type: 6-Channel Power Amplifier Mixer</li> <li>b. Operating Power: 240 Watt</li> <li>c. Power Requirement: AC 220-240 V 50/60 Hz</li> <li>d. Power consumption: 532 W(Rated output)</li> <li>e. Phantom Power: ON or OFF for each MIC 1-6 with switching setting (+17vdc)</li> <li>f. Temperature Range: -10C<sup>0</sup> - + 60 C<sup>0</sup></li> <li>g. Power Consumption: 220VAC</li> <li>h. Tone control: BASS:+-10db at 100hz treble: +-10db at 10khz</li> <li>j. Operating temperature: -10 C to +40 C</li> <li>k. Dimensions: 420 (W) X 107.7 (H) X 376(D) ml</li> <li>l. Weight: 13.5kg</li> <li>m. Frequency Response: (D) 20 - 20000 Hz ± 1dB</li> <li>(T) 20 -15000 Hz ± 1dB</li> </ul>
10.	Eligibility Criteria	Reputable local contractor having working experience with PMSA/ OEM authorized reps will be given preference
11.	EDD	10 days
12.	Warranty	12 x Months
13.	Acceptance Criteria	<ul> <li>a. OEM Certified item</li> <li>b. Item will be accepted after satisfactory test/ trials onboard</li> <li>c. OEM Technical documents/ warranty certificate of items required</li> <li>d. Upon scrutiny of items and provided documents i.e technical specifications along with production certificate and batch No by OEM</li> <li>e. Item must be genuine and OEM packed. Aftermarket products and items will not be accepted.</li> </ul>
<b>1</b> 4	Any other relevant Information	Firm must visit onboard for clarification of any query and understanding of requirement before quoting.

### IT NO : 35/21/2024-25

#### IT SPECIFICATION OF PETROL STOWAGE FACILITY- PMSS REHMAT

S No	Specification	Remarks
1.	Parent Equipment	Petrol engines
2.	Sub Equipment	Petrol stowage system
3.	Assembly Components	Petrol stowage racks
4.	Make	Stainless steel
5.	Model	Local fabricated
6.	Quantity	01 (250/240 Ltrs capacity of petrol)
7.	Justification i.e PMS/ Failure/ FWT etc	Installation of petrol stowage facility with quick release mechanism is required as highlighted by HQ FOST
8.	Work required/ Defect	Installation of petrol stowage facility as per design and drawing
9.	Technical Specification	As per drawing/ design and location (picture enclosed)
10.	Detailed scope of work	Following work is undertaken for installation of Petrol stowage system petrol stowage facility:
 11.	Eligibility Criteria	<ul> <li>a. Installation of petrol stowage facility for safe preservation of petrol with quick release mechanism.</li> <li>b. Standardize fire proof material is to be ensured having durability at least 10-15 years.</li> <li>c. Stowage/ area must be well ventilated.</li> <li>d. Petrol stowage canes to be provided within the racks.</li> <li>e. The firm will be responsible to undertake any work no covered above to ensure good quality of work.</li> <li>f. The firm will be responsible for welding/cutting, i required along with material.</li> <li>g. The firm will arrange all spares, tools and accessories etc required for the same work.</li> <li>h. The firm will be responsible for requirement of externa services.</li> <li>j. The firm will be responsible for all removal transportation and installation work during warranty.</li> <li>guarantee period claims and in case of any re-work.</li> </ul>
i		<ul><li>to establish the extent of required work.</li><li>b. Income tax registered.</li><li>c. Sales tax registered.</li></ul>
12.	EDC	15 x Working days after issuance of work/ confirmation order
13.	Warranty	01 Year
14.	Acceptance criteria	Successful completion and acceptance by the end user
15.	Any other relevant information	Nil.

A. . . . . .

#### IT NO: 35/22/2024-25 REPLACEMENT OF SSDG NO 2 -PMSS BARKAT

1.	Ship's Name	PMSS BARKAT
2.	Parent equipment/system	Power generation
3.	Sub equipment	SSDG No 2 (110 KW)
4.	Assembly/ equipment	Engine
5.	Make	DEUTZ
6.	Model	D234V8
7.	Qty	01
8.	Justification	Performance degraded
9.	Work requisition	Dismantle and removal of existing engine from SSDC 2 and installation/commissioning of compatible Cumi- engine on SSDG No 2
10.	Detailed scope of work	<ul> <li>a Decouple and remove existing DEUTZ engine in SSDG No 2 and unship.</li> <li>b Install and commission refurbished Cullengine on SSDG No 2, as per technical specifications.</li> <li>c. Alignment of Cummins engine is the responsition of firm</li> <li>d. Any additional piping for SW, Lub oil and fuel is responsibility of firm</li> <li>e. Installation/provision of start/stop and engine manual at remote and local position.</li> <li>f. Marine version engine is to be installed</li> <li>g. Any additional/essentia accessories i e</li> <li>Cooring pump. Heat exchanger after</li> <li>h. Safeties of new installed engine are be tested certificate is to be provided.</li> <li>i. Technical manual parts manual and works manual of newly engine to be provided.</li> <li>j. New nuts &amp; bolts (SS) to be used for installation k. All spares (must be genuine) tools steryment /accessories required for said Repair and installation system/equipment will be repaire and installation system/equipment will be repaired /met by firm</li> <li>k. Requirement of external services, if required wiresponsibility of firm</li> <li>l fany Repair/ Maintenance work goes beyon defined scope of works will be processed accordingly m initial 25/50 hrs routine is to be carried out by and spares required for initial 25/50 hrs routine are a provided by the firm.</li> </ul>
11.	Technical spec	<ul> <li>p. 02 days training of SS wirlt PMS routines a arranged by the firm at ship premises.</li> <li>110 KW</li> <li>50 Hz</li> </ul>
	i -	380 V

12.	Eligibilities	<ul> <li>a. The firm must visit onboard and carry out diagnoses/inspections to establish the extent of required work.</li> <li>b. The firm must have sufficient experience of same kind of work and experienced.</li> <li>c. The firm should be NTN /GST registered</li> </ul>			
13.	EDC	14 x days after issuance of work/confirmation order			
14.	Warranty	01 Year			
15.	Acceptance criteria	<ul> <li>a. Satisfactory work done by the firm.</li> <li>b. Satisfactory VA Report by FMG.</li> <li>c. No leakage/ unusual noise at full load trials.</li> <li>30% for ½ hrs</li> <li>50% for ½ hrs</li> <li>75% for 1 hr</li> <li>100% for 4 hrs</li> <li>d. Satisfactory sea trials.</li> </ul>			
16.	Any other information	-			

1.1

S No	IT Specifications	
1.	· · · · · · · · · · · · · · · · · · ·	Power Generation and Distribution
2.	Parent Equipment	SSDG-1
3.	Assembly Component	All components/ Parts of SSDG
<u>4</u> .	Make	CUMMINS (USA)
5.	Model	6CTA 8.3
6.	Quantity	01 in No
7.	Justification i.e PMS/	TOH routine is due at 6000Hrs
8.	Failure/ FWT etc Work required/ Defect	Complete TOH to be carried out for safe operation of SSDG
9	Technical	a. 110KW
	Specification	<ul> <li>b. 380VAC 3 phase 50Hz</li> <li>c. 6 cylinders alongwith heat exchanger</li> </ul>
10.	Scope of Work	Repair/ maintenance (TOH/ PMS routine) work of SSDG No 1 i
		required with provisioning of parts/ spares on firm arrangemen Details is appended below:
		<ul> <li>a. Remove cylinder heads.</li> <li>b. Remove intake and exhaust manifolds.</li> </ul>
		c. Disconnect fuel lines from injectors.
		d. Loosen bolts and remove cylinder heads.
		e. Clean and inspect cylinder head for crack wear etc
		<ol> <li>Check condition of valve springs.</li> </ol>
		g. Valves to be inspected and seats to be prepared.
		h. Replace valve seats if required.
		j. Injectors to be tested and calibrated for proper spray.
		k. Replace injectors if required.
		I. Rocker arm push rods to be examined against wear tear.
		m. Replace worn out valve guides and seals if required.
		n. After decarbonising and cleaning assemble and ref
		cylinder heads with new gaskets.
		o. Refit the manifolds using new seals, packing and joint
		required.
		<ul> <li>p. Adjust valve clearances as specified.</li> <li>q. Adjust and set injector timing.</li> </ul>
		<ul> <li>q. Adjust and set injector timing.</li> <li>r. Refill fresh oil and coolant in engine.</li> </ul>
		REPAIR/ MAINTENANCE OF KNOWN DEFECTS DURING
		<ul> <li>a. Fresh water pump/ water body is observed deteriorated.</li> <li>b. Engine mounts are observed deteriorated and same are to be replaced due to excessive vibration.</li> <li>c. Air intake cooler is observed choked and same is require to be replaced.</li> <li>d. Lub oil pressure dropped after 60% load and same is required to be rectified.</li> </ul>
		e. Fuel injection pump to be overhauled due to leakages.
	İ	f. Turbo charger is to be overhauled due to exhaust leakages.
		g. Heat exchanger to be chemically cleaned and zinc anodes are to be replaced.
		h. OEM certified spares/ parts of TOH routines to be ensured. j. Instrument colour coding paint of mechanical system to be
	j	carried out. k. Provide complete list of replaced/ repaired items. Replaced
		items to be handed over to SS for survey.
		I. All spares, tools, special equipment / tools, accessories etc
		for repair and cleaning work are to be arranged by the contractor.
		m. Any damage / defect / wear tear occur during the course of
		removal and installation of SSDG is the responsibility of the concerned firm
11.	Eligibility Criteria	a. The firm must visit onboard and carry out diagnosis,
	J. y enterior	inspections to establish the extent of required work.
		b. Firms not undertaking the visit onboard ship to see extent
		of work will not technically qualify.
	1	c. The firm must have sufficient experience of same kind of
		work onboard corvette.
		d. Successful HATs and SATs at 1500 RPM and maximum load
12	EDC	e. NTN/ GST registered.
12.	EDC	30 Working days
13 14	Warranty	01 year after completion of successful full load trials
14.	Acceptance criteria	a. SATs at full load for 04 hours i.e
		(1) 30% load for ½ hrs
		(2) 50% load for ½ hrs
		(3) 75% load for 1 hrs

# IT NO : 35/24/2024-25

## IT SPECIFICATION FOR REPAIR/ MAINTENANCE OF CHEQUERED PLATES - PMSS REHMAT

S No	Specification	Remarks
1.	Parent Equipment	
2.	Sub Equipment	Deck plates
3	Assembly	Bilges plates
0	Components	Chequered plates
4.	Make	Local
5.	Model	Aluminium / MS
6.	Quantity	FWD Engine room, Aft Engine room, EVAC compartment,
		Junior rate mess and senior rate mess
7.	Justification i.e PMS/ Failure/ FWT etc	Chequered plates are deteriorated due EW/T
8.	Work required/	Chequered plates repair/ maintenance along with angle frame
	Defect	and locking mechanism is required
9.	Technical	a. Chequered plates thickness 4MM
	Specification	b. Material aluminium
10.	Detailed scope of work	Following work is required to be undertaken for the repair/ maintenance of chequered plates:
		a. Chequered plates to be fitted/ secured along with locking mechanism.
		b. Repair/ maintenance/ welding of angle frames is required.
		<ul> <li>Proper securing of chequered plates to be ensured for antiskid/ slip.</li> </ul>
		d. Paint work of angle frame to be carried out.
		e. All spares, tools, special equipment/ tools, accessories etc. required for said repair/ maintenance are to be arranged by firm.
		f. Any damage/ defect/ wear tear occur during the course of removal, repair and installation of system/ equip will be repaired/ met by firm.
1.	Eligibility Criteria	<ul> <li>The firm must visit onboard and carry out diagnosis/ inspections to establish the extent of required work and must have experience for chequerd plates onboard corvettes.</li> <li>Income tay registered</li> </ul>
		<ul> <li>b. Income tax registered.</li> <li>c. Sales tax registered.</li> </ul>
2.	EDC	20 x Working days after inclusion
	Warranty	20 x Working days after issuance of work/ confirmation order
		the thickness AMM
14.	Acceptance criteria	a. Chequered plates thickness 4MM
	•	b. Material aluminium
		c. Acceptance by SS
15.	Any other relevant information	t -

#### <u>IT NO : 35/25/2024-25</u> <u>DIR(OPS)</u>

#### IT SPECIFICATION - PRINTING WITH BINDING OF DG PMSA STANDING ORDER

S No	S No IT SPECIFICATION						
1.	Description Booklets printing with binding						
2.	Location	Ops Directorate					
3.	Make/ Model	-					
4.	Quantity 27 x Copies of Booklets with binding						
5.	Size of Paper	A4 (210 x 297 mm)					
6.	Weight of Paper	80 gsm					
7.	Scope of Work	As per sample					
8.	Eligibility	The firm registered in PMSA & NTN/GST registered					
9.	EDD	Upto 07x Working Days					
10.	Acceptance Criteria	Acceptance after delivery and Inspection by Staff					
11.	Term of Payment	100 % payment after work completion					

# Note: 100% Payment after completion by CNA

Director General Pakistan Maritime Security Agency Plot No 34-A, Dockyard Road KARACHI Telephone 021-48509194 Fax 99214625 E-Mail dpcc@pmsa.gov.pk

#### **INVITATION TO TENDER GENERAL INSTRUCTIONS**

#### 1. <u>CONDITIONS GOVERNING CONTRACT:</u>

All Procurement / Repairs / Maintenance Contract, Local Purchase Order (LPO) and work ordered made as aresult of this IT shall mean the agreement entered into between the parties that is buyer and the supplier will be in accordance with the PPRA rules 2004 or any amendment issued from time to time. Therefore all open tender inquiry will be uploaded on PPRA Website and publish on print media as the case may be.

#### 2. <u>SUMBISSION OF TENDER:</u>

Firms shall submit their offers in two separate envelopes clearly marked as "**Commercial Offer**" and "**Technical Offer**" for open tender. Both envelops shall be properly sealed bearing the signature of the bidder. Thereafter both these envelopes shall be placed in one bigger envelope. This envelope should bearthe address of the D (P&CC).

a. **TECHNICAL OFFER:** Should contain all relevant details and specifications as per the IT specifications. Literature / Brochure or any other relevant technical details may also be included in it. Technical offer should not contain the price. Indication of price in technical offer may render it null and void. The word "Technical Offer" should be clearly mentioned alongwith the tender No anddate on the envelope containing the technical offer.

b. **<u>COMMERCIAL OFFER:</u>** The price be quoted in figures as well as in words alongwith essential Literature / Brochures. The word "Commercial Offer", tender number should be clearly mentioned on the envelope. Taxes, duties, freight / transportation, insurance charges etc if any areto be indicated separately.

c. **<u>BID SECURITY</u>**: All registered firms are exempted from provision of bid security upto Rs.500,000/- and unregistered firms have to provide bid security equals to 02% for bids amounting upto Rs.500,000/- in the shape of Pay Order in favor of "IT Sale Account DG PMSA". Furthermore, firms are required to deposit bid security not exceeding 05% of the bid price for bid value amounting more than Rs.500,000/-. Moreover, following guidelines will be followed:

- i. 2% from registered firms.
- ii. 5% from un-registered firms.

d. Total price of the items quoted against the tender is to be clearly mentioned. It should also contains a **pay order 2% or 5% in the shape of pay order of the offered value** as earnest money. Cross cheque or cash is not acceptable in this case. The offer received without earnest money will be rejected.

e. **SPECIAL INSTRUCTIONS:** Tender documents and its conditions may please be read point to point and understood properly before quoting. All tender conditions should be responded properly. In case of any deviation due to non-acceptance of tender conditions, the same should be highlighted alongwith changed offer / conditions. Tender may however be liable to be rejected.

#### **PREPARATION OF QUOTATION**

Please prepare quotation in this format In case of GST @ 18% or SST @ 15%:

<u>S.NO</u>	Description	<u>Unit Price</u>	<u>Qty</u>	<u>Total</u>	GST @ 18% or SST @ 15%.	<u>T/Price</u>

Please prepare quotation in this format In case of without GST or SST:

S.NO	<b>Description</b>	<u>Unit Price</u>	<u>Qty</u>	<u>Total</u>	T/Price

#### Without this format quotation will not be accepted.

#### 3. DATE AND TIME FOR RECEIPT OF TENDER:

Tender must be dropped in tender Box placed at main gate. HQ PMSA will not accept any excuse of delay occurring due to whatsoever reason. Tender received after the time indicated in IT will not be entertained. The tender opening time, however, fall on next working day in case of closed / forced holiday or any other unforeseen event. Only authorized representatives of firm will be allowed to attend tender opening. **The tender received through Fax. E-Mail will not be acceptable**.

#### 4. <u>TENDER OPENING:</u>

Technical offer will be opened as per scope of work on the date and time mentioned in the tender. Commercial offer shall be retained with technical officer. It will be opened at a later stage. All technical offers will be scrutinized by a Technical Scrutiny Report (TSR) committee nominated by HQ PMSA. The offers which are not as per the IT specification will be rejected. The firms recommended by TSR Committee will be allowed to attend the commercial opening for which date and time will be intimated separately.

#### 5. <u>VALIDITY OFFER:</u>

The validity period of quotations must be indicated and should invariably be for 90 days extendable to

30 days from the date of opening of Technical offer.

#### 6. <u>QUOTING OF RATES:</u>

Unit price of the item, GST/ SST or any other Govt tax and Total price all these should be indicated separately in Pak Rupees in a very clear manner as follows:

# S No Description Qty U/Price GST/SST/Taxes Total Price

#### 7. ATL/ GST/ SST/ INCOME TAX NUMBER:

Only registered suppliers, who are on Active Taxpayers List (ATL) of FBR, are eligible to supply goods/ services to Government department. GST/SST and income tax number be clearly indicated on the quotations and all other relevant documents.

#### 8. <u>RETURN OF EARNEST MONEY:</u>

a. Earnest money to the unsuccessful bidders will be returned **one week** after commercialopening date.

b. Earnest money to the firm who has won the purchase order/ work order & contract will bereturned on submission of Bank Guarantee as per the contract.

#### 9. <u>TENDER FEE:</u>

Each technical offer must be accompanied with Cash of **Rs.1,000**/- nonrefundable as tender fee

(In favour of IT Sale Account DG PMSA) (Separate Quotations required for each IT Specification).

#### 10. **INSPECTION AUTHORITY:**

Joint inspection of stores provided and work done will be carried out by committee appointed by HQ PMSA or as per the contract.

#### 11. <u>CONDITION OF STORES:</u>

Spares, Stores, items and work done will be accepted on Warranty / Guarantee of the firm onForm DPL-15.

#### 12. DOCUMENTS REQUIRED:

Following documents are required to be submitted alongwith the quotes where applicable:

a. OEM / Authorized Dealer/Agent Certificate alongwith OEM Dealership Evidence as applicable.

b. The Supplier is to provide OEM conformance certificate. In case of Fax or e-mail hard copy of conformance certificate must follow. On receipt of this PMSA HQ may approach the OEM to confirm the veracity of the documents submitted. Companies / firms rendering false OEM conformance certificate will be penalized as per rules in vogue.

#### 13. <u>SECURITY DEPOSIT / BANK GUARANTEE:</u>

To ensure timely and correct supply of stores the firm will furnish an unconditional Bank Guarantee (BG) from a schedule bank for an amount of **10%** of the contract value (excluding taxes, duties / freight handling charges on a stamp paper of the value of (Rs.100/00) as per prescribed format in the shape of Bank Guarantee. Format of Bank Guarantee is at Annex "B". Furthermore, it is imperative to mention that deposit of PBG for HMI and Core Exchange cases will be equal to the total value of engine.

#### 14. <u>CURRENT BANK STATEMENT:</u>

For all contracts of Rs 1,000,000/- or more the firm is required to submit current bank statement of the firm.

#### 15. INTEGRITY PACT:

Procurement exceeding Rs 1.00 M shall be subject to an integrity pact, between the Buyer and the Suppliers or Contractors.

#### 16. <u>CORRESPONDENCE:</u>

All correspondence will be addressed to the Buyer. Correspondence with regard to payment or issue of delivery receipt may be addressed to D (P & CC) PMSA Karachi.

#### 17. <u>PRE SHIPMENT INSPECTION:</u>

PMSA may send a team of Officers for the inspection of Major Equipment and Machinery items at OEM premises for inspection before dispatch if required at the Supplier's cost and arrangement.

#### 18. <u>AMENDMENT IN CONTRACT:</u>

Contract may be amended / modified to include fresh clause modify the existing clauses with the mutual agreements by the Supplier and the Buyer such modifications shall form an integral part of the contract.

#### 19. <u>DISCREPANCY:</u>

The Buyer will render a discrepancy report to all concerned within 45 days after receipt of stores for discrepancies found in the consignment. The quantities found short are to be made good by the Supplier free of cost.

#### 20. PRICE VARIATION:

Price offered against IT are to be firm and final.

#### 21. LIQUIDATED DAMAGES (LD):

Liquidated Damages upto 2% per month are liable to be imposed on the Suppliers by the Buyer in accordance with PPRA rules, if the stores supplied after the expiry of the delivery date without any valid reason. Total value of the LD shall not exceed 10% of the contract value.

#### 22. <u>RISK PURCHASE:</u>

In the event of failure on the part of Supplier to comply with the contractual obligations the contract will be cancelled at the Risk and Expense of the Supplier in accordance with PPRA rules.

#### 23. <u>PENALTY:</u>

In case of wrong supply of the item by the Supplier, a penalty of 10% of the contract value may beimposed by this HQ PMSA apart from any other penalties.

#### 24. ALL RIGHTS RESERVED:

HQ PMSA may reject all bids or proposals at any time prior to the acceptance of a bid or proposal as per PPRA Rule 33(I).

#### 25. <u>PAYMENT:</u>

The payment will be released through Controller of Naval Accounts (CNA) Karachi in Pak Rupees after completion of delivery / work.

#### 26. **PARTIAL ORDER**.

All participating firms are to comply acceptance of partial order. Partial supply as per lowest rates will be awarded to the lowest bidder.

#### 27. **DISOUALIFICATION:** Offers are liable to be rejected if:-

- a. Received after time and date specified in the IT.
- b. Offers are found conditional or incomplete in any respect.

c. There is any deviation from the General / Special / Technical Instructions contained in this tender.

d. Taxes and duties, Freight, Transportation and Insurance charges not indicated separately as per required price breakdown mentioned above.

- e. Pay Order with Commercial Offer and Cash with Technical Offer is not received.
- f. Multiple rates quoted against one item.

g. Manufacture's relevant Brochures and technical details on major equipment, assemblies are not attached in support of specification.

- h. Offers (Technical / Commercial) are containing amendments / corrections / overwriting etc.
- j. National Tax No (NTN) and GST/SST No are not indicated on technical and commercial offer.
- k. If validity of offer is not quoted as required in IT or made subject to confirmation late.