



Garden Reach Shipbuilders & Engineers Limited
(A Govt. of India Undertaking)

P-2/2, TARATALA ROAD, Kolkata - 700 088.

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NOTICE INVITING TENDER

QS/03/0002

E-TENDER NO: DKMC/ABH/OT/RLHTS Anchor Mooring capstan/ET-1913

Date: 17-11-2022

Due Date: **08-Dec-2022 12:00 Hrs.**
Tender Opening Time: 10-Dec-2022 12:00 Hrs.

- Bids in Single Stage Two Bid System (Part – I: Techno- Commercial Bid and Part –II: Price Bid) are invited for **15 KW & 22KW Motor JB, Upgradation of 15 KW & 22KW FLP Soft Starter for SVL RLHTS Yd-3025-28, B& D spares for P15B of RLHTS Project, OBS along with Electrical connection of RLHTS system, B& D spares for Anchor Capstan and Mooring Capstan of SVL Yd-3025-28** from resourceful and financially solvent Vendors/Contractors having experience in similar work.
Part – I: Techno – Commercial bid – ANNEXURE – A & B (it must contain only technical & commercial points against Annexure - I, II, III, IV,V, VI, VII, VIII, IX, X ,XI, XII,XIII& XIV of the NIT and should not contain any price. If any price is indicated in Part – I, the offer will be treated as CANCELLED)
Part – II: Price bid (containing only price)-ANNEXURE – C
- You will have to submit your bid in two part (Techno-Commercial and price Bid as per **Annexure – I, II ,III, IV, V,VI,VII, VIII, IX, X , XI,XII,XIII & XIV of NIT**) in E-PROCUREMENT mode where all data sheet will be available for download. You are required to fill up the required field and upload the file. Price bid need to be filled up in given price bid data sheet only (ANNEXURE –C). No other attachment regarding price will be allowed, if attached the offer will be treated as cancelled. You should mention your offer Ref. No. Date in ANNEXURE – A, B & C.
- Nature of Tender: Open E-tender.**
- Description of items: 15 KW & 22KW Motor for JB, Upgradation of Soft Starter for SVL RLHTS Yd-3025-28, B& D spares for P15B of RLHTS Project, B& D spares for Anchor Capstan and Mooring Capstan of SVL Yd-3025-28.**
- Technical Specification and scope of supply:** As per enclosed Annexure-I, II,III,IV,V,VI
- Drawing:** As per enclosed Annexure-VII, VIII,IX,X ,XI,XII,XIII.
- General commercial terms and conditions:** As per enclosed Annexure- XIV.
- Important Dates:-**
 - Date of Publishing on Web : 17-11-2022
 - Last date of collection of Tender drawings : .2022
 - Pre Bid Meeting : Not required. However for any clarification please contact the undersigned.
 - Last date of submission of Tender : up to 10.00 AM
 - Date of opening of Tender- Part-I : at 10.30 AM
 - Date of opening Tender- Part II– Price Bid : Date of opening of Price Bid to be notified after conclusion of TNC/CNC meetings and acceptance of Techno-commercial offers.

9. Price shall be firm & fixed till full execution of order and F.O.R. GRSE Store at Kolkata basis.
10. (a) Vendor should attach (Submit hard copy in case of large document) the following details with their Techno- Commercial bid:
- (i) Supplier should have previously manufactured type tested Control Panel/Starter for Indian Navy/ Coast Guard ships. Vendor have to submit documentary evidence along with their offer.
 - (ii) Details of Plant & covered shed area, Machineries, equipment's executive / workman/ staff on roll of the company and other infrastructure / facilities etc. which may be audited by GRSE.
 - (iii) PAN No.
 - (iv) GST registration no.
 - (v) Registration with Excise authority if applicable.
 - (vi) Solvency certificate from Banker.
 - (vii) Audited annual accounts for last three years along with annual report.
- Vendors registered with GRSE, need not submit the documents (iii) to (vii) above.
- (b) The bidder will particularly specify in their bid documents whether they have any arrangements for joint venture/consortium/partnership and the detailed documentary proof of evidence of such joint venture/consortium/partnership shall accompany the bid document for consideration thereof as a participant.
11. **Eligibility Criteria:** Supplier should have previous experience for Manufacturing of Type tested Control panel or Starters. Vendor shall have to furnish the documentary evidence of type tested Control Panel/ Starters for Naval application along with all kinds of Type test and Routine test certificate.
12. **Tender Fee:** Tender Fee will be 500/- (Five Hundred)(non- refundable). From Nationalized Bank through DD/PO in favor of: Garden Reach Shipbuilders & Engineers Ltd.” payable at Kolkata. Vendor need to submit tender fees as detailed in prescribed format in e-procurement commercial data sheet and send the DD/PO to Deck Machinery Department, GRSE Taratala Unit, Address to DGM (DKMC) before due date of submission. Please scan the Draft copy and attach to General Documents part in e-procurement. Non-submission of value of tender documents may lead to offer rejection. SSI Units registered under single point registration with NSIC will be exempted from Tender Fee Deposit on submission of valid NSIC single point registration certificate for particular product under tender.
13. **EMD:** Amount of Rs.50,000.00/- (Rupees Fifty thousand only) (interest free) issued from Nationalized Bank through DD/PO/Bank Guarantee (as per format) in favour of Garden Reach Shipbuilders & Engineers Limited (Detailed in ANNEXURE –XVII). Vendor need to submit EMD as detailed in prescribed format in e-procurement commercial date sheet and send the DD/PO to Manager (Project Management - DKMC), GRSE Taratala Unit and BG directly to Deputy General Manager (Finance) at GRSE Main, 43/46, Garden Reach Road, Kolkata – 700024 before due date of submission. Please scan the DD/PO/BG (As per format) and attach to General Documents part in e- procurement. Non-submission of EMD will lead to offer rejection. SSI Units registered under single point registration with NSIC will be exempted from Earnest Money Deposit on submission of valid NSIC single point registration certificate for particular product under tender. EMD will be returned to the unsuccessful bidders. GRSE registered vendors are also have to submit EMD as per tender.
14. **Micro & Small Enterprise: -**
MSEs will also be entitled for following benefits subject to they have to provide Enterprise Memorandum (EM Part-II)/ NSIC Certificate/ Udyog Aadhar Memorandum (UAM) for manufactures/ supply of concerned Equipment / items, along with the offer :-
- (a) Tender documents will be issued free of cost.
 - (b) Payment of Earnest Money will be exempted.
15. Last date of submission of Bid/ date of opening of bid is indicated in Tender Document. Bidders may view the opening of tenders (Technical Bid) from their portal using their DSC. Tender is liable to be rejected if the requisite documents are not enclosed with the technical offer.
16. Date of opening of offer (Price Bid) will be notified in due course after conclusion of TNC/CNC meetings and acceptance of Techno- Commercial offer. Price bids of the qualified vendors could be viewed by the bidders from their own portal.

17. Acceptance Format Matrix should be filled up and attached with techno-commercial bid as marks of acceptance of NIT/SOTR/STACs. In case of non-receipt of filled in STACs acceptance format matrix, it would be presumed that you have accepted all our terms & conditions as per GRSE tenders until & unless deviation is specially mentioned in offer.
18. Queries if any on SOTR or others Terms may be got clarified from Mgr. (PM-DKMC)/DGM (Design-DKMC) prior to submission of offer.
19. GRSE reserves the right to accept/ reject any Tender in full or in part without assigning any reason.

for GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.

Amit Bikram .Hajra
Manager (PM-DKMC)
M/s Garden Reach Shipbuilders & Engineers Ltd
P-2/2 Taratala Road, Kolkata-700088.
Tel: 2469-8138/8139 Ext-211.

Enclosure List:

1. Annexure-I: Scope of Work.
2. Annexure-II: Statement of Technical Requirement (SOTR) of POWER JB (FLP) FOR 22KW, 15KW FLP MOTOR FOR RLHS OF SV(L).
3. Annexure-III: Statement of Technical Requirement (SOTR) for SLAVE CONTROL UNIT JUNCTION BOXES WITH DUMMY PLUG FOR RLHTS.
4. Annexure-IV: Statement of Technical Requirement (SOTR) for UPGRADATION OF 22KW, 15KW SOFT STARTER (FLP) OF RLHTS FOR SV(L).
5. Annexure-V: Statement of Technical Requirement (SOTR) of SPARES FOR RLHTS AND B&D SPARES.
6. Annexure-VI: Statement of Technical Requirement (SOTR) for INDEGENISED ELECTRICAL EQUIPMENT FOR RLHS OF SV(L).
7. Annexure-VII: General Arrangement of DUMMY CONNECTOR ASSEMBLY.
8. Annexure-VIII: General Arrangement of SCU JB-13 for port hanger.
9. Annexure-IX: General Arrangement of SCU JB-14 for SELECTOR DECK.
10. Annexure-X: General Arrangement of 15KW POWER JB FOR HANGAR HPU
11. Annexure-XI: General Arrangement of 22 KW POWER JB FOR DECK HPU
12. Annexure-XII: General Arrangement of CONTROL PANEL -15KW FOR HANGAR HPU – SINGLE WINCH
13. Annexure-XIII: General Arrangement of CONTROL PANEL -22KW FOR DECK HPU – DULE WINCH
14. Annexure-XIV: GENERAL TERMS & CONDITIONS OF TENDER
15. Annexure-XV: GRSE's STAC'S for Indigenous Equipment / Machinery
16. Annexure-XVI: Format of Bank Guarantee.
17. Annexure-XVII: Format of bank guarantee towards Earnest money.
18. Annexure-XVIII: Format of bank guarantee towards Security deposit.

ANNEXURE-I:

1. Scope of Work:

<u>INDENT</u>							
SL. N O.	INDENT NO.	SAP SL. NO.	MATERIAL .CODE	MDL PROJECT YD NO	INDENT ITEMS		UO M
					MATERIAL DESCRIPTION	QUAN TITY REQ.	
1	1000044132	10	409901234191	SVL YD 3025	15KW MOTOR JB (FLP)	1	EA
2	1000044132	20	409901234192	SVL YD 3025	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
3	1000044132	30	409901236103	SVL YD 3025	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
4	1000044132	40	409901234194	SVL YD 3025	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
5	1000044132	50	409901234195	SVL YD 3025	22KW MOTOR JB (FLP)	1	EA
6	1000044132	60	409901234192	SVL YD 3025	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
7	1000044132	70	409901236104	SVL YD 3025	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
8	1000044132	80	409901234194	SVL YD 3025	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
9	1000044132	90	409901234197	SVL YD 3025	UP-GRADATION OF 15 KW SOFT STARTER (FLP)	1	EA
10	1000044132	100	409901234192	SVL YD 3025	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
11	1000044132	110	409901234198	SVL YD 3025	SHOCK VIBRATION MOUNTS	1	EA
12	1000044132	120	409901236105	SVL YD 3025	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
13	1000044132	130	409901234194	SVL YD 3025	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
14	1000044132	140	409901234199	SVL YD 3025	UP-GRADATION OF 22 KW SOFT STARTER (FLP)	1	EA
15	1000044132	150	409901234192	SVL YD 3025	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
16	1000044132	160	409901234200	SVL YD 3025	SHOCK VIBRATION MOUNTS	1	EA
17	1000044132	170	409901236106	SVL YD 3025	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET

18	1000044132	180	409901234194	SVL YD 3025	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
19	1000044132	190	409901234202	SVL YD 3025	SLAVE CONTROL UNIT JUNCTION BOX JB 13 (FLP)	1	EA
20	1000044132	200	409901234192	SVL YD 3025	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
21	1000044132	210	409901236107	SVL YD 3025	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
22	1000044132	220	409901234194	SVL YD 3025	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
23	1000044132	230	409901234203	SVL YD 3025	SLAVE CONTROL UNIT JUNCTION BOX JB 14 (FLP)	1	EA
24	1000044132	240	409901234192	SVL YD 3025	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
25	1000044132	250	409901236108	SVL YD 3025	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
26	1000044132	260	409901234194	SVL YD 3025	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
27	1000044132	270	409901234204	SVL YD 3025	OBS_CONTROL RELAY 2 C/O CONTACT 24VDC	1	EA
28	1000044132	280	409901234205	SVL YD 3025	OBS_CONTACTOR 40AMP AC3 DUTY 24V DC COIL FOR 22KW & WITH CONTROL RELAY 4NO & 2NO+2NC ADDON BLOCK	1	EA
29	1000044132	290	409901234206	SVL YD 3025	OBS_2NO – 2NC AUXILIARY CONTACTS	1	EA
30	1000044132	300	409901234207	SVL YD 3025	OBS_2NO – 2NC AUXILIARY CONTACTS	1	EA
31	1000044132	310	409901234208	SVL YD 3025	OBS_THERMISTOR RELAY 24V DC	1	EA
32	1000044132	320	409901234209	SVL YD 3025	OBS_SAFETY RELAY 24V DC	1	EA
33	1000044132	330	409901234210	SVL YD 3025	OBS_SAFETY RELAY PNOZ X 3 24V DC.	1	EA
34	1000044132	340	409901234211	SVL YD 3025	OBS_1A FUSE	3	EA
35	1000044132	350	409901234212	SVL YD 3025	OBS_2A FUSE,	3	EA
36	1000044132	360	409901234213	SVL YD 3025	OBS_5A FUSE,	3	EA
37	1000044132	370	409901234214	SVL YD 3025	OBS_ 0.5 AMP FUSE	1	EA
38	1000044132	380	409901234215	SVL YD 3025	OBS_15 A FUSE	1	EA
39	1000044132	390	409901234216	SVL YD 3025	OBS_12.5 A FUSE	2	EA
40	1000044132	400	409901234217	SVL YD 3025	OBS_2 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
41	1000044132	410	409901234218	SVL YD 3025	OBS_4 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA

42	1000044132	420	409901234219	SVL YD 3025	OBS_1 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
43	1000044132	430	409901234220	SVL YD 3025	OBS_7A FUSE,	1	EA
44	1000044132	440	409901234191	SVL YD 3026	15KW MOTOR JB (FLP)	1	EA
45	1000044132	450	409901234192	SVL YD 3026	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
46	1000044132	460	409901236103	SVL YD 3026	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
47	1000044132	470	409901234194	SVL YD 3026	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
48	1000044132	480	409901234195	SVL YD 3026	22KW MOTOR JB (FLP)	1	EA
49	1000044132	490	409901234192	SVL YD 3026	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
50	1000044132	500	409901236104	SVL YD 3026	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
51	1000044132	510	409901234194	SVL YD 3026	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
52	1000044132	520	409901234197	SVL YD 3026	UP-GRADATION OF 15 KW SOFT STARTER (FLP)	1	EA
53	1000044132	530	409901234192	SVL YD 3026	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
54	1000044132	540	409901234198	SVL YD 3026	SHOCK VIBRATION MOUNTS	1	EA
55	1000044132	550	409901236105	SVL YD 3026	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
56	1000044132	560	409901234194	SVL YD 3026	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
57	1000044132	570	409901234199	SVL YD 3026	UP-GRADATION OF 22 KW SOFT STARTER (FLP)	1	EA
58	1000044132	580	409901234192	SVL YD 3026	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
59	1000044132	590	409901234200	SVL YD 3026	SHOCK VIBRATION MOUNTS	1	EA
60	1000044132	600	409901236106	SVL YD 3026	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
61	1000044132	610	409901234194	SVL YD 3026	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
62	1000044132	620	409901234202	SVL YD 3026	SLAVE CONTROL UNIT JUNCTION BOX JB 13 (FLP)	1	EA
63	1000044132	630	409901234192	SVL YD 3026	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
64	1000044132	640	409901236107	SVL YD 3026	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET

65	1000044132	650	409901234194	SVL YD 3026	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
66	1000044132	660	409901234203	SVL YD 3026	SLAVE CONTROL UNIT JUNCTION BOX JB 13 (FLP)	1	EA
67	1000044132	670	409901234192	SVL YD 3026	FOUNDATION / INSTALLATION BOLT & NUTS (S)	1	SET
68	1000044132	680	409901236108	SVL YD 3026	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
69	1000044132	690	409901234194	SVL YD 3026	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
70	1000044132	700	409901234204	SVL YD 3026	OBS_CONTROL RELAY 2 C/O CONTACT 24VDC	1	EA
71	1000044132	710	409901234205	SVL YD 3026	OBS_CONTACTOR 40AMP AC3 DUTY 24V DC COIL FOR 22KW & WITH CONTROL RELAY 4NO & 2NO+2NC ADDON BLOCK	1	EA
72	1000044132	720	409901234206	SVL YD 3026	OBS_2NO – 2NC AUXILIARY CONTACTS	1	EA
73	1000044132	730	409901234207	SVL YD 3026	OBS_2NO – 2NC AUXILIARY CONTACTS	1	EA
74	1000044132	740	409901234208	SVL YD 3026	OBS_THERMISTOR RELAY 24V DC	1	EA
75	1000044132	750	409901234209	SVL YD 3026	OBS_SAFETY RELAY 24V DC	1	EA
76	1000044132	760	409901234210	SVL YD 3026	OBS_SAFETY RELAY PNOZ X 3 24V DC.	1	EA
77	1000044132	770	409901234211	SVL YD 3026	OBS_1A FUSE	3	EA
78	1000044132	780	409901234212	SVL YD 3026	OBS_2A FUSE,	3	EA
79	1000044132	790	409901234213	SVL YD 3026	OBS_5A FUSE,	3	EA
80	1000044132	800	409901234214	SVL YD 3026	OBS_ 0.5 AMP FUSE	1	EA
81	1000044132	810	409901234215	SVL YD 3026	OBS_15 A FUSE	1	EA
82	1000044132	820	409901234216	SVL YD 3026	OBS_12.5 A FUSE	2	EA
83	1000044132	830	409901234217	SVL YD 3026	OBS_2 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
84	1000044132	840	409901234218	SVL YD 3026	OBS_4 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
85	1000044132	850	409901234219	SVL YD 3026	OBS_1 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
86	1000044132	860	409901234220	SVL YD 3026	OBS_7A FUSE,	1	EA
87	1000044132	870	409901234191	SVL YD 3027	15KW MOTOR JB (FLP)	1	EA
88	1000044132	880	409901234192	SVL YD 3027	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET

89	1000044132	890	409901236103	SVL YD 3027	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
90	1000044132	900	409901234194	SVL YD 3027	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
91	1000044132	910	409901234195	SVL YD 3027	22KW MOTOR JB (FLP)	1	EA
92	1000044132	920	409901234192	SVL YD 3027	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
93	1000044132	930	409901236104	SVL YD 3027	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
94	1000044132	940	409901234194	SVL YD 3027	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
95	1000044132	950	409901234197	SVL YD 3027	UP-GRADATION OF 15 KW SOFT STARTER (FLP)	1	EA
96	1000044132	960	409901234192	SVL YD 3027	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
97	1000044132	970	409901234198	SVL YD 3027	SHOCK VIBRATION MOUNTS	1	EA
98	1000044132	980	409901236105	SVL YD 3027	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
99	1000044132	990	409901234194	SVL YD 3027	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
100	1000044132	1000	409901234199	SVL YD 3027	UP-GRADATION OF 22 KW SOFT STARTER (FLP)	1	EA
101	1000044132	1010	409901234192	SVL YD 3027	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
102	1000044132	1020	409901234200	SVL YD 3027	SHOCK VIBRATION MOUNTS	1	EA
103	1000044132	1030	409901236106	SVL YD 3027	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
104	1000044132	1040	409901234194	SVL YD 3027	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
105	1000044132	1050	409901234202	SVL YD 3027	SLAVE CONTROL UNIT JUNCTION BOX JB 13 (FLP)	1	EA
106	1000044132	1060	409901234192	SVL YD 3027	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
107	1000044132	1070	409901236107	SVL YD 3027	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
108	1000044132	1080	409901234194	SVL YD 3027	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
109	1000044132	1090	409901234203	SVL YD 3027	SLAVE CONTROL UNIT JUNCTION BOX JB 14 (FLP)	1	EA
110	1000044132	1100	409901234192	SVL YD 3027	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
111	1000044132	1110	409901236108	SVL YD 3027	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET

112	1000044132	1120	409901234194	SVL YD 3027	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
113	1000044132	1130	409901234204	SVL YD 3027	OBS_CONTROL RELAY 2 C/O CONTACT 24VDC	1	EA
114	1000044132	1140	409901234205	SVL YD 3027	OBS_CONTACTOR 40AMP AC3 DUTY 24V DC COIL FOR 22KW & WITH CONTROL RELAY 4NO & 2NO+2NC ADDON BLOCK	1	EA
115	1000044132	1150	409901234206	SVL YD 3027	OBS_2NO – 2NC AUXILIARY CONTACTS	1	EA
116	1000044132	1160	409901234207	SVL YD 3027	OBS_2NO – 2NC AUXILIARY CONTACTS	1	EA
117	1000044132	1170	409901234208	SVL YD 3027	OBS_THERMISTOR RELAY 24V DC	1	EA
118	1000044132	1180	409901234209	SVL YD 3027	OBS_SAFETY RELAY 24V DC	1	EA
119	1000044132	1190	409901234210	SVL YD 3027	OBS_SAFETY RELAY PNOZ X 3 24V DC.	1	EA
120	1000044132	1200	409901234211	SVL YD 3027	OBS_1A FUSE	3	EA
121	1000044132	1210	409901234212	SVL YD 3027	OBS_2A FUSE,	3	EA
122	1000044132	1220	409901234213	SVL YD 3027	OBS_5A FUSE,	3	EA
123	1000044132	1230	409901234214	SVL YD 3027	OBS_0.5 AMP FUSE	1	EA
124	1000044132	1240	409901234215	SVL YD 3027	OBS_15 A FUSE	1	EA
125	1000044132	1250	409901234216	SVL YD 3027	OBS_12.5 A FUSE	2	EA
126	1000044132	1260	409901234217	SVL YD 3027	OBS_2 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
127	1000044132	1270	409901234218	SVL YD 3027	OBS_4 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
128	1000044132	1280	409901234219	SVL YD 3027	OBS_1 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
129	1000044132	1290	409901234220	SVL YD 3027	OBS_7A FUSE,	1	EA
130	1000044132	1300	409901234191	SVL YD 3028	15KW MOTOR JB (FLP)	1	EA
131	1000044132	1310	409901234192	SVL YD 3028	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
132	1000044132	1320	409901236103	SVL YD 3028	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
133	1000044132	1330	409901234194	SVL YD 3028	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
134	1000044132	1340	409901234195	SVL YD 3028	22KW MOTOR JB (FLP)	1	EA
135	1000044132	1350	409901234192	SVL YD 3028	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET

136	1000044132	1360	409901236104	SVL YD 3028	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
137	1000044132	1370	409901234194	SVL YD 3028	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
138	1000044132	1380	409901234197	SVL YD 3028	UP-GRADATION OF 15 KW SOFT STARTER (FLP)	1	EA
139	1000044132	1390	409901234192	SVL YD 3028	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
140	1000044132	1400	409901234198	SVL YD 3028	SHOCK VIBRATION MOUNTS	1	EA
141	1000044132	1410	409901236105	SVL YD 3028	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
142	1000044132	1420	409901234194	SVL YD 3028	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
143	1000044132	1430	409901234199	SVL YD 3028	UP-GRADATION OF 22 KW SOFT STARTER (FLP)	1	EA
144	1000044132	1440	409901234192	SVL YD 3028	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
145	1000044132	1450	409901234200	SVL YD 3028	SHOCK VIBRATION MOUNTS	1	EA
146	1000044132	1460	409901236106	SVL YD 3028	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
147	1000044132	1470	409901234194	SVL YD 3028	ALL INK SIGNED INSPECTION REPORTS AND MA	3	SET
148	1000044132	1480	409901234202	SVL YD 3028	SLAVE CONTROL UNIT JUNCTION BOX JB 13 (FLP)	1	EA
149	1000044132	1490	409901234192	SVL YD 3028	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
150	1000044132	1500	409901236107	SVL YD 3028	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
151	1000044132	1510	409901234194	SVL YD 3028	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
152	1000044132	1520	409901234203	SVL YD 3028	SLAVE CONTROL UNIT JUNCTION BOX JB 14 (FLP)	1	EA
153	1000044132	1530	409901234192	SVL YD 3028	FOUNDATION / INSTALLATION BOLT & NUTS (SS316).	1	SET
154	1000044132	1540	409901236108	SVL YD 3028	DOUBLE COMPRESSION CABLE GLANDS (FLP)	1	SET
155	1000044132	1550	409901234194	SVL YD 3028	ALL INK SIGNED INSPECTION REPORTS AND MANUFACTURER TEST CERTIFICATES.	3	SET
156	1000044132	1560	409901234204	SVL YD 3028	OBS_CONTROL RELAY 2 C/O CONTACT 24VDC	1	EA
157	1000044132	1570	409901234205	SVL YD 3028	OBS_CONTACTOR 40AMP AC3 DUTY 24V DC COIL FOR 22KW & WITH CONTROL RELAY 4NO & 2NO+2NC ADDON BLOCK	1	EA
158	1000044132	1580	409901234206	SVL YD 3028	OBS_2NO – 2NC AUXILIARY CONTACTS	1	EA
159	1000044132	1590	409901234207	SVL YD 3028	OBS_2NO – 2NC AUXILIARY CONTACTS	1	EA

160	1000044132	1600	409901234208	SVL YD 3028	OBS_THERMISTOR RELAY 24V DC	1	EA
161	1000044132	1610	409901234209	SVL YD 3028	OBS_SAFETY RELAY 24V DC	1	EA
162	1000044132	1620	409901234210	SVL YD 3028	OBS_SAFETY RELAY PNOZ X 3 24V DC.	1	EA
163	1000044132	1630	409901234211	SVL YD 3028	OBS_1A FUSE	3	EA
164	1000044132	1640	409901234212	SVL YD 3028	OBS_2A FUSE,	3	EA
165	1000044132	1650	409901234213	SVL YD 3028	OBS_5A FUSE,	3	EA
166	1000044132	1660	409901234214	SVL YD 3028	OBS_ 0.5 AMP FUSE	1	EA
167	1000044132	1670	409901234215	SVL YD 3028	OBS_15 A FUSE	1	EA
168	1000044132	1680	409901234216	SVL YD 3028	OBS_12.5 A FUSE	2	EA
169	1000044132	1690	409901234217	SVL YD 3028	OBS_2 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
170	1000044132	1700	409901234218	SVL YD 3028	OBS_4 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
171	1000044132	1710	409901234219	SVL YD 3028	OBS_1 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION. ELECTRICAL JB	1	EA
172	1000044132	1720	409901234220	SVL YD 3028	OBS_7A FUSE,	1	EA
173	1000044132	1730	409901248117	RLHTS_P 15B	B&D_CONTROL RELAY 2 C/O CONTACT 24V DC	1	EA
174	1000044132	1740	409901248101	RLHTS_P 15B	B&D_INCOMING ISOLATOR 63A BASE MOUNTED	1	EA
175	1000044132	1750	409901248102	RLHTS_P 15B	B&D_22KW CONTACTOR 24V DC COIL	1	EA
176	1000044132	1760	409901248103	RLHTS_P 15B	B&D_2NO+2NC AUXILIARY CONTACTS	2	EA
177	1000044132	1770	409901248104	RLHTS_P 15B	B&D_THERMISTOR RELAY 24V DC	1	EA
178	1000044132	1780	409901248105	RLHTS_P 15B	B&D_GREEN LED 24V DC	1	EA
179	1000044132	1790	409901248106	RLHTS_P 15B	B&D_RED LED 24V DC	2	EA
180	1000044132	1800	409901248107	RLHTS_P 15B	B&D_EMERGENCY STOP RELAY 24V DC	1	EA
181	1000044132	1810	409901248108	RLHTS_P 15B	B&D_LOCAL OFF REMOTE SWITCH	1	EA
182	1000044132	1820	409901248109	RLHTS_P 15B	B&D_STOP/ START SWITCH	1	EA
183	1000044132	1830	409901248110	RLHTS_P 15B	B&D_EMERGENCY STOP PUSH BUTTON	1	EA
184	1000044132	1840	409901248111	RLHTS_P 15B	B&D_YELLOW LED LAMP	1	EA
185	1000044132	1850	409901248112	RLHTS_P 15B	B&D_2 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION	5	EA
186	1000044132	1860	409901248113	RLHTS_P 15B	B&D_4 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION	4	EA

187	1000044132	1870	409901248114	RLHTS_P 15B	B&D_1 POLE C/O RELAY 24V DC WITH INTEGRAL SURGE PROTECTION	2	EA
188	1000044132	1880	409901248115	RLHTS_P 15B	B&D_2 POSITION SELECTOR SWITCH	1	EA
189	1000044132	1890	409901248116	RLHTS_P 15B	B&D_EMERGENCY STOP BODY WITH 1 NO	1	EA
190	1000044132	1900	409901248118	RLHTS_P 15B	B&D_CHECK VALVE	1	EA
191	1000044132	1910	409901248119	RLHTS_P 15B	B&D_RETURN FILTER	1	EA
192	1000044132	1920	409901248120	RLHTS_P 15B	B&D_RETURN FILTER SEAL KIT	1	EA
193	1000044132	1930	409901248121	RLHTS_P 15B	B&D_PRESSURE FILTER ELEMENT	1	EA
194	1000044132	1940	409901248122	RLHTS_P 15B	B&D_PRESSURE FILTER SEAL KIT	1	EA
195	1000044132	1950	409901248123	RLHTS_P 15B	B&D_PRESSURE SENSOR	1	EA
196	1000044132	1960	409901248124	RLHTS_P 15B	B&D_TEMPERATURE SENSOR	1	EA
197	1000044132	1970	409901248125	RLHTS_P 15B	B&D_COMBINED PRESSURE SENSOR	1	EA
198	1000044132	1980	409901248126	RLHTS_P 15B	B&D_PRESSURE REDUCING VALVE	1	EA
199	1000044132	1990	409901248127	RLHTS_P 15B	B&D_RELIEF VALVE	1	EA
200	1000044132	2000	409901248128	RLHTS_P 15B	B&D_PROPORTIONAL REDUCING /RELIEF VALVE SEAL	1	EA
201	1000044132	2010	409901248129	RLHTS_P 15B	B&D_SANDWICH CHECK VALVE	1	EA
202	1000044132	2020	409901248130	RLHTS_P 15B	B&D_SANDWICH CHECK VALVE SEAL KIT	1	EA
203	1000044132	2030	409901248131	RLHTS_P 15B	B&D_DIRECTIONAL CONTROL VALVE SEAL KIT	1	EA
204	1000044132	2040	409901248132	RLHTS_P 15B	B&D_PROPORTIONAL DIRECTIONAL CONTROL VALVE SEAL.	1	EA
205	1000044132	2050	409901248133	RLHTS_P 15B	B&D_ELECTRONIC PRESSURE SWITCH	1	EA
206	1000044132	2060	409901248134	RLHTS_P 15B	B&D_DIRECTIONAL CONTROL VALVE SEAL KIT	1	EA
207	1000044132	2070	409901248135	RLHTS_P 15B	B&D_PRESSURE TRANSMITTER	1	EA
208	1000044132	2080	409901259101	SVL_AC_ 3025-28	B&D_ON DELAY TIMER	1	EA
209	1000044132	2090	409901259102	SVL_AC_ 3025-29	B&D_SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	1	EA
210	1000044132	2100	409901259103	SVL_AC_ 3025-30	B&D_CONTROL MCB	1	EA
211	1000044132	2110	409901259104	SVL_AC_ 3025-31	B&D_CONTROL MCB	1	EA
212	1000044132	2120	409901259105	SVL_AC_ 3025-32	B&D_MUSHROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT.	1	EA
213	1000044132	2130	409901259106	SVL_AC_ 3025-33	B&D_SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT.	1	EA

214	1000044132	2140	409901259107	SVL_AC_3025-34	B&D_SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	1	EA
215	1000044132	2150	409901259108	SVL_AC_3025-35	B&D_INDICATING LAMP GREEN COLOUR 230V AC	1	EA
216	1000044132	2160	409901259109	SVL_AC_3025-36	B&D_INDICATING LAMP GREEN COLOUR 230V AC	1	EA
217	1000044132	2170	409901259110	SVL_AC_3025-37	B&D_INDICATING LAMP BLUE COLOUR 230V AC	1	EA
218	1000044132	2180	409901259111	SVL_AC_3025-38	B&D_INDICATING LAMP WHITE COLOUR 230V AC	1	EA
219	1000044132	2190	409901259112	SVL_AC_3025-39	B&D_INDICATING LAMP YELLOW COLOUR 230V AC	1	EA
220	1000044132	2200	409901259113	SVL_AC_3025-40	B&D_INDICATING LAMP AMBER 230V AC	1	EA
221	1000044132	2220	409901259114	SVL_AC_3025-41	B&D_ELECTRONIC OVER CURRENT RELAY	1	EA
222	1000044132	2240	409901259115	SVL_AC_3025-42	B&D_SINGLE PHASE OVER CURRENT RELAY	1	EA
223	1000044132	2250	409901259116	SVL_AC_3025-43	B&D_THERMISTOR PROTECTION UNIT (2NO+2NC) AUX. VOLTAGE 240V AC	1	EA
224	1000044132	2260	409901259117	SVL_AC_3025-44	B&D_THERMISTOR PROTECTION UNIT (2NO+2NC) AUX. VOLTAGE 240V AC	1	EA
225	1000044132	2270	409901259118	SVL_AC_3025-45	B&D_SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	1	EA
226	1000044132	2280	409901259119	SVL_AC_3025-46	B&D_POWER CONTACTOR 50AMPS, TO COIL 220V AC, 1 NO + 1 NC INBUILT +ADDON BLOCK	1	EA
227	1000044132	2300	409901259120	SVL_AC_3025-47	B&D_TIMER	1	EA
228	1000044132	2310	409901259121	SVL_AC_3025-48	B&D_CONTROL MCB	2	EA
229	1000044132	2320	409901259122	SVL_AC_3025-49	B&D_MUSHROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT.	1	EA
230	1000044132	2330	409901259123	SVL_AC_3025-50	B&D_SELECTOR FOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT	1	EA
231	1000044132	2340	409901259124	SVL_AC_3025-51	B&D_SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1 NO CONTACT.	1	EA
232	1000044132	2350	409901259101	SVL_AC_3025-52	B&D_ON DELAY TIMER	1	EA
233	1000044132	2360	409901259102	SVL_AC_3025-53	B&D_SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	1	EA
234	1000044132	2370	409901259103	SVL_AC_3025-54	B&D_CONTROL MCB	1	EA
235	1000044132	2380	409901259104	SVL_AC_3025-55	B&D_CONTROL MCB	1	EA
236	1000044132	2390	409901259105	SVL_AC_3025-56	B&D_MUSROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT.	1	EA

237	1000044132	2400	409901259106	SVL_AC_3025-57	B&D_SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1 NO CONTACT	1	EA
238	1000044132	2410	409901259107	SVL_AC_3025-58	B&D_SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT.	1	EA
239	1000044132	2420	409901259108	SVL_AC_3025-59	B&D_INDICATING LAMP RED COLOUR	1	EA
240	1000044132	2430	409901259109	SVL_AC_3025-60	B&D_INDICATING LAMP GREEN COLOUR	1	EA
241	1000044132	2440	409901259110	SVL_AC_3025-61	B&D_INDICATING LAMP BLUE COLOUR	1	EA
242	1000044132	2450	409901259111	SVL_AC_3025-62	B&D_INDICATING LAMP WHITE COLOUR	1	EA
243	1000044132	2460	409901259112	SVL_AC_3025-63	B&D_INDICATING LAMP YELLOW COLOUR	1	EA
244	1000044132	2470	409901259113	SVL_AC_3025-64	B&D_INDICATING LAMP AMBER	1	EA
245	1000044132	2480	409901259115	SVL_AC_3025-65	B&D_SINGLE PHASE OVER CURRENT RELAY	1	EA
246	1000044132	2490	409901259117	SVL_AC_3025-66	B&D_VOLTAGE MONITORING RELAY	1	EA
247	1000044132	2500	409901259118	SVL_AC_3025-67	B&D_SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER.	1	EA
248	1000044132	2510	409901259119	SVL_AC_3025-68	B&D_POWER CONTACTOR 50AMPS, TO COIL 220V AC, 1 NO + 1 NC INBUILT +ADDON BLOCK	1	EA
249	1000044132	2520	409901259120	SVL_AC_3025-69	B&D_TIMER	1	EA
250	1000044132	2530	409901259121	SVL_AC_3025-70	B&D_CONTROL MCB	2	EA
251	1000044132	2540	409901259123	SVL_AC_3025-71	B&D_SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT.	1	EA
252	1000044132	2550	409901259124	SVL_AC_3025-72	B&D_SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1 NO CONTACT.	1	EA
253	1000044132	2560	409901260101	SVL_MC_3025-28	B&D_ON TIMER DELAY RELAY	1	EA
254	1000044132	2570	409901260102	SVL_MC_3025-28	B&D_SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	1	EA
255	1000044132	2580	409901260103	SVL_MC_3025-28	B&D_CONTROL MCB	1	EA
256	1000044132	2590	409901260104	SVL_MC_3025-28	B&D_MUSHROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CNTACT	1	EA
257	1000044132	2600	409901260105	SVL_MC_3025-28	B&D_SELECTOR SWITCH 2MAINTAINED POSITION WITH 1NO CONTACT	1	EA
258	1000044132	2610	409901260106	SVL_MC_3025-28	B&D_SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	1	EA
259	1000044132	2620	409901260107	SVL_MC_3025-28	B&D_INDICATING LAMP,WHITE COLOUR	1	EA
260	1000044132	2630	409901260108	SVL_MC_3025-28	B&D_INDICATING LAMP,RED COLOUR	1	EA
261	1000044132	2640	409901260109	SVL_MC_3025-28	B&D_INDICATING LAMP,GREEN COLOUR	1	EA

262	1000044132	2650	409901260110	SVL_MC_3025-28	B&D_LED INDICATING LAMP INTEGRAL LED BLUE COLOUR	1	EA
263	1000044132	2660	409901260111	SVL_MC_3025-28	B&D_ELECTRONIC OVER CURRENT RELAY	1	EA
264	1000044132	2670	409901260112	SVL_MC_3025-28	B&D_SINGLE PHASE OVER CURRENT RELAY	1	EA
265	1000044132	2680	409901260113	SVL_MC_3025-28	B&D_THERMISTOR PROTECTION UNIT	1	EA
266	1000044132	2690	409901260114	SVL_MC_3025-28	B&D_VOLTAGE MONITORING RELAY	1	EA
267	1000044132	2700	409901260115	SVL_MC_3025-28	B&D_SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	1	EA
268	1000044132	2710	409901260116	SVL_MC_3025-28	B&D_POWER CONTACTOR	1	EA
269	1000044132	2720	409901260101	SVL_MC_3025-28	B&D_ON TIMER DELAY RELAY	1	EA
270	1000044132	2730	409901260102	SVL_MC_3025-28	B&D_SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	1	EA
271	1000044132	2740	409901260103	SVL_MC_3025-28	B&D_CONTROL MCB	1	EA
272	1000044132	2750	409901260104	SVL_MC_3025-28	B&D_MUSHROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NO CONTACT	1	EA
273	1000044132	2760	409901260105	SVL_MC_3025-28	B&D_SELECTOR SWITCH 2MAINTAINED POSITION WITH 1NO CONTACT	1	EA
274	1000044132	2770	409901260106	SVL_MC_3025-28	B&D_SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	1	EA
275	1000044132	2780	409901260107	SVL_MC_3025-28	B&D_INDICATING LAMP,WHITE COLOUR	1	EA
276	1000044132	2790	409901260108	SVL_MC_3025-28	B&D_INDICATING LAMP,RED COLOUR	1	EA
277	1000044132	2800	409901260109	SVL_MC_3025-28	B&D_INDICATING LAMP,GREEN COLOUR	1	EA
278	1000044132	2810	409901260110	SVL_MC_3025-28	B&D_LED INDICATING LAMP INTEGRAL LED BLUE COLOUR	1	EA
279	1000044132	2820	409901260111	SVL_MC_3025-28	B&D_ELECTRONIC OVER CURRENT RELAY	1	EA
280	1000044132	2830	409901260112	SVL_MC_3025-28	B&D_SINGLE PHASE OVER CURRENT RELAY	1	EA
281	1000044132	2840	409901260113	SVL_MC_3025-28	B&D_THERMISTOR PROTECTION UNIT	1	EA
282	1000044132	2850	409901260114	SVL_MC_3025-28	B&D_VOLTAGE MONITORING RELAY	1	EA
283	1000044132	2860	409901260115	SVL_MC_3025-28	B&D_SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	1	EA
284	1000044132	2870	409901260116	SVL_MC_3025-28	B&D_POWER CONTACTOR	1	EA
285	1000044132	2880		SVL_RLH TS_3025-28	ECTL. CONNECTIO OF RLHTS sys.FAT AT GRSE	1	AU
286	1000044132	2890		SVL_RLH TS_3025-28	ECTL. CONNECTION ONBOARD SHIP PRIOR HAT	1	AU

2. **Inspection Authority:** The equipment shall be supplied duly inspected & **approved by IRS** and your quality assurance department. Firm shall Co-ordinate with IRS to ensure inspection at Firm's works prior to dispatch. The Quality Assurance Plan (QAP) of manufacturer is required to be approved by the inspecting authorities prior to commencement of manufacturing. Approved QAP is to be submitted to GRSE within 01 week from the date of receipt of LOI / P.O. **Inspection charges shall be borne by GRSE for accepted Material only. If any extra Visit required due to vendor's failure, then Inspection charges will be paid by the firm only.**
3. **Scope of Inspection:** As per approved QAP by IRS which shall necessarily include Functional Test, Type test and **IP Test by NABL accredited Lab,** Routine test & Performance Test of the system at No Load or With Load as per SOTR's and QAP's requirement. Material Test & Conformity Certificate of materials wherever required. Supplier have to provide the Type test report along with the Motors
4. Original Manufacturer's Test Certificates and Guarantee Certificates for all Electrical and other bought out items are to be furnished.
5. The necessary notes given in the drawings are to be strictly followed.
6. Inferior quality of materials is not acceptable. Genuine materials are to be provided. Surface protection is must. At any case, pitted & rusted materials are not acceptable to us.
7. All the assemblies are to be tested for desired functioning at your premises in presence of Inspection Authority. The necessary Testing arrangements are to be arranged by you.
8. All the Items are to be supplied in assembled condition and to be identified in the BOM of drawings specified.
9. All relevant drawings and documentations (Part List, Specifications, Data Sheets, Instruction & Maintenance manual) should have prior approval from GRSE Design Cell / & Inspection Authority. You will have to provide hard copies (up to maximum 8 copies) as well as soft copies of all drawings & documentations along with the supply.
10. All the Items are to be supplied in assembled conditions per SOTR specified.
11. All relevant drawings and documentations (Part List, Specifications, Data Sheets, Instruction & Maintenance manual) should have prior approval from GRSE Design Cell / & Inspection Authority. You will have to provide hard copies as well as soft copies of all drawings & documentations along with the supply as stated in SOTR.

ANNEXURE-II

STATEMENT OF TECHNICAL REQUIREMENT (SOTR) OF POWER JB (FLP) FOR 22KW, 15KW FLP MOTOR FOR RLHS OF SV(L).

SOTR No: E/PJB/15KW/22KW/RLHTS/SV(L)/GRSE.

Intent: M/s GRSE / Taratala Unit (DKMC) intends to purchase the power JB (FLP) for 15 KW & 22 KW motors (FLP) for **04 no. ships (Yd. No. 3025-3028)** being built by M/s GRSE. Governing specification EED-Q-071(R4) & IS/IEC 600730:2004, IS/IEC 600790:2007 construction and testing of flame proof enclosure of electrical apparatus.

2. General: The above equipment must be constructed in accordance with the specification and in strict compliance to the approved drawing. Deviation from these specification and drawing shall be accorded by GRSE/DKMC. It is be intimated that this ship is weight and space sensitive and therefore economy of weight and space is of utmost importance.

3. Environmental conditions:

3.01	Sea Water temperature	Upto + 40 ⁰ C
3.02	Ambient temperature	Upto + 55 ⁰ C
3.03	Relative Humidity	30 to 100% at 32 ⁰ C
3.04	Salinity of Water	35000 PPM
3.05	Environmental conditions.	The design of the power JBS (FLP) are to be catered for the most adverse of the environmental and ambient conditions and should operate.

4. Operating conditions:

4.01	Roll, Roll period, Pitch, Pitch period List	± 30 ⁰ , 10 seconds, Max 15 ⁰ Pitch period 20 seconds & ± 30 ⁰
4.02	Ship Supply Voltage	415V, +10% & -15%
4.03	Ship Supply Frequency	50 Hz. ±3%
4.04	No. of Phase.	3 Phase, 3 Wire, Unearthed System

5. Application / use: On Naval Warship exposed to Marine Weather.

6. Type of Driven / Equipment: 15 KW & 22KW motor (FLP) are to be connected through these JB's (FLP) to the respective starter.

7. Inspection Agency: Inspection of the equipment will be carried out by IRS.

8. **Testing and Inspection:** The testing of equipment should be carried out as per EED-Q-071(R4) and all ink signed inspection reports should be submitted to GRSE / DKMC along with invoice.

9. **Drawing:** All equipment to be manufactured in accordance with approved drawing and SOTR. The components specified in the components part list (CPL) and General Arrangement (GA) are to be used without any alteration & deviation and manufacturer test certificate to be provided. All drawings are enclosed with this SOTR.

10. **Technical specifications of Power JB (FLP) for 15KW & 22KW motor (FLP):**

Sl.	Statutory Requirement	Description
10.01	Power JB (FLP) for 15KW & 22KW motor (FLP)	02 (Two) No. / ship (Total 08 Nos., 01 for 22KW Motor and 01 for 15KW motor each ship)
10.02	Location of installation	Hello Hangar & below Deck
10.03	Flame Proof	Power JB (FLP) should be flame proof as per EED-Q-071(R4).
10.04	Thermal Rating of contacts	32A & 63A for 15KW & 22KW respectively.
10.05	Degree of protection	IP 56 or higher.
10.06	Overall dimension	As per GA Drawing.
10.07	Bottom plan with Gland position	As per GA Drawing.
10.08	Earthing Arrangement	As per GA Drawing.
10.09	Maintenance Envelop	To be as per GA drawing.
10.10	Mounting arrangement.	As per GA Drawing. (BHD mounted).
10.11	Internal component identification & position to be reflected.	As per drawing.
10.12	4 set fixing (Mounting) Bolt (SS 316, size & length (Nut & Washer	To be provided.
10.13	Door material	As per flame proof specification
10.14	Body material	As per flame proof specification
10.15	Overall weight in Kgs.	To be mentioned / as per GA drawing.
10.16	Following test are required to be carried out.	
10.17	(i) Functional tests. (ii) Earth Bonding test. (iii) Enclosure effectiveness tests. (iv) Withstand Voltage Test.	Test to be carried out using voltmeter, ammeter, frequency meter & phase sequence meter etc. The inspector ink signed report to be submitted along with the invoice. Enclosure effectiveness & withstand voltage test as per EED-Q-071(R4).
10.18	Mounting arrangement, Spare Terminal, Internal wiring cable, Cable marker (ferruling of cable), Terminal marker, Insulated crimping sockets, color & finishing. Caution board, Connection Circuit Diagram tally plate.	As per GA Drawing.

10.19	Doors opening	As per "General Arrangement (GA). Door should be provided with the solid hinges & to be internally earthed as per EED-Q-071(R4).	
10.20	Cable glands	The glands should be double compression flame proof.	
10.21	Thermistor, Control, and Heater supply connection as per motor terminal box	Connection provision to be provided.	
10.22	Motor winding connection	Delta (The L1 bidder must check the motor drawing post placement of PO prior commencement of manufacturing)	
10.23	Motor Duty Cycle	S2 /60 Minutes.	
10.24	Drawing for 15KW & 22KW Motor Power JB (FLP) enclosed with SOTR are:		
	Description of Drawings	Drawing No.	No. of Pages
	(i) General Arrangement of 15KW Power JB	E082-C-1	01
	(ii) General Arrangement of 22KW Power JB	E082-D-1	01

11. **Direction of Rotation of Motor:** Uni-direction.

12. **Equipment Name Plate:** As per EED-Q-071(R4)

13. **Tally plates material, location and fixing arrangement for components:** All tally plates will be made of anodized aluminum alloy. It should not be fixed on the component. Fixing location should be clearly visible from front. All tally plates to be fixed with screws / rivets nearest to each component.

14. **Modification / Minor changes:** Any minor modification / changes arises in due course of manufacturing shall be completed by the manufacturer without any financial implication.

15. **Compliance:** All parts, sub-assemblies and components shall comply with the requirement of drawings and specification to the satisfaction of the GRSE/IHQ/Inspection agency.

16. **Rejected items:** No materials, parts, components or complete units which have been rejected, shall be retreated or adjusted without the approval of the GRSE and / or inspection agency.

17. **Quality / Workmanship:** The manufacturer shall ensure attaining specified quality, workmanship, endurance and electrical characteristics of the equipment.

ANNEXURE-III

STATEMENT OF TECHNICAL REQUIREMENT (SOTR) FOR SLAVE CONTROL UNIT JUNCTION BOXES WITH DUMMY PLUG FOR RLHTS.

SOTR No: E/ SCU JBS/RLHTS/SV(L)/GRSE.

1. **Intent:** M/s GRSE / Taratala Unit (DKMC) intends to purchase the materials as elaborated below.

2. **Inspection Authority:** The equipment shall be inspected by IRS as per SOTR & approved drawing attached.

3. **Technical Specifications of Slave Control Unit JB 13 (FLP) & JB14 (FLP) with Dummy plug as per MTS standard:**

Sl.	Statutory Requirement	Description
3.01	Location of installation	Under Deck
3.02	Control supply	24 VDC.
3.03	Degree of protection.	IP 65.
3.04	Mounting	The JB shall be bulkhead Mounted.
3.05	Construction	Flame Proof, Gas Groups IIA&IIB as per IS/IEC 60079-1(2007) and IS/IEC 60079-0(2004).
3.06	Cable Glands	All cable glands are of double compression type & shall confirm BS6121 /EN 62444 – 2017 with IP 68 along with crimping sockets of electrolytic copper are required to be provided. All cable glands are to be supplied by manufacturers.
3.07	Internal Wiring Cable	All control cable shall be LFH, 0.5 SQMM, single core, Multi Strand copper cable of 1.1KV Grade.
3.08	Sockets & Connectors details	(a) Connector Material – Bronze. (b) Design: Circular with EMI-RFI shielding. (c) Contact Type: Crimp type Pin and Socket, Numbers of Pin and Sockets as per project Signals. (d) Pin & socket Mating: Self locking mechanism with visual indication and scoop proof. (e) Crimp Contacts: Should be as per MIL DTL 38999 SIII gold plated. (f) Backshell for Pin Connector: Pin connector along with Backshell referred to as applications. (g) Environment: Exposed to Marine environment, high vibration and shock.

3.09	Dummy Plug	<p>The Dummy plug shall be MTS standard. Hence, all components of the dummy plug to be make of M/s Souriau to meet the MTS standard.</p> <p>(a) Connector Material – Bronze. (b) Design: Circular with EMI-RFI shielding. (c) Contact Type: Crimp type Pin and Socket, Numbers of Pin and Sockets as per project Signals. (d) Pin & socket Mating: Self locking mechanism with visual indication and scoop proof. (e) Crimp Contacts: Should be as per MIL DTL 38999 SIII gold plated. (f) Backshell for Pin Connector: Pin connector along with Backshell referred to as applications. (g) Environment: Exposed to Marine environment, high vibration and shock.</p>	
3.10	Insulated Crimping Socket	Insulated crimping socket to be flat pin type for control connection.	
3.11	Cable Marker	The control cables shall me marked with ferrule at both ends.	
3.12	Terminal Marker	As per drawing at all terminals.	
3.13	Tally Plates	The tally plates for all components as per Navy specification (Brass / stainless steel) and shall be engraved.	
3.14	Fasteners (Nut, Bolt & Washers)	All fasteners shall be Cadmium Plated for inside and Stainless Steel (AISI 316) for outside.	
3.15	Painting, Color and Finish	Painting shall be done with admiralty grey semi-glossy for outside and white at inside.	
3.16	Identification Tally Plate.	Identification tally plate shall be provided as per drawing at front on cover.	
3.17	Caution / Danger plate	Caution / danger plate at front on cover (Danger 24VDC, Base Red & Letter White color).	
3.18	Makers Name Plate:	Maker Name Plate (M/s GRSE LTD) at front on cover.	
3.19	Drawing of JB 13 (FLP) & JB14 (FLP) with dummy plug attached with this SOTR are as tabulated below:-		
	Description of Drawing	Drawing No.	No. of Sheet
	(i) General Arrangement (GA) of JB 13.	E082-J-1	01
	(ii) Connection Diagram of SCU JB 13	E082-J-5	01
	(iii) General Arrangement (GA) of JB 14.	E082-K-1	01
	(iv) Connection Diagram of SCU JB 14	E082-k-5	01
	(v) General Arrangement of Dummy Connector Assembly.	E082-o-1	01

4. EMI/EMC Compatibility: All above equipment shall be EMI/EMC compatible. Because the Slave Control Unit which are being connected shall be EMI/EMC tested as per

MIL-STD-461-E9 (CE-102, CS-101, CS-114, CS-116, RE-102 & RE-103). Therefore, all JB's shall be compatible to the EMI/EMC as per MIL-STD-461-F as mentioned above.

5. Operation and integration The operation and integration of the supplied equipment with RLHTS will be the responsibility of the manufacturer. During FAT at DKMC the manufacturer should depute the competent person.

6. Gate stamp for inward material: Supplier must produce the GRSE/TU gate stamped delivery challan along with the invoice for processing the bill.

7. Guarantee: The guarantee of the supplied material & workmanship should not be less than two year (24 Months) from the date of issue of inspection note if applicable. If any defect observed for the supplied material & workmanship during the guarantee period, same should be rectified / replaced with new one by vendor free of cost.

8. Supply of materials: The material to be supplied to GRSE/DKMC within 12 weeks from date of LOI/PO whichever is earlier.

9. Equipment Name Plate: The name plate of equipment shall be as given below:

- (a) Makers Name: Garden Reach Shipbuilders and Engineers LTD.
- (b) Panel Name:
- (c) Input Voltage:
- (d) Enclosure:
- (e) Rating:
- (f) Weight:
- (g) Sl. No. of Equipment.
- (h) Date of Manufacture:

10. Components Fixing Arrangement: All components must be fitted directly with screws on the component mounting plate except control terminal.

11. Gap / Space between components: Sufficient gap between the components to be provided for ease of maintenance.

12. Insulated crimping socket at cable end: One insulated crimping socket to be connected to only one cable (Multiplicity of cables to be a single insulated crimping socket is not acceptable).

13. Connection at terminal point: One terminal host only one cable. Multiplicity of cables to a single terminal is not acceptable.

14. Tally plates material, location and fixing arrangement for components: All tally plates will be made of anodized aluminum alloy. It should not be fixed on the component. Fixing location should be clearly visible from front. All tally plates to be fixed with screws / rivets nearest to each component.

15. Modification / Minor changes: Any minor modification / changes arises in due course of manufacturing shall be completed by the manufacturer without any financial implication.

16. Spare Terminals: 10% spare terminal are required to be provided for each panels.

17. Warranty Certificates: The supplier shall submit the connector certificate of conformity (COC) / Warranty certificates from OEM.

18. Components & Connectors: All the components & connectors must be as per European Associates

ANNEXURE-IV

STATEMENT OF TECHNICAL REQUIREMENT (SOTR) FOR UPGRADATION OF 22KW, 15KW SOFT STARTER (FLP) OF RLHTS FOR SV(L).

SOTR No: E/15KW/22KW/SS/RLHTS/SV(L)/GRSE

1. Intent: M/s GRSE / Taratala Unit (DKMC) intends to purchase the services towards up-gradation of existing 15 KW & 22 KW soft starter (FLP) of Rail less Helo Traversing System for **04 no. ships (Yd. No. 3025-3028)** being built by M/s GRSE. The equipment to be up-graded and tested as per Indian Naval standard **{EED-Q-071(R4)}** along with flame proof certifications.

2. General: The above equipment must be constructed in accordance with the specification and in strict compliance to the approved drawing. Deviation from these specifications and drawing shall be accorded by GRSE/DKMC. It is be intimated that this ship is weight and space sensitive and therefore economy of weight and space is of utmost importance.

3. Environmental conditions:

3.01	Sea Water temperature	Upto + 40 ⁰ C
3.02	Ambient temperature	Upto + 55 ⁰ C
3.03	Relative Humidity	30 to 100% at 32 ⁰ C
3.04	Salinity of Water	35000 PPM
3.05	Environmental conditions.	The design of the 22KW & 15KW soft starter (FLP) are to be catered for the most adverse of the environmental and ambient conditions and should operate.

4. Operating conditions:

4.01	Roll, Roll period, Pitch, Pitch period List	± 30 ⁰ , 10 seconds, Max 15 ⁰ Pitch period 20 seconds & ± 30 ⁰
4.02	Ship Supply Voltage	415V, +10% & -15%
4.03	Ship Supply Frequency	50 Hz. ±3%
4.04	No. of Phase.	3 Phase, 3 Wire, Unearthed System

5. Application / use: On Naval Warship exposed to Marine Weather.

6. **Type of Driven Equipment:** RLHTS system.
7. **Inspection Agency:** Inspection of the equipment will be carried out by IRS.
8. **Testing and Inspection:** The testing of equipment should be carried out as per **EED-Q-071(R4)** and all ink signed inspection reports should be submitted to GRSE / DKMC along with invoice.
9. **Drawing:** All equipment to be manufactured in accordance with approved drawing and SOTR. The components specified in the components part list (CPL) and General Arrangement (GA) are to be used without any alteration & deviation and manufacturer test certificate to be provided. All drawings are enclosed with this SOTR.
10. **Technical specifications of 15KW Soft Starter (FLP):**

Sl.	Statutory Requirement	Description
10.01	15 KW Soft Starter (Flame Proof)	01 (one) No. / ship (Total 04 Nos.) The supplier shall upgrade the existing soft starter as per attached drawings.
10.02	Location of installation	Under Deck
10.03	Control, Break and Heater supply	To be derived internally through control transformer 240 / 190 / 110 V, 1 Phase, 50 Hz.
10.04	Motor output (SQIM) Unidirectional.	15 KW, 1500 RPM (Sync.)
10.05	Motor full load current	35 Amps. (Approx.) The supplier shall confirm from GRSE post placement of PO.
10.06	Flame Proof	Starter is flame proof.
10.07	Motor winding connection	Delta
10.08	Duty Cycle	S2 /60 Minutes.
10.09	Shock Manual	NSS II as per BR 3021
10.10	Climatic shock and Vibration testing of service equipment	As per JSS 55555 & MIL STD 461F One starter is to be subjected to these tests and other starter in this range shall be accepted on the basis of certification if prior testing of the same starter has not been carried out. The prior report shall be valid and should be submitted with bid.
10.11	Testing of Rotating electrical machinery	As per NES-629
10.12	Specification of electrical testing of equipment	As per NES-511

10.13	Specification of AC & DC starting & control gear	As per NES-636
10.14	Requirements for materials for electro technical & Naval weapon equipment (Operation of relay & protection device & efficiency).	As per NES-501
10.15	Radio Interference Suppression	As per BS 1597
10.16	EMI / EMC Tests	In accordance with MIL STD – 461 F
10.17	Following test as per EED-Q-71(R4) are required to be carried out if not in the Type / Routine Test Report.	
10.18	(i) Functional tests. (ii) Performance test. (iii) Earth Bonding test. (iv) Enclosure effectiveness tests. (v) Withstand Voltage Test. (vi) PTC Thermistor Test. (vii) Non Luminous Heater Test.	Test to be carried out using voltmeter, ammeter, frequency meter & phase sequence meter etc. The inspector ink signed report to be submitted along with the invoice. Enclosure effectiveness & withstand voltage test as per EED-Q-071(R4). PTC and heater test to be done as applicable.
10.19	Type test, routine test & calibration certificate for all manually adjustable relays.	Type test is to be carried out as per EED-Q-071(R4) and inspector's ink signed copy to be forwarded along with equipment.
10.20	Degree of protection	IP 56 or higher.
10.21	Mounting arrangement, Spare Terminal, Indication Lamp, Internal wiring cable, Cable marker (ferruling of cable), Terminal marker, Insulated crimping sockets, color & finishing. Caution board, Connection Circuit Diagram tally plate.	As per attached Technical Specification (TS).
10.22	Enclosure, Cable Gland fixing plate, Doors & gland plate gasket, In side components mounting plate, Earthing / grounding, Non-Insulated crimping socket for earthing, Shock mounts, Mounting holes, Lifting Hook & Lugs.	As per attached Part Identification List (PIL) & General Arrangement (GA).

10.23	Doors opening	As per "General Arrangement (GA)" of Control Panel, Single door front opening fitted with hinges & detachable door-stopper to be provided. The door should be internally earthed as per EED-Q-071(R4).	
10.24	Cable glands	As per "Component Part List (CPL)" & "General Arrangement (GA)" of Control Panel	
10.25	Power & Control terminals	As per "Component Part List (CPL)" of Control Panel	
10.26	Fasteners (bolt , nut & spring washer)	As per "Brief Technical Specification (TS)" & "Part Identification List (PIL)" of Control Panel	
10.27	Potential free contacts as spare	Minimum one spare of both auxiliary contacts to be provided.	
10.28	Control terminals position	The control terminals position should be such that there is an inclination of 30° to the vertical and placed inside the vertical plane of the Control Panel. Such mountings will be clamped at 30° angular position.	
10.29	Tally plate position	Tally plates inside the Control Panel will be as per 'Component Identification' column of 'Component Part List' Drawing & same at the front door will be as per 'General Arrangement (GA)' of Control Panel.	
10.30	Additional Tally Plate shall include on top of Control Panel for Anchor Capstan front door.	As per "General Arrangement (GA)" of Control Panel	
10.31	Overall Dimension, Mounting (Fixing) dimension and their tolerances.		
10.32	Drawing of 15KW Soft Starter enclosed with this SOTR are as tabulated below:-		
	Description of Drawing	Drawing No.	No. of Sheet
	(a) General Arrangement (GA).	E082-E-1	01

(b) Part Identification List (PIL).	E082-E-2	01
(c) Brief Technical Specification (TS) of Control Panel 15KW	E082-E-0	01
(d) Component Part List (CPL).	E082-E-3	02
(e) Circuit Diagram of Control Panel.	Circuit Diagram will be provided to L1 bidder after placement of PO.	

11. Technical Specifications of 22KW Soft Starter (FLP):

Sl.	Statutory Requirement	Description
11.01	22 KW Soft Starter (Flame Proof)	01 (One) No. / ship (Total 04 Nos.) The supplier shall upgrade the existing soft starter as per attached drawings.
11.02	Location of installation	Under Deck
11.03	Control, Break and Heater supply	To be derived internally through control transformer 415 / 240 / 190 / 110 V, 1 Phase, 50 Hz.
11.04	Motor output (SQIM) Unidirectional	22 KW, 1500 RPM (Sync.)
11.05	Motor full load current	45 Amps. (Approx.) The supplier shall confirm from GRSE post placement of PO.
11.06	Flame Proof	Starter is flame proof.
11.07	Motor winding connection	Delta
11.08	Duty Cycle	S2 /60 Minutes.
11.09	Shock Manual	NSS II as per BR 3021
11.10	Climatic shock and Vibration testing of service equipment	As per JSS 55555 & MIL STD 461E One starter is to be subjected to these tests and other starter in this range shall be accepted on the basis of certification if prior testing of the same starter has not been carried out. The prior report shall be valid and should be submitted with bid.
11.11	Testing of Rotating electrical machinery	As per NES-629

11.12	Specification of electrical testing of equipment	As per NES-511
11.13	Specification of AC & DC starting & control gear	As per NES-636
11.14	Requirements for materials for electro technical & Naval weapon equipment (Operation of relay & protection device & efficiency).	As per NES-501
11.15	Radio Interference Suppression	As per BS 1597
11.16	EMI / EMC Tests	In accordance with MIL STD – 461 F
11.17	Following test as per EED-Q-71(R4) are required to be carried out if not in the Type / Routine Test Report.	
11.18	(i) Functional tests. (ii) Performance test. (iii) Earth Bonding test. (iv) Enclosure effectiveness (v) Withstand Voltage Test. (vi) PTC Thermistor Test. (vii) Non Luminous Heater	Test to be carried out using voltmeter, ammeter, frequency meter & phase sequence meter etc. The inspector ink signed report to be submitted along with the invoice. Enclosure effectiveness & withstand voltage test as per EED-Q-071(R4) . PTC and heater test to be done as applicable.
11.19	Type test, routine test & calibration certificate for all manually adjustable relays.	Type test is to be carried out as per EED-Q-071(R4) and inspector's ink signed copy to be forwarded along with equipment.
11.20	Degree of protection	IP 56 or higher.
11.21	Mounting arrangement, Spare Terminal, Indication Lamp, Internal wiring cable, Cable marker (ferruling of cable), Terminal marker, Insulated crimping sockets, color & finishing. Caution board, Connection Circuit Diagram tally plate.	As per attached Technical Specification (TS).
11.22	Enclosure, Cable Gland fixing plate, Doors & gland plate gasket, In side components mounting plate, Earthing / grounding, Non-Insulated crimping socket for earthing, Shock mounts, Mounting holes, Lifting Hook & Lugs.	As per attached Part Identification List (PIL) & General Arrangement (GA).

11.23	Doors opening	As per "General Arrangement (GA)" of Control Panel, Single door front opening fitted with hinges & detachable door-stopper to be provided. The door should be internally earthed as per EED-Q-071(R3).		
11.24	Cable glands	As per "Component Part List (CPL)" & "General Arrangement (GA)" of Control Panel.		
11.25	Power & Control terminals	As per "Component Part List (CPL)" of Control Panel.		
11.26	Fasteners (bolt , nut & spring washer)	As per "Brief Technical Specification (TS)" & "Part Identification List (PIL)" of Control Panel		
11.27	Potential free contacts as spare	Minimum one spare of both auxiliary contacts to be provided.		
11.28	Control terminals position	The control terminals position should be such that there is an inclination of 300 to the vertical and placed inside the vertical plane of the Control Panel. Such mountings will be clamped at 30° angular position.		
11.29	Tally plate position	Tally plates inside the Control Panel will be as per 'Component Identification' column of 'Component Part List' Drawing & same at the front door will be as per 'General Arrangement (GA)' of Control Panel.		
11.30	Additional Tally Plate shall include on top of Control Panel for Anchor Capstan front door.	As per "General Arrangement (GA)" of Control Panel		
11.31	Overall Dimension, Mounting (Fixing) dimension and their tolerances.			
11.32	Drawing of 22KW Soft Starter enclosed with this SOTR are as tabulated below:-			
	Description of Drawing	Drawing No.	No. of Sheet	
	(a) General Arrangement (GA).	E082-F-1	01	

(b) Part Identification List (PIL).	E082-F-2	01
(c) Brief Technical Specification (TS).	E082-F-0	01
(d) Component Part List (CPL).	E082-F-3	02
(e) Circuit Diagram of Control Panel.	Circuit Diagram will be provided to L1 bidder after placement of PO.	

Common points for all equipment mentioned above

12. Direction of Rotation of Motor: Uni-direction.

13. Equipment Name Plate: The name plate of all equipment (15KW / 22KW soft starter) shall be as given below: -

- (a) **Makers Name:** Garden Reach Shipbuilders and Engineers LTD.
- (b) Panel Name:
- (c) Input Voltage:
- (d) Enclosure:
- (e) Rating:
- (f) Weight:
- (g) Sl. No. of Equipment.
- (h) Date of Manufacture:

14. Components Fixing Arrangement: All components must be fitted directly with screws on the component mounting plate except control terminal.

15. Gap / Space between components: Sufficient gap between the components to be provided for ease of maintenance.

16. Insulated crimping socket at cable end: One insulated crimping socket to be connected to only one cable (Multiplicity of cables to be a single insulated crimping socket is not acceptable).

17. Connection at terminal point: One terminal host only one cable. Multiplicity of cables to a single terminal is not acceptable.

18. Panel Key with securing arrangement: All panel should be fitted with panel lock with securing arrangement at the side of panel (**03 set of panel key should be provided for each panel**).

19. Cable Glands: All cable glands as per flame proof certification with undrilled nut are in the scope of suppliers.

20. Tally plates material, location and fixing arrangement for components: All tally plates will be made of anodized aluminum alloy. It should not be fixed on the component. Fixing location should be clearly visible from front. All tally plates to be fixed with screws / rivets nearest to each component.

21. Modification / Minor changes: Any minor modification / changes arises in due course of manufacturing shall be completed by the manufacturer without any financial implication.

22. Spare Terminals: 10% spare terminal are required to be provided for each panels.

23. Non Luminous Heater: Non luminous heater with LED indication "Conditioning heaters ON" and a yellow warning marker plate stating conditioning circuit line when equipment OFF.

- 24. Preservation and Maintenance Schedule:** Preservation and maintenance schedule to be submitted by the supplier in soft (word format) and hard copy. Also, the procedure for the preservation as well as maintenance should have elaborated from maintainer point of view.
- 25. Compliance:** All parts, sub-assemblies and components shall comply with the requirement of drawings and specification to the satisfaction of the GRSE/MDL/NHQ/Inspection agency.
- 26. Rejected items:** No materials, parts, components or complete units which have been rejected, shall be retreated or adjusted without the approval of the GRSE and / or inspection agency.
- 27. Quality / Workmanship:** The manufacturer shall ensure attaining specified quality, workmanship, endurance and electrical characteristics of the equipment.
- 28. Integration with the RLHTS system:** The supplier shall be responsible for integration of the supplied equipment with the RLHTS system during FAT at the GRSE. Any defect observed shall be rectified by the supplier without any financial implication.
- 29. Transportation of 15KW & 22KW Control panel (FLP):** The transportation of the control panels (FLP) (15KW & 22KW, 04 No. each) are in the scope of supplier. The supplier shall return the functional and duly inspected control panel (15KW & 22KW soft starters) along with flame proof certificates to GRSE. The existing control panel (15KW & 22KW soft starter, FLP) shall be free issued to the successful bidder as per commercial terms and conditions in force.
- 30. Inspection & Inspection Authority:**
(a) The equipment shall be inspected by IRS as per SOTR, approved drawing & QAP. All deliverables to be offered to inspection agency for verification against the make, model & part No. along with the Certificate of Conformity (COC).
(b) QAP: - The firm shall submit QAP within 10 days post placement of PO/LOA to GRSE for onward submission to IRS for approval.
- 31. Guarantee:** The guarantee of the supplied material & workmanship should not be less than **Two year (24 Months)** from the date of issue of inspection note. If any defect observed for the supplied material & workmanship during the guarantee period, same should be rectified / replaced with new one by vendor free of cost.
- 32. Supply of materials:** The material to be supplied to /DKMC within 08 weeks from date of LOI/PO whichever is earlier.
- 33. Weight Certificate:** **The weight of the equipment is to be witnessed by IRS** and the same to be embedded in the tally plate. The weight certificate duly certified by IRS to be submitted to GRSE.
- 34. Deletion of components:** The components / spares may be deleted partially or in full at any time as per requirement without assigning any reason and GRSE decision will be final.
- 35. Starting of work:** Immediate after issue of L.O.I / P.O. whichever is earlier.
- 36. GRSE Scope of supply:** The following are in the scope of supply by GRSE:
(a) All approved drawings. The deficiency (if any) in drawing is to be intimated to GRSE prior bidding with advance notice.
(b) Electricity, HP air during trials of RLHTS.
(c) Crane facility for lifting of material (as and when required with one day prior intimation).
(d) The available soft starters with GRSE.
- 37. Scope of supply by intended bidders:** It is to be confirmed by bidders that, the scope of supply are clearly understood. The firm shall also confirm that all drawings and documents as bought in this tender have been checked and have clear visibility for scope of supply & deliverables.

ANNEXURE-V

STATEMENT OF TECHNICAL REQUIREMENT (SOTR) OF SPARES FOR RLHTS AND B&D SPARES.

SOTR No: E/SPARES/RLHTS/PJB/SV(L)

1. **Intent:** M/s GRSE / Taratala Unit (DKMC) intends to purchase the spares as OBS & commissioning spares for SV(L) and B&D spares for P15B of RLHTS as enumerated in the succeeding paragraph.

2. **General:** The above equipment must be constructed in accordance with the specification and in strict compliance to the approved drawing. Deviation from these specification and drawing shall be accorded by GRSE/DKMC. It is be intimated that this ship is weight and space sensitive and therefore economy of weight and space is of utmost importance.

3. **Environmental conditions:**

3.01	Sea Water temperature	Upto + 40 ⁰ C
3.02	Ambient temperature	Upto + 55 ⁰ C
3.03	Relative Humidity	30 to 100% at 32 ⁰ C
3.04	Salinity of Water	35000 PPM
3.05	Environmental conditions.	The components must be catered for the most adverse of the environmental and ambient conditions and should operate.

4. **Operating conditions:**

4.01	Roll, Roll period, Pitch, Pitch period List	± 30 ⁰ , 10 seconds, Max 15 ⁰ Pitch period 20 seconds & ± 30 ⁰
4.02	Ship Supply Voltage	415V, +10% & -15%
4.03	Ship Supply Frequency	50 Hz. ±3%
4.04	No. of Phase.	3 Phase, 3 Wire, Unearthed System

5. **Application / use:** On Naval Warship exposed to Marine Weather.

6. **Inspection Agency:** Inspection of the equipment will be carried out by IRS.

7. **Technical specifications of spares:** -

7.01	Onboard Spares (OBS) of RLHTS for SV(L)				
	Description	Qty./ Ship	Den .	Part No	Make
	(i) Control Relay 2 C/O contact 24VDC	01	No	CA3-KN22BD	Schneider

(ii) Contactor 40AMP AC3 DUTY 24V DC coil for 22KW & with control relay 4NO & 2NO+2NC ADDON BLOCK.	01	No	LC1D40ABD,C A3-KN40BD, LA1-KN22	Schneider
(iii) 2NO – 2NC Auxiliary Contacts	01	No	LA1-KN22	Schneider
(iv) 2NO – 2NC Auxiliary Contacts	01	No	LA1-KN22	Schneider
(v) Thermistor Relay 24V DC	01	No	ST-WTR1	Minilec
(vi) Safety Relay 24V DC	01	No	RT6-24VDC	Jokab
(vii) Safety relay PNOZ x 3 24V DC.	01	No	PNOZ X 3, 774-310	Pilz
(viii) 1A fuse,	01	No	534-808	Belling Lee
(ix) 2A fuse,	01	No	534-810	Belling Lee
(x) 5A fuse,	01	No	534-833	Belling Lee
(xi) 1 A fuse	01	No	534-808	Belling Lee
(xii) 0.5 A Fuse	01	No	0.5A	Belling Lee
(xiii) 2 A fuse	01	No	534-810	Belling Lee
(xiv) 5 A fuse	01	No	534-833	Belling Lee
(xv) 15 A fuse	01	No	15A	Belling Lee
(xvi) 12.5 A fuse	01	No	12.5A	Belling Lee
(xvii) 2 Pole C/O relay 24V DC with integral surge protection. Electrical JB	01	No	2P	Schneider
(xviii) 4 Pole C/O relay 24V DC with integral surge protection. Electrical JB	01	No	4P	Schneider
(xix) 1 Pole C/O relay 24V DC with integral surge protection. Electrical JB	01	No	1P	Schneider
(xx) 1A fuse,	01	No	534-808	Belling Lee
(xxi) 2A fuse,	01	No	534-810	Belling Lee
(xxii) 5A fuse,	01	No	534-833	Belling Lee
(xxiii) 7A fuse,	01	No	7A	Belling Lee
(xxiv) 12.5A fuse	01	No	12.5A	Belling Lee

7.02	B&D Spares of RLHTS for P15B				
	Qty.	Den	Part No	Make	
(i) Control Relay 2 C/O contact 24V DC	01	No	RT6-24VDC	Jokab	
(ii) Incoming Isolator 63A Base Mounted.	01	No	LV429632+ LV429338	Schneider	
(iii) 22KW contactor 24V DC Coil	01	No	LC1D40A#,CA 3-KN40BD, LA1-KN22	Schneider	
(iv) 2NO-2NO Auxiliary Contacts	02	No	LA1-KN22	Schneider	
(v) Thermistor Relay 24V DC	01	No	ST-WTR1	Minilec	
(vi) Green LED 24V DC	01	No	Gen Next Pro	L&T	
(vii) Red LED 24V DC	02	No	Gen Next Pro	L&T	
(viii) Emergency Stop Relay 24V DC	01	No	3SK11111AB3 0	Siemens	
(ix) Local Off Remote Switch	01	No	6A,2P, 2W	Salzer	
(x) Stop/ Start Switch	01	No	Gen Next (EMN)	L&T	
(xi) Emergency Stop Push Button	01	No	EMNRMH1+E C2C	L&T	
(xii) Yellow LED Lamp	01	No	Gen Next Pro	L&T	
(xiii) 2 Pole C/O Relay 24V DC With integral Surge Protection	05	No	2P	REPUTED	
(xiv) 4 Pole C/O Relay 24V DC With integral Surge Protection	04	No	4P	REPUTED	
(xv) 1 Pole C/O Relay 24V DC With integral Surge Protection	02	No	1P	REPUTED	
(xvi) 2 Position Selector Switch	01	No	6A 2P		
(xvii) Emergency Stop Body with 1 NO.	01	No	EMNRMH1+E C2C	L&T	
(xviii) Check valve	1	No.	S10A0.0	Rexroth	
(xix) Return Filter	1	No	0110-R-020- BN3HC	Hydac	
(xx) Return Filter Seal Kit	1	No.	1267827	Hydac	
(xxi) Pressure Filter Element	1	No.	0060-D-005- BN3HC	Hydac	
(xxii) Pressure Filter Seal Kit	1	No.	308200	Hydac	
(xxiii) Pressure sensor	1	No.	PP7534	IFM Electronics	
(xxiv) Temperature sensor	1	No.	TR2432+TT20 50+E300 17+E34020+E 30018	IFM Electronics	
(xxv) Combined Pressure Sensor	1	No.	PN2028	IFM Electronics	

	(xxvi) Pressure Reducing Valve	1	No.	PBFB-LBN	Sun Hydraulics
	(xxvii) Relief Valve	1	No.	RPECLAN	Sun Hydraulics
	(xxviii) Proportional Reducing /Relief valve seal	1	No.	990-202-007/PBFF8	Sun Hydraulics
	(xxix) Sandwich Check Valve	1	No.	Z1S 6 P05-4X/V	Rexroth
	(xxx) Sandwich Check Valve SEAL Kit	1	No.	R961000838	Rexroth
	(xxxi) Directional Control Valve Seal Kit	1	No.	R900357574	Rexroth
	(xxxii) Proportional Directional Control valve Seal Kit	1	No.	R961000363	Rexroth
	(xxxiii) Electronic pressure Switch	1	No.	EDS 3446-3-0250-000	Hydac
	(xxxiv) Pressure Transmitter	1	No.	8251-74-25-17-35-19-33-43	Trafag
	(xxxv) Directional control Valve Seal Kit	1	No.	R961000360	Rexroth
7.03	B&D Spares of AC for SV(L)				
	(i) ON DELAY TIMER	1	No.	COIL 230V AC, 2A0DT5	GIC
	(ii) SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	1	No.	S2CMR5 / CCSD2	MINILEC
	(iii) CONTROL MCB	1	No.	6A, SP2 A9N1P06C	SCHNEIDER
	(iv) CONTROL MCB	1	No.	4A, SP A9N1P04C	SCHNEIDER
	(v) MUSROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT	1	Set	1NC, XB5AS542N	SCHNEIDER
	(vi) SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT	1	Set	3WAY,2NO, XB5AD33N	SCHNEIDER
	(vii) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	1	Set	XB5AA51N	SCHNEIDER
	(viii) INDICATING LAMP RED COLOUR	1	No.	230V AC, XB7EV04MPN	SCHNEIDER
	(ix) INDICATING LAMP GREEN COLOUR, 230V AC	1	No.	XB7EV03MPN	SCHNEIDER
	(x) INDICATING LAMP BLUE COLOUR 230V AC	1	No.	XB7EV06MPN	SCHNEIDER
	(xi) INDICATING LAMP WHITE COLOUR 230V AC	1	No.	XB7EV01MPN	SCHNEIDER
	(xii) INDICATING LAMP YELLOW COLOUR 230V AC	1	No.	XB7EV05MPN	SCHNEIDER
	(xiii) INDICATING LAMP AMBER 230V AC	1	No.	XB7EV08MPN	SCHNEIDER
	(xiv) ELECTRONIC OVER CUTTENT RELAY	1	No.	5-60 AMP, EOCRSS-60S	SCHNEIDER

	(xv) SINGLE PHASE OVER CURRENT RELAY	1	No.	220V AC, S2CMR5 / CCSD2	MINILEC
	(xvi) THERMISTOR PROTECTION UNIT (2NO+2NC) AUX. VOLTAGE 240VAC	1	Set	5A, 230V AC, S2WTR1	MINILEC
	(xvii) VOLTAGE MONITORING RELAY	1	No.	415VAC, 3PH 3- WIRE, 2C/O MG53BH	GIC
	(xviii) SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	1	No.	415/220/190/1 10 VAC, 750VA	GUPTA
	(xix) POWER CONTACTOR 50Amps, TP Coil 220V AC, 1NO+1NC Inbuilt + Addon block	1	No.	3RT2036-1AL20 + 3RH2911-1HA22 +3RH2911-1HA31	SIEMENS
	(xx) TIMER	1	No.	COIL 230V AC, 2A0DT5	GIC
	(xxi) CONTROL MCB	2	No.	6A, SP2, A9N1P06C	SCHNEIDER
	(xxii) MUSROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT	1	Set	1NC, XB5AS542N	SCHNEIDER
	(xxiii) SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT	1	Set	3WAY, 2NO, XB5AD33N	SCHNEIDER
	(xxiv) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	1	Set	XB5AA51N	SCHNEIDER
7.04	B&D Spares of AC for SV(L)				
	(i) ON DELAY TIMER	1	No.	COIL 230V AC, 2A0DT5	GIC
	(ii) SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	1	No.	S2CMR5 /CCSD2	MINILEC
	(iii) CONTROL MCB	1	No.	6A,SP2, A9N1P06C	SCHNEIDER
	(iv) CONTROL MCB	1	No.	4A, SP, A9N1P04C	SCHNEIDER
	(v) MUSROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT	1	Set	1NC, XB5AS542N	SCHNEIDER
	(vi) SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT	1	Set	3WAY,2NO, XB5AD33N	SCHNEIDER
	(vii) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	1	Set	XB5AA51N	SCHNEIDER
	(viii) INDICATING LAMP RED COLOUR	1	No.	XB7EV04MPN	SCHNEIDER

	(ix) INDICATING LAMP GREEN COLOUR	1	No.	XB7EV03MPN	SCHNEIDER
	(x) INDICATING LAMP BLUE COLOUR	1	No.	XB7EV06MPN	SCHNEIDER
	(xi) INDICATING LAMP WHITE COLOUR	1	No.	XB7EV01MPN	SCHNEIDER
	(xii) INDICATING LAMP YELLOW COLOUR	1	No.	XB7EV05MPN	SCHNEIDER
	(xiii) INDICATING LAMP AMBER	1	No.	XB7EV08MPN	SCHNEIDER
	(xiv) SINGLE PHASE OVER CURRENT RELAY	1	No.	220V AC, S2CMR5 / CCSD2	MINILEC
	(xv) VOLTAGE MONITORING RELAY	1	No.	415VAC, 3PH 3- WIRE, 2C/O, MG53BH	GIC
	(xvi) SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	1	No.	415/220/190/1 10 VAC, 750VA	GUPTA
	(xvii) POWER CONTACTOR 50Amps, TP Coil 220V AC, 1NO+1NC Inbuilt + Addon block	1	No.	3RT2036-1AL20 + 3RH2911-1HA22 +3RH2911-1HA31	SIEMENS
	(xviii) TIMER	1	No.	COIL 230V AC, 2A0DT5	GIC
	(xix) CONTROL MCB	2	No.	6A, SP2, A9N1P06C	SCHNEIDER
	(xx) SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT	1	Set	3WAY, 2NO, XB5AD33N	SCHNEIDER
	(xxi) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	1	Set	XB5AA51N	SCHNEIDER
7.05	B&D Spares of MC for SV(L)				
	(i) ON TIMER DELAY RELAY	1	No.	230V, 50HZ, A1D1	EAPL
	(ii) SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	1	No.	25A-40A, 3UC5830-5E	SIEMENS
	(iii) CONTROL MCB	1	No.	6A, DP, 5SL42067RC	SIEMENS
	(iv) MUSHROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT	1	Set	500V AC, ESBEE	L&T
	(v) SELECTOR SWITCH 2MAINTAINED POSITION WITH 1NO CONTACT	1	Set	10A,2P-2W WITH OFF. 2S26B0	KAYCEE
	(vi) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	1	Set	500V AC, ESBEE	L&T

	(vii) INDICATING LAMP,WHITE COLOUR	1	No.	230V AC, ESBE	L&T
	(viii) INDICATING LAMP,RED COLOUR	1	No.	230V AC, ESBE	L&T
	(ix) INDICATING LAMP,GREEN COLOUR	1	No.	230V AC, ESBE	L&T
	(x) INDICATING LAMP INTEGRAL LED BLUE COLOUR	1	No.	230V AC, ESBE	L&T
	(xi) ELECTRONIC OVER CURRENT RELAY	1	No.	25A-40A, 3UC5830-5E	SIEMENS
	(xii) SINGLE PHASE OVER CURRENT RELAY	1	No.	230V AC, CCS D2	MINILEC
	(xiii) THERMISTOR PROTECTION UNIT	1	No.	230V AC, S2 WTR1	MINILEC
	(xiv) VOLTAGE MONITORING RELAY	1	No.	415V AC, VCT D2	MINILEC
	(xv) SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	1	No.	500VA, AIR COOLED	Reputed
	(xvi) POWER CONTACTOR	1	No.	65A, CE15JN3K C320KGTC31	BCH
7.06	B&D Spares of MC for SV(L)				
	(i) ON TIMER DELAY RELAY	1	No.	230V, 50HZ, A1D1	EAPL
	(ii) SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	1	No.	25A-40A, 3UC5830-5E	SIEMENS
	(iii) CONTROL MCB	1	No.	6A, DP, 5SL42067RC	SIEMENS
	(iv) MUSHROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CNTACT	1	Set	500V AC, ESBE	L&T
	(v) SELECTOR SWITCH 2MAINTAINED POSITION WITH 1NO CONTACT	1	Set	10A,2P-2W WITH OFF, 2S26B0	KAYCEE
	(vi) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	1	Set	500V AC, ESBE	L&T
	(vii) INDICATING LAMP,WHITE COLOUR	1	No.	230V AC, ESBE	L&T
	(viii) INDICATING LAMP,RED COLOUR	1	No.	230V AC, ESBE	L&T
	(ix) INDICATING LAMP,GREEN COLOUR	1	No.	230V AC, ESBE	L&T
	(x) INDICATING LAMP INTEGRAL LED BLUE COLOUR	1	No.	230V AC, ESBE	L&T
	(xi) ELECTRONIC OVER CURRENT RELAY	1	No.	25A-40A, 3UC5830-5E	SIEMENS
	(xii) SINGLE PHASE OVER CURRENT RELAY	1	No.	230V AC, CCS D2	MINILEC
	(xiii) THERMISTOR PROTECTION UNIT	1	No.	230V AC, S2 WTR1	MINILEC
	(xiv) VOLTAGE MONITORING RELAY	1	No.	415V AC, VCT D2	MINILEC
	(xv) SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	1	No.	500VA	Reputed

	(xvi) POWER CONTACTOR	1	No.	65A, CE15JN3K C320KGTC31	BCH
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- 8. Compliance:** All parts, sub-assemblies and components shall comply with the requirement of drawings and specification to the satisfaction of the GRSE/IHQ/Inspection agency.
- 9. Rejected items:** No materials, parts, components or complete units which have been rejected, shall be retreated or adjusted without the approval of the GRSE and / or inspection agency.
- 10. Certificate of conformity:** The supplier shall submit the certificate of conformity for all supplied material from OEM.

ANNEXURE-VI

STATEMENT OF TECHNICAL REQUIREMENT (SOTR) FOR INDEGENISED ELECTRICAL EQUIPMENT FOR RLHS OF SV(L).

SOTR No: E/3025-28/ELECTRICAL/RLHTS/SV(L)/GRSE

- 1. Intent:** M/s GRSE / Taratala Unit (DKMC) intends to purchase the electrical equipment along with OBS and B&D spares. The equipment to be manufactured and tested as per Indian Naval standard {EED-Q-071(R4)}.
- 2. General:** The above equipment must be constructed in accordance with the specification and in strict compliance to the approved drawing. Deviation from these specification and drawing shall be accorded by GRSE/DKMC. It is be intimated that this ship is weight and space sensitive and therefore economy of weight and space is of utmost importance.

3. Environmental conditions:

3.01	Sea Water temperature	Upto + 40 ⁰ C
3.02	Ambient temperature	Upto + 55 ⁰ C
3.03	Relative Humidity	30 to 100% at 32 ⁰ C
3.04	Salinity of Water	35000 PPM
3.05	Environmental conditions.	The design of the electrical equipment shall be catered for the most adverse of the environmental and ambient conditions and should operate.

4. Operating conditions:

4.01	Roll, Roll period, Pitch, Pitch period List	$\pm 30^{\circ}$, 10 seconds, Max 15° Pitch period 20 seconds & $\pm 30^{\circ}$
4.02	Ship Supply Voltage	415V, +10% & -15%
4.03	Ship Supply Frequency	50 Hz. $\pm 3\%$
4.04	No. of Phase.	3 Phase, 3 Wire, Unearthed System

5. **Application / use:** On Naval Warship exposed to Marine Weather.
6. **Type of Driven Equipment:** RLHTS system.
7. **Inspection Agency:** Inspection of the equipment will be carried out by IRS.
8. **Testing and Inspection:** The testing of equipment should be carried out as per **EED-Q-071(R4)** and all ink signed inspection reports should be submitted to GRSE / DKMC along with invoice.
9. **Drawing:** All equipment to be manufactured in accordance with approved drawing and SOTR. The components specified in the components part list (CPL) and General Arrangement (GA) are to be used without any alteration & deviation and manufacturer test certificate to be provided. All drawings are enclosed with this SOTR.
10. **Indigenized Electrical equipment for RLHTS:** The following indigenized electrical equipment for RLHTS needs to be manufactured and supplied to GRSE:
- (a) **15 KW & 22KW Motor Power JB:** The details of the technical specifications are elaborated in the Appendix I attached with this SOTR.
- (b) **Slave Control Unit Junction Box JB13 & JB14 with dummy plug as per MTS standard:** The details of the technical specifications are elaborated in the Appendix II attached with this SOTR.
- (c) **15KW and 22KW Soft Starter (FLP):** The details of the technical specifications are elaborated in the Appendix III attached with this SOTR.
- (d) **Onboard Spares (OBS) and B&D spares:** The details of onboard spares (OBS) and B&D spares are elaborated in the Appendix IV.
11. **Eligibility criteria:** The RLHTS system is being used are being imported and the equipment mentioned above shall be indigenized as per European Standard. Also, the RLHTS system is fully automated system and being deployed in the marine environment on the floating platform. Therefore, the intended supplier shall be competent enough to

execute the project in a time bound professional manner. Considering the above, the interested participant shall have the minimum eligibility as mentioned below:

11.1 The interested bidder shall have prior experience in supplying the Type Tested control system as per governing specifications EED-Q-071 to defence / Shipbuilders /GRSE/ Any Govt. Organisation. A documentary evidence shall be submitted along with the bid.

11.2 The SCU JB's along with dummy plug shall be as per MTS standard matching the make and model as supplied by MTS. Hence, the intended bidders shall submit the authorization letter from M/s Souriau to match the standard as elaborated in the SOTRs.

12. Electrical Connection and Trial of RLHTS during FAT at GRSE. The intended supplier shall be responsible for electrical connection of complete RLHTS including supplied equipment during FAT at GRSE premise. The drawings are available at GRSE and bidder may review the same with prior intimation. Also, the supplier shall depute the team during FAT at GRSE.

13. Electrical Connection, HAT & SAT onboard ship.

(a) The electrical connection of complete RLHTS system onboard ship as per shipbuilding standard is the responsibility of the bidder. The electrical connection onboard ship shall be carried out and to be presented to GRSE/WOT/IN/IRS for inspection as per standard procedure of the shipyard. The liaison with shipyard and the inspection agency is the responsibility of the bidder for successful installation inspection of RLHTS system.

(b) The all consumables are in the scope of supplier for successful installation inspection of the RLHTS system.

(c) The electrical connection includes ferrule marking, placement of tallies, glands packing etc. as per standard shipbuilding procedure.

(d) The supplier shall depute the team during HAT & SAT onboard ship at Kolkata or any other port of India for successful HAT & SAT.

14. Deliverables:

Sl.	Description of item	Qty. / Ship	UoM	Total
14.01	15KW motor Power JB (FLP) of RLHTS for SV(L)			
	(i) 15KW motor JB (FLP)	01	No.	04
	(ii) Foundation / installation bolt & nuts (SS316).	01	Set	04
	(iii) Double Compression Cable glands (FLP)	01	Set	04
	(iv) All ink signed inspection reports and Manufacturer test certificates.	03	Set	12
14.02	22KW motor Power JB (FLP) of RLHTS for SV(L)			
	(i) 22KW motor JB (FLP)	01	No.	04
	(ii) Foundation / installation bolt & nuts (SS316).	01	Set	04
	(iii) Double Compression Cable glands (FLP)	01	Set	04
	(iv) All ink signed inspection reports and Manufacturer test certificates.	03	Set	12
14.03	Up gradation of 15KW Soft Starter (FLP) of RLHTS for SV(L)			
	(i) Up-gradation of 15 KW Soft Starter (FLP)	01	No.	04

	(ii) Foundation / installation bolt & nuts (SS316).	01	Set	04
	(iii) Shock Vibration mounts	01	Set	04
	(iv) Double Compression Cable glands (FLP)	01	Set	04
	(v) All ink signed inspection reports and Manufacturer test certificates.	03	Set	12
14.04	Up gradation of 22KW Soft Starter (FLP) of RLHTS for SV(L)			
	(i) Up-gradation of 22 KW Soft Starter (FLP)	01	No.	04
	(ii) Foundation / installation bolt & nuts (SS316).	01	Set	04
	(iii) Shock Vibration mounts	01	Set	04
	(iv) Double Compression Cable glands (FLP)	01	Set	04
	(v) All ink signed inspection reports and Manufacturer test certificates.	03	Set	12
14.05	Slave Control Unit Junction Box JB 13 (FLP) with dummy plug as per MTS standard of RLHTS for SV(L)			
	(i) Slave Control Unit Junction Box JB 13 (FLP) with dummy plug as per MTS standard	01	No.	04
	(ii) Foundation / installation bolt & nuts (SS316).	01	Set	04
	(iii) Double Compression Cable glands (FLP)	01	Set	04
	(iv) All ink signed inspection reports and Manufacturer test certificates.	03	Set	12
14.06	Slave Control Unit Junction Box JB 14 (FLP) with dummy plug as per MTS standard of RLHTS for SV(L)			
	(i) Slave Control Unit Junction Box JB 14 (FLP) with dummy plug as per MTS standard.	01	No.	04
	(ii) Foundation / installation bolt & nuts (SS316).	01	Set	04
	(iii) Double Compression Cable glands (FLP)	01	Set	04
	(iv) All ink signed inspection reports and Manufacturer test certificates.	03	Set	12
14.07	OBS of RLHTS for SV(L)			
	(i) Control Relay 2 C/O contact 24VDC	01	No	04
	(ii) Contactor 40AMP AC3 DUTY 24V DC coil for 22KW & with control relay 4NO & 2NO+2NC ADDON BLOCK.	01	No	04
	(iii) 2NO – 2NC Auxiliary Contacts	01	No	04
	(iv) 2NO – 2NC Auxiliary Contacts	01	No	04
	(v) Thermistor Relay 24V DC	01	No	04
	(vi) Safety Relay 24V DC	01	No	04
	(vii) Safety relay PNOZ x 3 24V DC.	01	No	04

	(viii) 1A fuse,	01	No	04
	(ix) 2A fuse,	01	No	04
	(x) 5A fuse,	01	No	04
	(xi) 1 A fuse	01	No	04
	(xii) 0.5 Amp Fuse	01	No	04
	(xiii) 2 A fuse	01	No	04
	(xiv) 5 A fuse	01	No	04
	(xv) 15 A fuse	01	No	04
	(xvi) 12.5 A fuse	01	No	04
	(xvii) 2 Pole C/O relay 24V DC with integral surge protection. Electrical JB	01	No	04
	(xviii) 4 Pole C/O relay 24V DC with integral surge protection. Electrical JB	01	No	04
	(xix) 1 Pole C/O relay 24V DC with integral surge protection. Electrical JB	01	No	04
	(xx) 1A fuse,	01	No	04
	(xxi) 2A fuse,	01	No	04
	(xxii) 5A fuse,	01	No	04
	(xxiii) 7A fuse,	01	No	04
	(xxiv) 12.5A fuse	01	No	04
14.08	B&D Spares of RLHTS for P15B			
	(i) Control Relay 2 C/O contact 24V DC	01	No	01
	(ii) Incoming Isolator 63A Base Mounted.	01	No	01
	(iii) 22KW contactor 24V DC Coil	01	No	01
	(iv) 2NO-2NO Auxiliary Contacts	02	No	02
	(v) Thermistor Relay 24V DC	01	No	01
	(vi) Green LED 24V DC	01	No	01
	(vii) Red LED 24V DC	02	No	02
	(viii) Emergency Stop Relay 24V DC	01	No	01
	(ix) Local Off Remote Switch	01	No	01
	(x) Stop/ Start Switch	01	No	01
	(xi) Emergency Stop Push Button	01	No	01
	(xii) Yellow LED Lamp	01	No	01
	(xiii) 2 Pole C/O Relay 24V DC With integral Surge Protection	05	No	05

	(xiv) 4 Pole C/O Relay 24V DC With integral Surge Protection	04	No	04
	(xv) 1 Pole C/O Relay 24V DC With integral Surge Protection	02	No	02
	(xvi) 2 Position Selector Switch	01	No	01
	(xvii) Emergency Stop Body with 1 NO.	01	No	01
	(xviii) Check valve	01	No.	01
	(xix) Return Filter	01	No	01
	(xx) Return Filter Seal Kit	01	No.	01
	(xxi) Pressure Filter Element	01	No.	01
	(xxii) Pressure Filter Seal Kit	01	No.	01
	(xxiii) Pressure sensor	01	No.	01
	(xxiv) Temperature sensor	01	No.	01
	(xxv) Combined Pressure Sensor	01	No.	01
	(xxvi) Pressure Reducing Valve	01	No.	01
	(xxvii) Relief Valve	01	No.	01
	(xxviii) Proportional Reducing /Relief valve seal	01	No.	01
	(xxix) Sandwich Check Valve	01	No.	01
	(xxx) Sandwich Check Valve SEAL Kit	01	No.	01
	(xxxi) Directional Control Valve Seal Kit	01	No.	01
	(xxxii) Proportional Directional Control valve Seal Kit	01	No.	01
	(xxxiii) Electronic pressure Switch	01	No.	01
	(xxxiv) Pressure Transmitter	01	No.	01
	(xxxv) Directional control Valve Seal Kit	01	No.	01
14.09	B&D Spares of AC for SV(L)			
	(i) ON DELAY TIMER	01	No.	01
	(ii) SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	01	No.	01
	(iii) CONTROL MCB	01	No.	01
	(iv) CONTROL MCB	01	No.	01
	(v) MUSROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT	01	Set	01
	(vi) SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT	01	Set	01
	(vii) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	01	Set	01

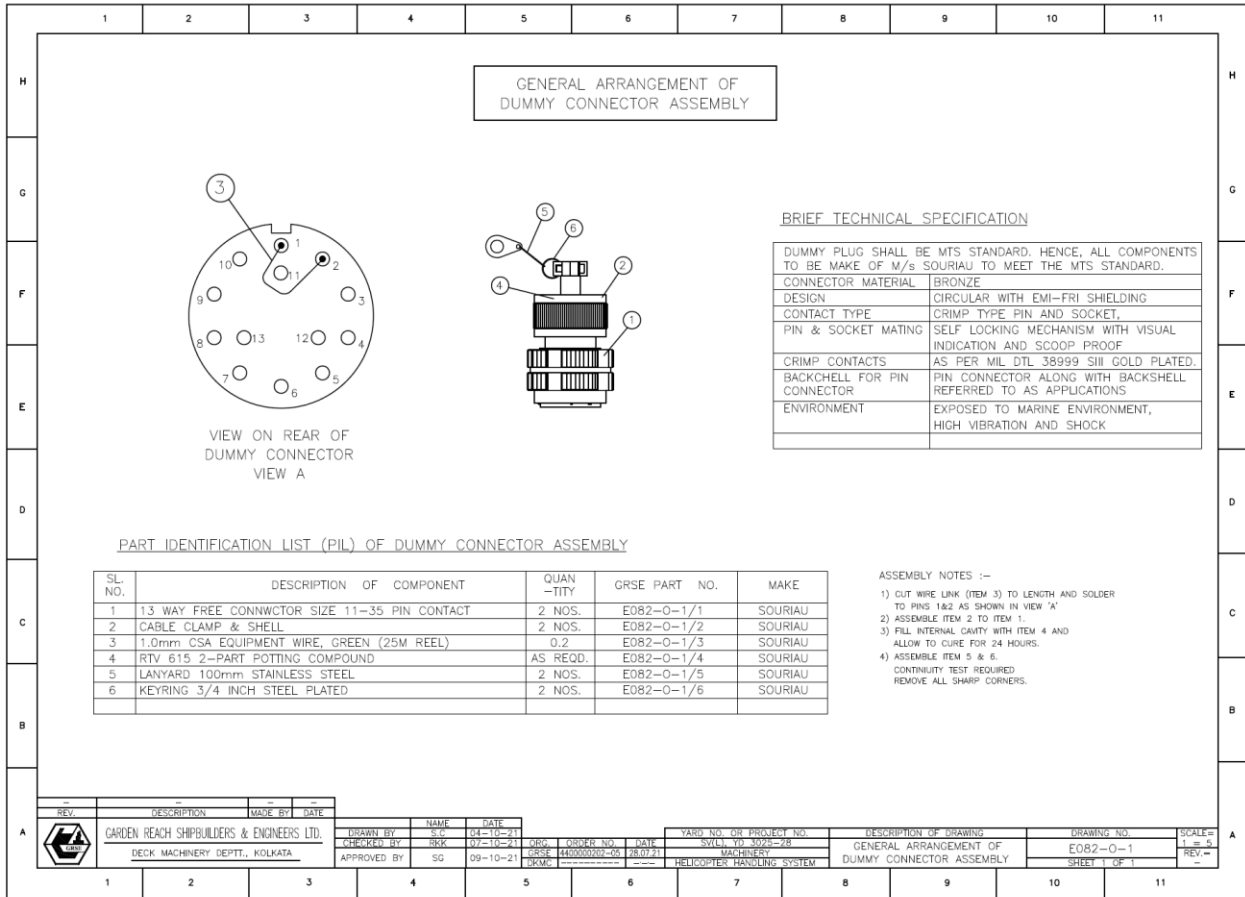
	(viii) INDICATING LAMP RED COLOUR	01	No.	01
	(ix) INDICATING LAMP GREEN COLOUR, 230V AC	01	No.	01
	(x) INDICATING LAMP BLUE COLOUR 230V AC	01	No.	01
	(xi) INDICATING LAMP WHITE COLOUR 230V AC	01	No.	01
	(xii) INDICATING LAMP YELLOW COLOUR 230V AC	01	No.	01
	(xiii) INDICATING LAMP AMBER 230V AC	01	No.	01
	(xiv) ELECTRONIC OVER CURRENT RELAY	01	No.	01
	(xv) SINGLE PHASE OVER CURRENT RELAY	01	No.	01
	(xvi) THERMISTOR PROTECTION UNIT (2NO+2NC) AUX. VOLTAGE 240VAC	01	Set	01
	(xvii) VOLTAGE MONITORING RELAY	01	No.	01
	(xviii) SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	01	No.	01
	(xix) POWER CONTACTOR 50Amps, TP Coil 220V AC, 1NO+1NC Inbuilt + Addon block	01	No.	01
	(xx) TIMER	01	No.	01
	(xxi) CONTROL MCB	02	No.	02
	(xxii) MUSROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT	01	Set	01
	(xxiii) SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT	01	Set	01
	(xxiv) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	01	Set	01
14.10	B&D Spares of AC for SV(L)			
	(i) ON DELAY TIMER	01	No.	01
	(ii) SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	01	No.	01
	(iii) CONTROL MCB	01	No.	01
	(iv) CONTROL MCB	01	No.	01
	(v) MUSROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT	01	Set	01
	(vi) SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT	01	Set	01
	(vii) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	01	Set	01
	(viii) INDICATING LAMP RED COLOUR	01	No.	01
	(ix) INDICATING LAMP GREEN COLOUR	01	No.	01
	(x) INDICATING LAMP BLUE COLOUR	01	No.	01
	(xi) INDICATING LAMP WHITE COLOUR	01	No.	01

	(xii) INDICATING LAMP YELLOW COLOUR	01	No.	01
	(xiii) INDICATING LAMP AMBER	01	No.	01
	(xiv) SINGLE PHASE OVER CURRENT RELAY	01	No.	01
	(xv) VOLTAGE MONITORING RELAY	01	No.	01
	(xvi) SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	01	No.	01
	(xvii) POWER CONTACTOR 50Amps, TP Coil 220V AC, 1NO+1NC Inbuilt + Addon block	01	No.	01
	(xviii) TIMER	01	No.	01
	(xix) CONTROL MCB	02	No.	02
	(xx) SELECTOR SWITCH 2 MAINTAINED POSITION WITH 1NO CONTACT	01	Set	01
	(xxi) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	01	Set	01
14.11	B&D Spares of MC for SV(L)			
	(i) ON TIMER DELAY RELAY	01	No.	01
	(ii) SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	01	No.	01
	(iii) CONTROL MCB	01	No.	01
	(iv) MUSHROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT	01	Set	01
	(v) SELECTOR SWITCH 2MAINTAINED POSITION WITH 1NO CONTACT	01	Set	01
	(vi) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	01	Set	01
	(vii) INDICATING LAMP,WHITE COLOUR	01	No.	01
	(viii) INDICATING LAMP,RED COLOUR	01	No.	01
	(ix) INDICATING LAMP,GREEN COLOUR	01	No.	01
	(x) INDICATING LAMP INTEGRAL LED BLUE COLOUR	01	No.	01
	(xi) ELECTRONIC OVER CURRENT RELAY	01	No.	01
	(xii) SINGLE PHASE OVER CURRENT RELAY	01	No.	01
	(xiii) THERMISTOR PROTECTION UNIT	01	No.	01
	(xiv) VOLTAGE MONITORING RELAY	01	No.	01
	(xv) SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	01	No.	01
	(xvi) POWER CONTACTOR	01	No.	01
14.12	B&D Spares of MC for SV(L)			
	(i) ON TIMER DELAY RELAY	01	No.	01
	(ii) SINGLE PHASE OVER CURRENT RELAY, CT INPUT 5A	01	No.	01

	(iii) CONTROL MCB	01	No.	01
	(iv) MUSHROOM HEAD TURN TO RELEASE PUSH BUTTON RED COLOUR WITH 1NC CONTACT	01	Set	01
	(v) SELECTOR SWITCH 2MAINTAINED POSITION WITH 1NO CONTACT	01	Set	01
	(vi) SHROUDED PUSH BUTTON YELLOW COLOUR WITH 1NO CONTACT	01	Set	01
	(vii) INDICATING LAMP,WHITE COLOUR	01	No.	01
	(viii) INDICATING LAMP,RED COLOUR	01	No.	01
	(ix) INDICATING LAMP,GREEN COLOUR	01	No.	01
	(x) INDICATING LAMP INTEGRAL LED BLUE COLOUR	01	No.	01
	(xi) ELECTRONIC OVER CURRENT RELAY	01	No.	01
	(xii) SINGLE PHASE OVER CURRENT RELAY	01	No.	01
	(xiii) THERMISTOR PROTECTION UNIT	01	No.	01
	(xiv) VOLTAGE MONITORING RELAY	01	No.	01
	(xv) SINGLE PHASE DOUBLE WOUND CONTROL TRANSFORMER	01	No.	01
	(xvi) POWER CONTACTOR	01	No.	01
14.13	Electrical connection of RLHTS system prior FAT at GRSE	01	Set	04
14.14	Electrical connection onboard ship Prior HAT.	01	Set	04

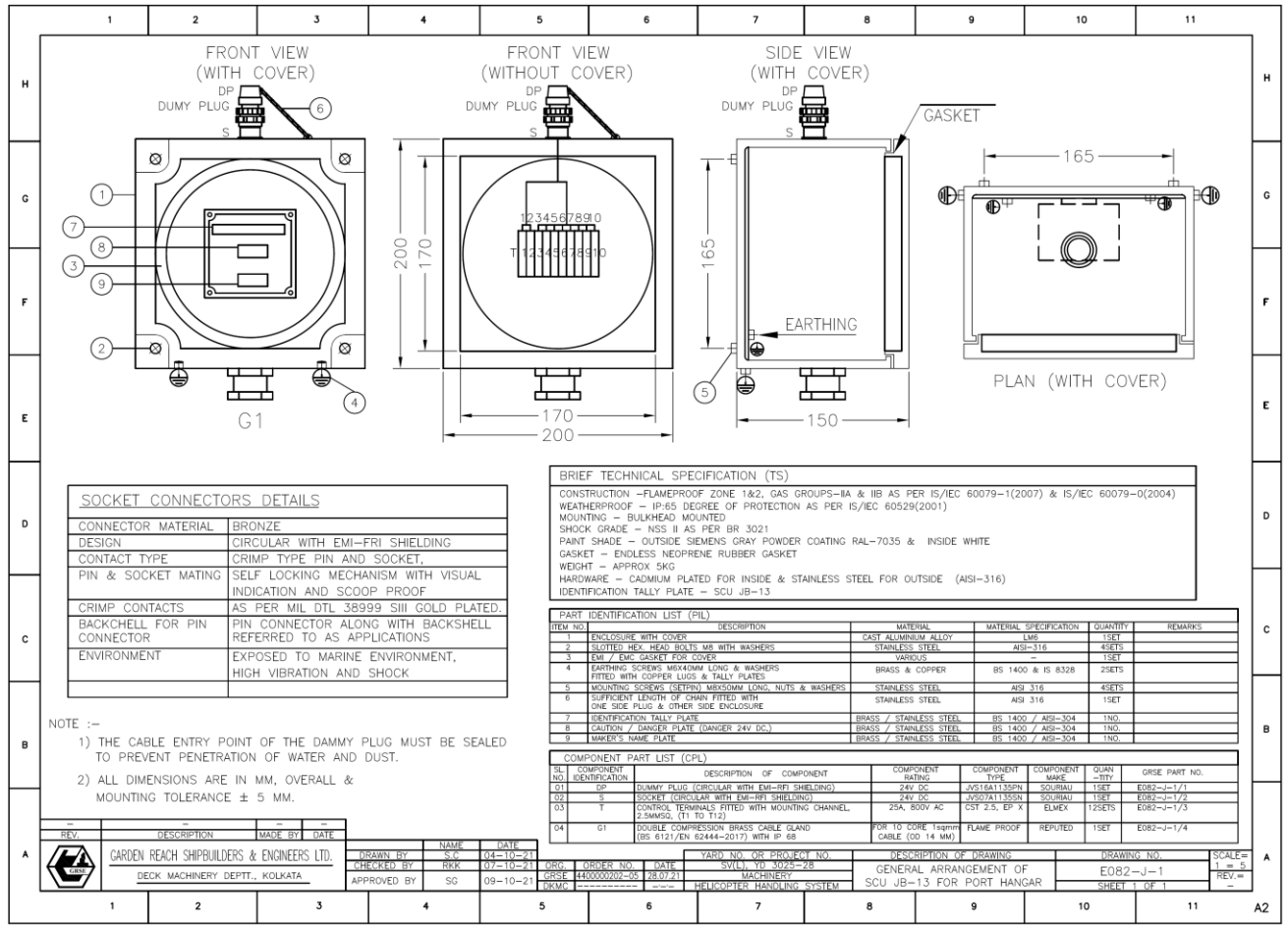
ANNEXURE-VII

GENERAL ARRANGEMENT OF DUMMY CONNECTOR ASSEMBLY

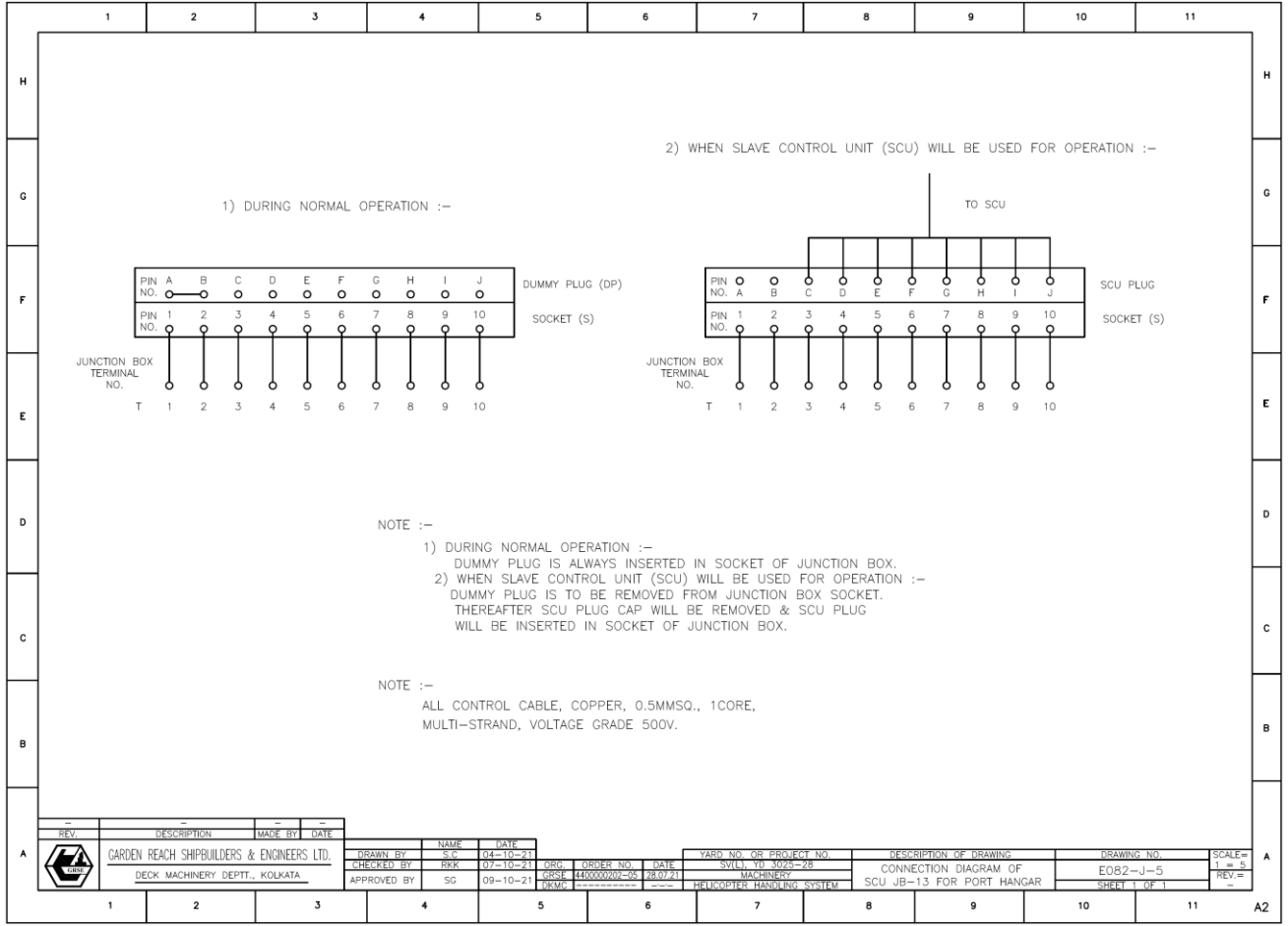


ANNEXURE-VIII

GENERAL ARRANGEMENT OF SCU JB-13 FOR PORT HANGER

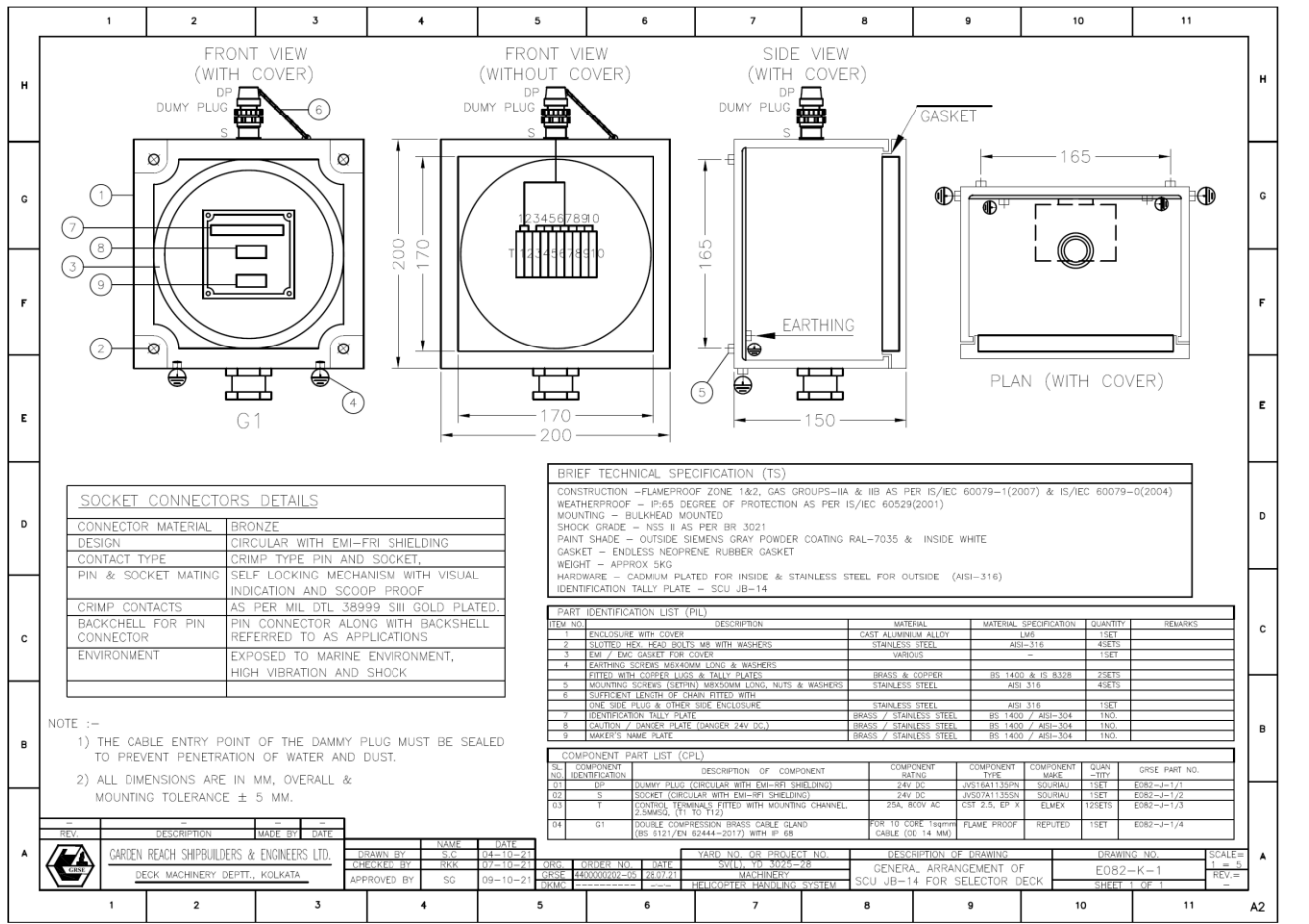


CONNECTION DIAGRAM FOR SCU JB-13 FOR PORT HANGER

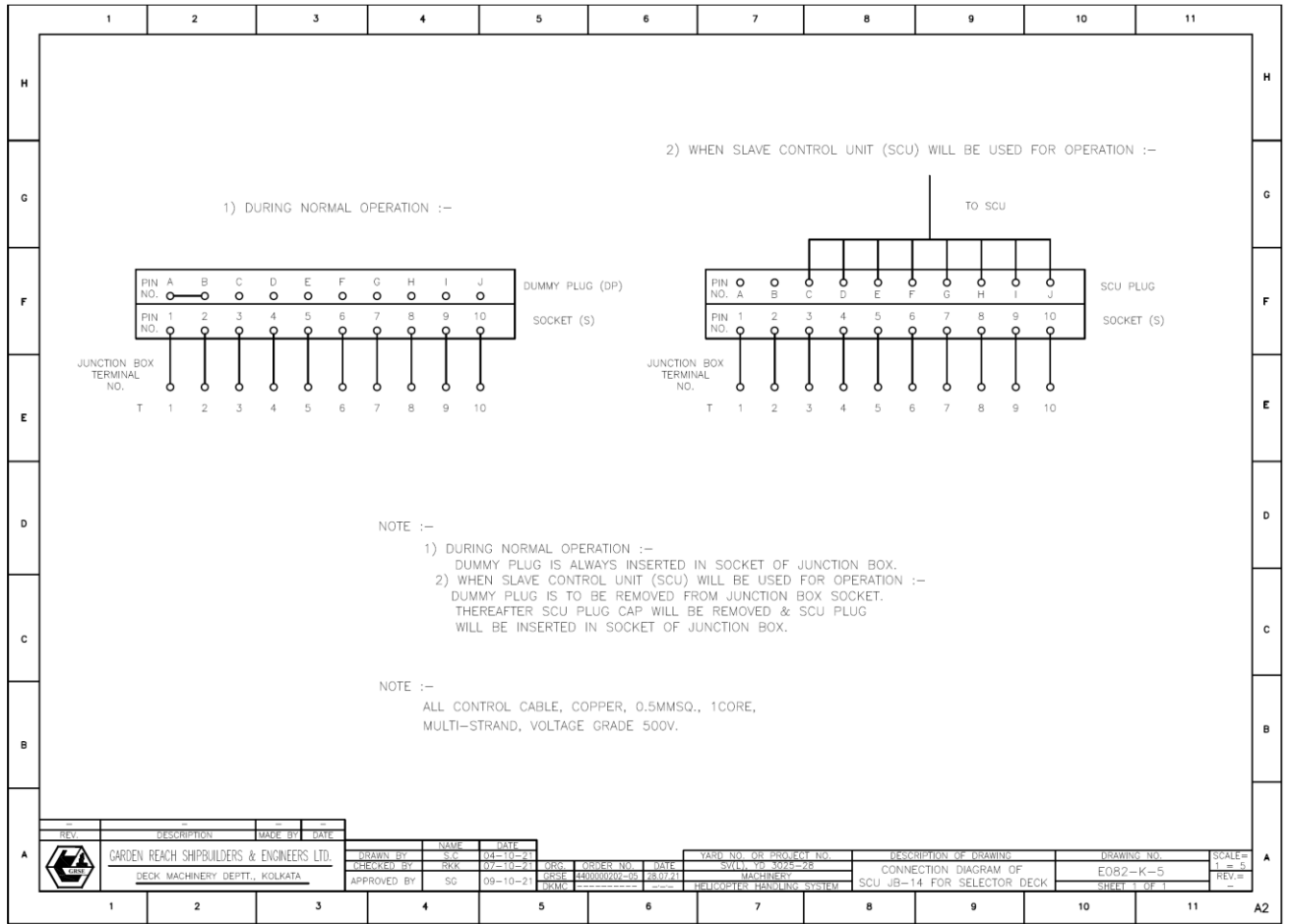


ANNEXURE-IX

GENERAL ARRANGEMENT OF SCU JB-14 FOR SELECTOR DECK

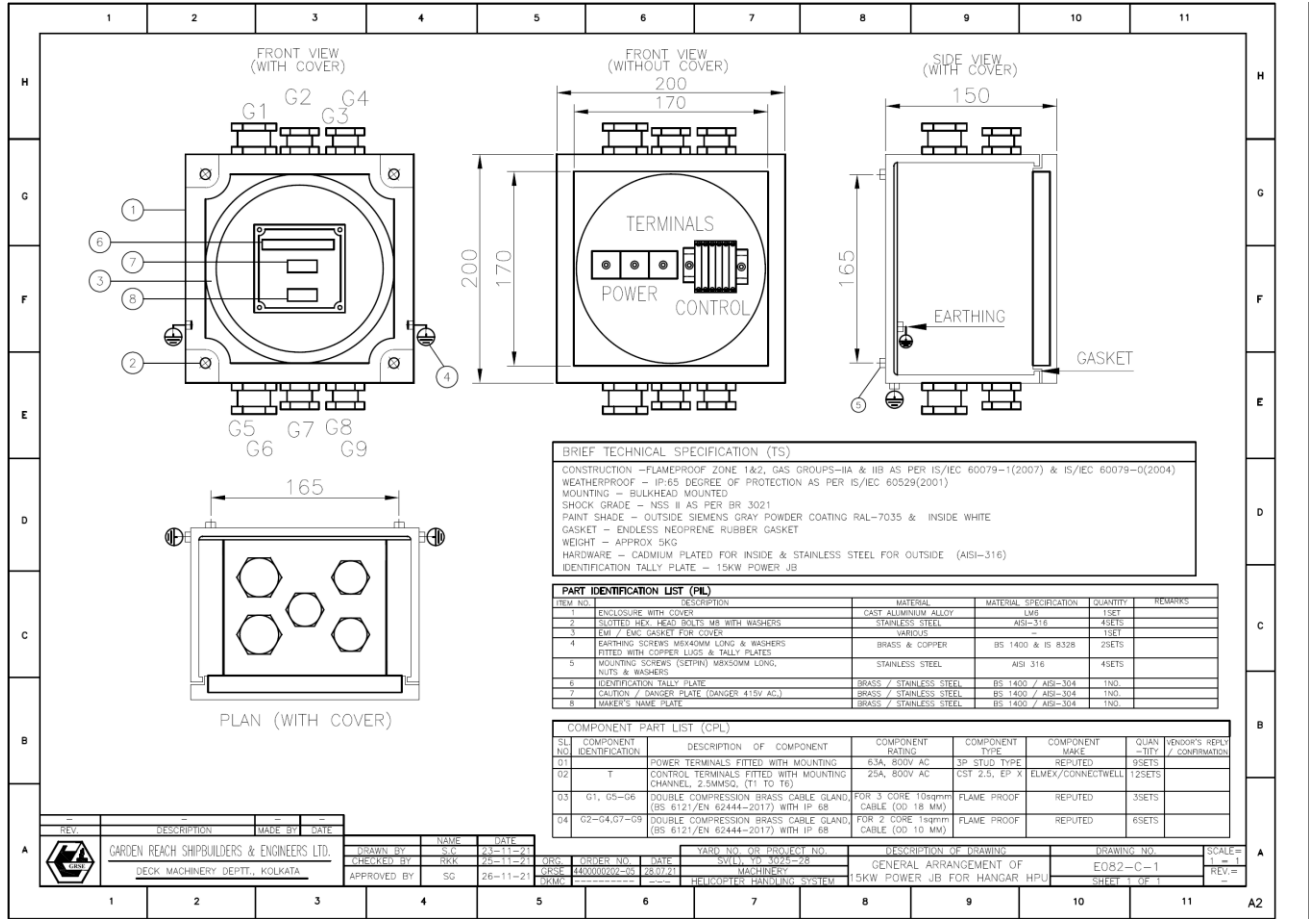


CONNECTION DIAGRAM FOR SCU JB-13 FOR PORT HANGER



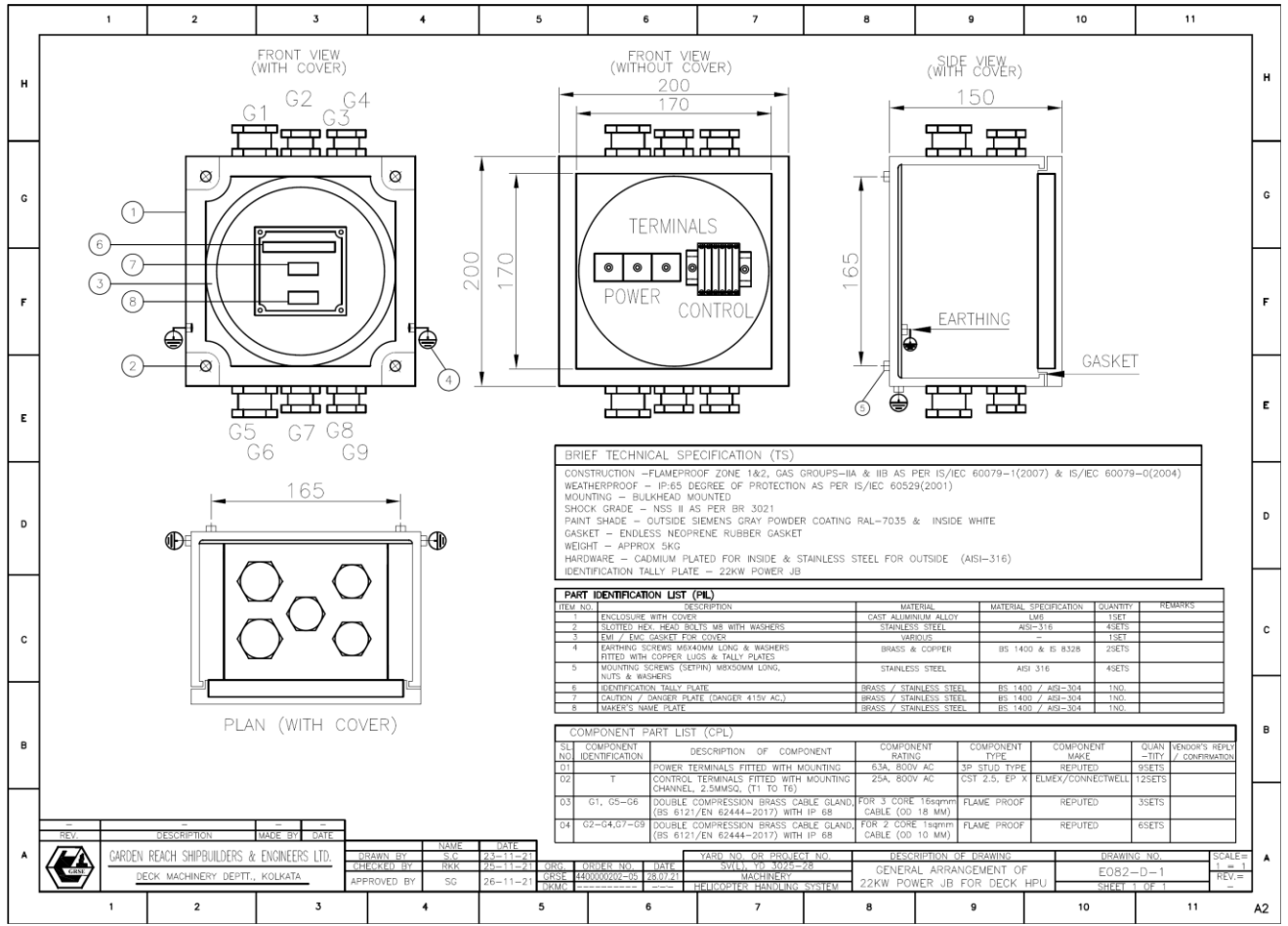
ANNEXURE-X

GENERAL ARRANGEMENT OF 15KW POWER JB FOR HANGAR HPU



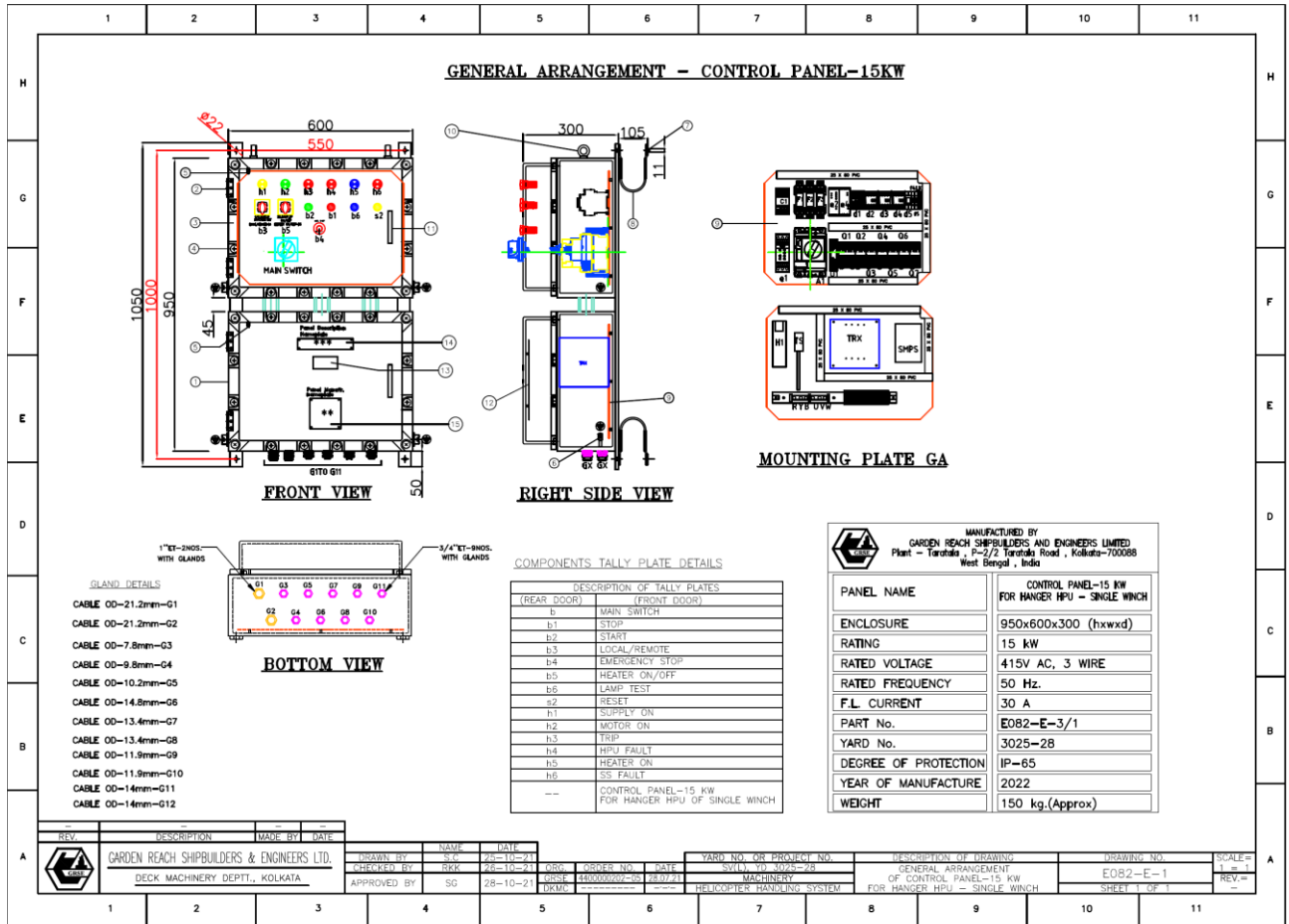
ANNEXURE-XI

GENERAL ARRANGEMENT OF 22 KW POWER JB FOR DECK HPU



ANNEXURE-XII

GENERAL ARRANGEMENT OF CONTROL PANEL -15KW FOR HANGAR HPU - SINGLE WINCH



COMPONENT PART LIST (CPL) – CONTROL PANEL–15KW

ITEM No.	COMPONENT IDENTIFICATION	DESCRIPTION	SPECIFICATION	QTY.	MANUFACTURER	GRSE PART NO.
1		ENCLOSURE: 950mm (H)x600mm (W)x 300mm (D)	FLAME PROOF,IP-65	1	SHYAM/SUDHIR/REPUTED	E082-E-3/1
2	A1	3 Poles,415V,63A CIRCUIT BREAKER WITH HANDLE	LV429632,LV429338	1	SCHNEIDER/REPUTED	E082-E-3/2
3	e1	415V STARTER FOR 15KW MOTOR	3RW40	1	SIEMENS	E082-E-3/3
4	F1,F2,F3	80AMPS SEMICONDUCTOR FUSE WITH BASE	80A	3	SIEMENS/BUSSMANN/GEC	E082-E-3/4
5	C1	3P,3NO,415V,32A CONTRACTOR-24VDC COIL	LC1D32BD	1	SCHNEIDER/REPUTED	E082-E-3/5
6	e2	OV/UV VOLTAGE MONITORING RELAY-3 PHASE	S2 VMR3	1	MINILEC/REPUTED	E082-E-3/6
7	e4	WINDING PROTECTION RELAY	S2-WTR1	1	MINILEC/REPUTED	E082-E-3/7
8	SMPS	3PHASE,24VDC,20AMPS SMPS	50024B	1	RISHAB/REPUTED	E082-E-3/8
9	U1	EMERGENCY SAFETY RELAY	3SK1111AB30	1	SIEMENS	E082-E-3/9
10	LK	NEUTRAL LINK		1	REPUTED	E082-E-3/10
11	TRX	415V/230V,50HZ TRANSFORMER-1500VA	380/240VAC,1500VA	1	LOCAL	E082-E-3/11
12	H1	230VAC PANEL HEATER-60W	230VAC,60W	1	APT/REPUTED	E082-E-3/12
13	TS	25-75 CELCIUS,230VAC THERMOSTAT	230VAC,1NO/NC	1	APT/REPUTED	E082-E-3/13
14	d1	CONTROL RELAY -24VDC COIL,4NO & 2NO+2NC ADD-ON	CA3-KN40BD,LA1-KN22	1	SCHNEIDER	E082-E-3/14
15	d2-d4	CONTROL RELAY -24VDC COIL,2NO+2NC	CA3-KN22BD	3	SCHNEIDER	E082-E-3/15
16	d5	CONTROL RELAY-230VAC COIL,2NO	230VAC RATED,2NO/NC	1	SALZER/SCHNEIDER/REPUTED	E082-E-3/16
17	Q1	TP MCB	16A	1	L&T /SCHNEIDER	E082-E-3/17
18	Q2	DP MCB	10A	1	L&T /SCHNEIDER	E082-E-3/18
19	Q3,Q4	DP MCB	6A	2	L&T /SCHNEIDER	E082-E-3/19
20	Q5	DP MCB	4A	1	L&T /SCHNEIDER	E082-E-3/20
21	Q6	DP MCB	16A	1	L&T /SCHNEIDER	E082-E-3/21
22	Q7	DP MCB	4A	1	L&T /SCHNEIDER	E082-E-3/22
23	h1	24VDC LED INDICATING LAMP-YELLOW	SUPPLY ON	1	TEKNIC/REPUTED	E082-E-3/23
24	h2	24VDC LED INDICATING LAMP-GREEN	MOTOR RUN	1	TEKNIC/REPUTED	E082-E-3/24
25	h3	24VDC LED INDICATING LAMP-RED	TRIP	1	TEKNIC/REPUTED	E082-E-3/25
26	h4	24VDC LED INDICATING LAMP-RED	HPU FAULT	1	TEKNIC/REPUTED	E082-E-3/26
27	h5	24VDC LED INDICATING LAMP-BLUE	HEATER ON	1	TEKNIC/REPUTED	E082-E-3/27
28	h6	24VDC LED INDICATING LAMP-RED	SS FAULT	1	TEKNIC/REPUTED	E082-E-3/28

REV	DESCRIPTION	MADE BY	DATE	NAME	DATE	YARD NO. OR PROJECT NO.	DESCRIPTION OF DRAWING	DRAWING NO.	SCALE		
	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD. DECK MACHINERY DEPT., KOLKATA			DRAWN BY: S.C. CHECKED BY: RPK APPROVED BY: SO	28-10-21 28-10-21 28-10-21	44000002-05 44000002-05 44000002-05	28.07.21 28.07.21 28.07.21	SO/19-2026-28 MACHINERY HELICOPTER HANDLING SYSTEM	COMPONENT PART LIST OF CONTROL PANEL-15 KW FOR HANGER HPU - SINGLE WINCH	E082-E-3 SHEET 1 OF 2	1:1 REV: -

1	2	3	4	5	6	7	8	9	10	11
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COMPONENT PART LIST (CPL) – CONTROL PANEL–15KW

ITEM No.	COMPONENT IDENTIFICATION	DESCRIPTION	SPECIFICATION	QTY.	MANUFACTURER	GRSE PART NO.
29	b1	PUSHBUTTON-RED WITH 1NC	STOP PB	1	ELEMENT-TEKNIC/REPUTED	E082-E-3/29
30	b2	PUSHBUTTON-GREEN WITH 1NO	START PB	1	ELEMENT-TEKNIC/REPUTED	E082-E-3/30
31	b6	PUSHBUTTON-BLUE WITH 1NO	LAMP TEST PB	1	ELEMENT-TEKNIC/REPUTED	E082-E-3/31
32	s2	PUSHBUTTON-YELLOW WITH 1NC	RESET PB	1	ELEMENT-TEKNIC/REPUTED	E082-E-3/32
33	b4	EMERGENCY STOP-RED WITH NC,MUSHROOM TYPE	EMERGENCY STOP	1	ELEMENT-TEKNIC/REPUTED	E082-E-3/33
34	b5	LOCAL/REMOTE,2P,2W WITH CENTER OFF,6A	LOCAL/REMOTE	1	SALZER/REPUTED	E082-E-3/34
35	b5	ON/OFF SWITCH,2P,6A	HEATER ON/OFF	1	SALZER/REPUTED	E082-E-3/35
36		J STRAP SHOCKMOUNT WITH LOCKING PLATE	0262/533-2589	4	RESISTOFLEX	E082-E-3/36
37		16SQMM SCREW TERMINALS		6	ELMEX/REPUTED	E082-E-3/37
38		2.5SQMM SCREW TERMINALS		1LOT	ELMEX/REPUTED	E082-E-3/38
39	G1-G12	DOUBLE COMPRESSION BRASS CABLE GLAND (BS 6121/EN 62444-2017)		12	SHYAM/SUDHIR/REPUTED	E082-E-3/39

REV	DESCRIPTION	MADE BY	DATE	NAME	DATE	YARD NO. OR PROJECT NO.	DESCRIPTION OF DRAWING	DRAWING NO.	SCALE		
	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD. DECK MACHINERY DEPT., KOLKATA			DRAWN BY: S.C. CHECKED BY: RPK APPROVED BY: SO	28-10-21 28-10-21 28-10-21	44000002-05 44000002-05 44000002-05	28.07.21 28.07.21 28.07.21	SO/19-2026-28 MACHINERY HELICOPTER HANDLING SYSTEM	COMPONENT PART LIST OF CONTROL PANEL-15 KW FOR HANGER HPU - SINGLE WINCH	E082-E-3 SHEET 2 OF 2	1:1 REV: -

1	2	3	4	5	6	7	8	9	10	11
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PART IDENTIFICATION LIST (PIL) – CONTROL PANEL–15KW

ITEM NO.	DESCRIPTION	MATERIAL	QUANTITY
1	1NO. ENCLOSURE WITH 2NOS. DOOR 8MM THICK	CAST ALUMINIUM ALLOY LM6	1SET
2	HINGES	CAST ALUMINIUM ALLOY LM6	6SETS
3	EMI / EMC GASKETS, MIL STD 461F, WITHOUT USING METALIC GASKETS, INSIDE 2NOS. DOOR	VARIOUS	3SETS
4	SOCKET HEAD CAP SCREWS / ALLEN SCREWS M8, NUTS WITH WASHERS	STAINLESS STEEL	44SETS
5	OPEN-DOOR STOPPERS	STAINLESS STEEL	2SETS
6	EARTHING BOLTS M6X45MM LONG, NUTS & WASHERS FITTED WITH COPPER LUGS & TALLY PLATES	BRASS & COPPER	2SETS
7	40MM LONG M10 SCREWS (SETPIN), NUTS & WASHERS	STAINLESS STEEL AISI 316	4SETS
8	SHOCK MOUNTS & LOCKING PLATES, N.S. NO. SM 0262 / 539 – 6793 & LP 0262 / 533 – 2572	SPRING STEEL	4SETS
9	2NOS. COMPONENT MOUNTING PLATES 3MM THICK WITH M8 BOLTS, NUTS & WASHERS	STAINLESS STEEL	2SETS
10	LIFTING LUG / HOOK	CAST ALUMINIUM ALLOY LM6	2NOS.
11	HANDLE	CAST ALUMINIUM ALLOY LM6	2NOS.
12	CIRCUIT DIAGRAM PLATE	BRASS	1NO.
13	CAUTION / DANGER PLATE	BRASS	1NO.
14	EQUIPMENT NAMEPLATE DETAILS	BRASS	1NO.
15	MANUFACTURER'S NAME PLATE	BRASS	1NO.

REV	DESCRIPTION	MADE BY	DATE	NAME	DATE	YARD NO. OR PROJECT NO.	DESCRIPTION OF DRAWING	DRAWING NO.	SCALE
	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.								
	DECK MACHINERY DEPT., KOLKATA								
1	2	3	4	5	6	7	8	9	10

BRIEF TECHNICAL SPECIFICATION (TS) – CONTROL PANEL–15KW

A. System Parameters :

1) Rated incoming voltage	3 PH 415V, 50Hz
2) Rated control voltage	24V DC
3) Operating temperature	70°C (Max)
4) Ambient temperature	0–55°C
5) Quantity	1 Lot
6) Earthing system	Power earthing (PE) shall be connected to power earth on client end.
7) Power earth bus (type/size)	1 No. INSIDE & 2 Nos. OUTSIDE BRASS (M6) SCREWS WITH 2 Nos. PLAIN WASHERS

C. Control Circuit Wiring :

1) Flexible multi-stranded Copper conductor	LFH grade 1.1KV Rated Cable Coding to be followed for internal wiring.
2) Wiring channel to be provided for internal wiring and field wiring	Yes
3) All wiring standard with lugs/Gimp contact on both end	Yes

D. Terminal Arrangments :

1) Main power cable entry	From bottom
2) Power terminal	Stud Type
3) Control terminal	2.5sqmm.– Screw Type

B. Construction :

1) Type of panel	FLAMEPROOF – ZONE 1&2, GAS GROUPS – IIA & IIB AS PER IS/IEC 60079–1(2007) & IS/IEC 60079–0(2004)
2) Material	Die Cast Aluminium Alloy LM6
3) Hardware	Stainless Steel
4) Gasket	Endless Neoprene Rubber Gasket
5) Mounting	Bulkhead mounted
6) Dimention	Specified in GA
7) Lifting eyebolts	Provided for 15KW
8) Access	Front access with door
9) Locking arrangement	Provided
10) Cable glands	Provided
11) Degree of protection	IP 65 AS PER IS/IEC 60529(2001) WEATHERPROOF
12) Paint	Powder coated
13) Paint shade	RAL 7035 /Dark Admiralty Gray Shade No: 632 as per IS:5
14) Material	DIE CAST ALUMINIUM ALLOY LM6 FlameProof
15) Weight	Approx.150 Kg.
16) EMI/EMC Compliance	MIL–STD–461–F
17) ENVIRONMENTAL TESTING	JSS55555
18) GOVERNING SPECIFICATION	AS PER EED–Q–071(R4)

NOTE–ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED

DIMENSION TOLERANCE IS +/-5mm.

REV	DESCRIPTION	MADE BY	DATE	NAME	DATE	YARD NO. OR PROJECT NO.	DESCRIPTION OF DRAWING	DRAWING NO.	SCALE
	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.								
	DECK MACHINERY DEPT., KOLKATA								

ANNEXURE-XIII

GENERAL ARRANGEMENT OF CONTROL PANEL -22KW FOR DECK HPU - DUAL WINCH

GENERAL ARRANGEMENT - CONTROL PANEL-22KW

FRONT VIEW **RIGHT SIDE VIEW** **MOUNTING PLATE GA**

GLAND DETAILS

CABLE OD-24.9mm-G1
CABLE OD-21.2mm-G2
CABLE OD-7.8mm-G3
CABLE OD-9.8mm-G4
CABLE OD-10.2mm-G5
CABLE OD-14.8mm-G6
CABLE OD-13.4mm-G7
CABLE OD-13.4mm-G8
CABLE OD-14mm-G9
CABLE OD-14mm-G10
CABLE OD-14mm-G11

COMPONENTS TALLY PLATE DETAILS

DESCRIPTION OF TALLY PLATES	
(REAR DOOR)	(FRONT DOOR)
b	MAIN SWITCH
b1	STOP
b2	START
b3	LOCAL/REMOTE
b4	EMERGENCY STOP
b5	HEATER ON/OFF
b6	LAMP TEST
e2	RESET
h1	SUPPLY ON
h2	MOTOR ON
h3	TRIP
h4	HPU FAULT
h5	HEATER ON
h6	SS FAULT
--	CONTROL PANEL-22 KW FOR DECK HPU - DUAL WINCH

MANUFACTURED BY
GARDEN REACH SHIPBUILDERS AND ENGINEERS LIMITED
Plant - Taratala, P-2/2 Taratala Road, Kolkata-700088
West Bengal, India

PANEL NAME	CONTROL PANEL-15 KW FOR HANGER HPU - SINGLE WINCH
ENCLOSURE	950x600x300 (hxxwxd)
RATING	22 kW
RATED VOLTAGE	415V AC, 3 WIRE
RATED FREQUENCY	50 Hz.
F.L. CURRENT	43 A
PART No.	E082-F-3/1
YARD No.	3025-28
DEGREE OF PROTECTION	IP-65
YEAR OF MANUFACTURE	2022
WEIGHT	150 kg.(Approx)

GLAND DETAILS

1"ET-290S WITH GLANDS 3/4"ET-290S WITH GLANDS

BOTTOM VIEW

REV.	DESCRIPTION	MADE BY	DATE	NAME	DATE	YARD NO. OR PROJECT NO.	DESCRIPTION OF DRAWING	DRAWING NO.	SCALE
	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD. DECK MACHINERY DEPTT., KOLKATA.			DRAWN BY: RKK CHECKED BY: RKK APPROVED BY: SG	25-10-21 26-10-21 28-10-21	YARD NO. 3025-28 SV(L) YD 3025-28	GENERAL ARRANGEMENT OF CONTROL PANEL-22 KW FOR DECK HPU - DUAL WINCH	E082-F-1	1 = 1

COMPONENT PART LIST (CPL) - CONTROL PANEL-22KW

ITEM No.	COMPONENT IDENTIFICATION	DESCRIPTION	SPECIFICATION	QTY.	MANUFACTURER	GRSE PART NO.
1		ENCLOSURE: 950mm (H)x600mm (W)x 300mm (D)	FLAMEPROOF,IP-65	1	SHYAM/SUDHIR/REPUTED	E082-F-3/1
2	A1	3 Poles,415V,63A CIRCUIT BREAKER WITH HANDLE	LV429632,LV429338	1	SCHNEIDER/REPUTED	E082-F-3/2
3	e1	415V SOFTSTARTER FOR 22KW MOTOR	3RW40	1	SIEMENS	E082-F-3/3
4	F1,F2,F3	100AMPS SEMICONDUCTOR FUSE WITH BASE	100A	3	SIEMENS/BUSSMANN/GEC	E082-F-3/4
5	C1	3P,3NO,415V,40A CONTRACTOR-24VDC COIL	LC1D40ABD	1	SCHNEIDER/REPUTED	E082-F-3/5
6	e2	OV/UV VOLTAGE MONITORING RELAY-3 PHASE	S2 VMR3	1	MINILEC/REPUTED	E082-F-3/6
7	e4	WINDING PROTECTION RELAY	ST-WTR1	1	MINILEC/REPUTED	E082-F-3/7
8	SMPS	3PHASE,24VDC,20AMPS SMPS	500248	1	RISHAB/REPUTED	E082-F-3/8
9	U1	EMERGENCY SAFETY RELAY	3SK11111AB30	1	SIEMENS	E082-F-3/9
10	LK	NEUTRAL LINK		1	REPUTED	E082-F-3/10
11	TRX	415V/230V,50HZ TRANSFORMER-1500VA	380/240VAC,1500VA	1	LOCAL	E082-F-3/11
12	H1	230VAC PANEL HEATER-60W	230VAC,60W	1	APT/REPUTED	E082-F-3/12
13	TS	25-75 CELCIUS,230VAC THERMOSTAT	230VAC,1NO/NC	1	APT/REPUTED	E082-F-3/13
14	d1	CONTROL RELAY -24VDC COIL,4NO & 2NO+2NC ADD-ON	CA3-KN40BD,LA1-KN22	1	SCHNEIDER	E082-F-3/14
15	d2-d4	CONTROL RELAY -24VDC COIL,2NO+2NC	CA3-KN22BD	3	SCHNEIDER	E082-F-3/15
16	d5	CONTROL RELAY-230VAC COIL,2NO		1	SALZER/SCHNEIDER/REPUTED	E082-F-3/16
17	Q1	TP MCB	16A	1	L&T /SCHNEIDER	E082-F-3/17
18	Q2	DP MCB	10A	1	L&T /SCHNEIDER	E082-F-3/18
19	Q3,Q4	DP MCB	2A	2	L&T /SCHNEIDER	E082-F-3/19
20	Q5	DP MCB	6A	1	L&T /SCHNEIDER	E082-F-3/20
21	Q6	DP MCB	16A	1	L&T /SCHNEIDER	E082-F-3/21
22	Q7	DP MCB	4A	1	L&T /SCHNEIDER	E082-F-3/22
23	h1	24VDC LED INDICATING LAMP-YELLOW	SUPPLY ON	1	TEKNIC/REPUTED	E082-F-3/23
24	h2	24VDC LED INDICATING LAMP-GREEN	MOTOR RUN	1	TEKNIC/REPUTED	E082-F-3/24
25	h3	24VDC LED INDICATING LAMP-RED	TRIP	1	TEKNIC/REPUTED	E082-F-3/25
26	h4	24VDC LED INDICATING LAMP-RED	HPU FAULT	1	TEKNIC/REPUTED	E082-F-3/26
27	h5	24VDC LED INDICATING LAMP-BLUE	HEATER ON	1	TEKNIC/REPUTED	E082-F-3/27
28	h6	24VDC LED INDICATING LAMP-RED	SS FAULT	1	TEKNIC/REPUTED	E082-F-3/28

REV.	DESCRIPTION	MADE BY	DATE	NAME	DATE	YARD NO. OR PROJECT NO.	DESCRIPTION OF DRAWING	DRAWING NO.	SCALE
	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD. DECK MACHINERY DEPTT., KOLKATA.			DRAWN BY: RKK CHECKED BY: RKK APPROVED BY: SG	25-10-21 26-10-21 28-10-21	YARD NO. 3025-28 SV(L) YD 3025-28	COMPONENT PART LIST OF CONTROL PANEL-22 KW FOR DECK HPU - DUAL WINCH	E082-F-3	1 = 1

COMPONENT PART LIST (CPL) – CONTROL PANEL–22KW

ITEM No.	COMPONENT IDENTIFICATION	DESCRIPTION	SPECIFICATION	QTY.	MANUFACTURER	GRSE PART NO.
29	b1	PUSHBUTTON–RED WITH 1NC	STOP PB	1	ELEMENT–TEKNIC/REPUTED	E082–F–3/29
30	b2	PUSHBUTTON–GREEN WITH 1NO	START PB	1	ELEMENT–TEKNIC/REPUTED	E082–F–3/30
31	b6	PUSHBUTTON–BLUE WITH 1NO	LAMP TEST PB	1	ELEMENT–TEKNIC/REPUTED	E082–F–3/31
32	s2	PUSHBUTTON–YELLOW WITH 1NC	RESET PB	1	ELEMENT–TEKNIC/REPUTED	E082–F–3/32
33	b4	EMERGENCY STOP–RED WITH NC,MUSHROOM TYPE	EMERGENCY STOP	1	ELEMENT–TEKNIC/REPUTED	E082–F–3/33
34	b3	LOCAL/REMOTE,2P,2W WITH CENTER OFF,6A	LOCAL/REMOTE	1	SALZER/REPUTED	E082–F–3/34
35	b5	ON/OFF SWITCH,2P,6A	HEATER ON/OFF	1	SALZER/REPUTED	E082–F–3/35
36		J STRAP SHOCKMOUNT WITH LOCKING PLATE	0262/533–2589	4	RESISTOFLEX	E082–F–3/36
37		16SQMM SCREW TERMINALS		6	ELMEX/REPUTED	E082–F–3/37
38		2.5SQMM SCREW TERMINALS		1LOT	ELMEX/REPUTED	E082–F–3/38
39	G1–G11	DOUBLE COMPRESSION BRASS CABLE GLAND (BS 6121/EN 62444–2017)		11	SHYAM/SUDHIR/REPUTED	E082–F–3/39

REV	DESCRIPTION	MADE BY	DATE	DRAWN BY	NAME	DATE	YARN NO. OR PROJECT NO.	DESCRIPTION OF DRAWING	DRAWING NO.	SCALE
	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.			S.G.	S.G.	25-10-21	SVCL, YD 3024-28	COMPONENT PART LIST	E082-F-3	1
	DECK MACHINERY DEPT., KOLKATA			RKK	RKK	25-10-21	MACHINERY	OF CONTROL PANEL-22 KW	SHEET 2 OF 2	REV#
				SG	SG	28-10-21	HELIICOPTER HANDLING SYSTEM	FOR DECK HPU - DUAL WINCH		

PART IDENTIFICATION LIST (PIL) – CONTROL PANEL–22KW

ITEM NO.	DESCRIPTION	MATERIAL	QUANTITY
1	1NO. ENCLOSURE WITH 2NOS. DOOR 8MM THICK	CAST ALUMINIUM ALLOY LM6	1SET
2	HINGES	CAST ALUMINIUM ALLOY LM6	6SETS
3	EMI / EMC GASKETS, MIL STD 461F, WITHOUT USING METALIC GASKETS, INSIDE 2NOS. DOOR	VARIOUS	3SETS
4	SOCKET HEAD CAP SCREWS / ALLEN SCREWS M8, NUTS WITH WASHERS	STAINLESS STEEL	44SETS
5	OPEN–DOOR STOPPERS	STAINLESS STEEL	2SETS
6	EARTHING BOLTS M6X45MM LONG, NUTS & WASHERS FITTED WITH COPPER LUGS & TALLY PLATES	BRASS & COPPER	2SETS
7	40MM LONG M10 SCREWS (SETPIN), NUTS & WASHERS	STAINLESS STEEL AISI 316	4SETS
8	SHOCK MOUNTS & LOCKING PLATES, N.S. NO. SM 0262 / 539 – 6793 & LP 0262 / 533 – 2572	SPRING STEEL	4SETS
9	2NOS. COMPONENT MOUNTING PLATES 3MM THICK WITH M8 BOLTS, NUTS & WASHERS	STAINLESS STEEL	2SETS
10	LIFTING LUG / HOOK	CAST ALUMINIUM ALLOY LM6	2NOS.
11	HANDLE	CAST ALUMINIUM ALLOY LM6	2NOS.
12	CIRCUIT DIAGRAM PLATE	BRASS	1NO.
13	CAUTION / DANGER PLATE	BRASS	1NO.
14	EQUIPMENT NAMEPLATE DETAILS	BRASS	1NO.
15	MANUFACTURER'S NAME PLATE	BRASS	1NO.

REV	DESCRIPTION	MADE BY	DATE	DRAWN BY	NAME	DATE	YARN NO. OR PROJECT NO.	DESCRIPTION OF DRAWING	DRAWING NO.	SCALE
	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.			S.G.	S.G.	25-10-21	SVCL, YD 3024-28	PART IDENTIFICATION LIST	E082-F-2	1
	DECK MACHINERY DEPT., KOLKATA			RKK	RKK	25-10-21	MACHINERY	OF CONTROL PANEL-22 KW	SHEET 1 OF 1	REV#
				SG	SG	28-10-21	HELIICOPTER HANDLING SYSTEM	FOR DECK HPU - DUAL WINCH		

BRIEF TECHNICAL SPECIFICATION (TS) – CONTROL PANEL–22KW

A. System Parameters :	
1) Rated incoming voltage	3 PH 415V, 50Hz
2) Rated control voltage	24V DC
3) Operating temperature	70°C (Max)
4) Ambient temperature	0–55°C
5) Quantity	1 Lot
6) Earthing system	Power earthing (PE) shall be connected to power earth on client end.
7) Power earth bus (type/size)	1 No. INSIDE & 2 Nos. OUTSIDE BRASS (M6) SCREWS WITH 2 Nos. PLAIN WASHERS
C. Control Circuit Wiring :	
1) Flexible multi-stranded Copper conductor	LFH grade 1.1KV Rated Cable Coding to be followed for internal wiring.
2) Wiring channel to be provided for internal wiring and field wiring	Yes
3) All wiring standard with lugs/Gimp contact on both end	Yes
D. Terminal Arrangments :	
1) Main power cable entry	From bottom
2) Power terminal	Stud Type
3) Control terminal	2.5sqmm.– Screw Type

B. Construction :	
1) Type of panel	FLAMEPROOF – ZONE 1&2, GAS GROUPS – IIA & IIB AS PER IS/IEC 60079–1(2007) & IS/IEC 60079–0(2004)
2) Material	Die Cast Aluminium Alloy LM6
3) Hardware	Stainless Steel
4) Gasket	Endless Neoprene Rubber Gasket
5) Mounting	Bulkhead mounted
6) Dimention	Specified in GA
7) Lifting eyebolts	Provided for 22KW
8) Access	Front access with door
9) Locking arrangement	Provided
10) Cable glands	Provided
11) Degree of protection	IP 65 AS PER IS/IEC 60529(2001) WEATHERPROOF
12) Paint	Powder coated
13) Paint shade	RAL 7035 /Dark Admiralty Gray Shade No: 632 as per IS:5
14) Material	DIE CAST ALUMINIUM ALLOY LM6 FlameProof
15) Weight	Approx.150 Kg.
16) EMI/EMC Compliance	MIL–STD–461–F
17) ENVIRONMENTAL TESTING	JSS55555
18) GOVERNING SPECIFICATION	AS PER EED–Q–071(R4)

NOTE–ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED
DIMENSION TOLERANCE IS +/-5mm.

REV.	DESCRIPTION	MADE BY	DATE	DRAWN BY	NAME	DATE	YARD NO. OR PROJECT NO.	DESCRIPTION OF DRAWING	DRAWING NO.	SCALE
				S.C	S.C	25-10-21	SVLH 100 5065-25	BRIEF TECHNICAL SPECIFICATION OF CONTROL PANEL-22 KW	E082-F-0	1 = 1
				CHKD BY	MRK	28-10-21	4400000207-08	MACHINERY		
				APPROVED BY	SG	28-10-21	HELIICOPTER HANDLING SYSTEM	FOR DECK HPU – DUAL WINCH	SHEET 1 OF 1	

ANNEXURE-XIV

GENERAL TERMS & CONDITIONS OF TENDER

- 1) **DELIVERY:** 15 KW & 22KW Motor JB, Upgradation of 15 KW & 22KW FLP Soft Starter for SVL RLHTS Yd-3025-28, B& D spares for P15B of RLHTS Project, OBS along with Electrical connection of RLHTS system, B& D spares for Anchor Capstan and Mooring Capstan of SVL Yd-3025-28 project delivery schedule will be as follows:
- i) Upgradation of 15 KW and 22KW FLP soft starters, OBS along with Electrical connection of RLHTS system at GRSE and HAT On Board Ship SL No: - 1 to 172 and 285-286 shall be delivered within 03 months from the date of P.O.,
 - ii) B & D Spares of RLHTS system for MDL YD-12704-07 SL. No:- 173 to 207 shall be delivered within 03 months from the date of P.O.,
 - iii) B & D Spares of Anchor Capstan of SVL YD-3025-28 Sl. No:- 208 to 255 shall be delivered within 02 months from the date of P.O.,
 - iv) B & D Spares of Mooring Capstan of SVL YD-3025-28 Sl. No:- 256 to 284 shall be delivered within 02 months from the date of P.O.
- 2) **PRICE:** - Price shall be firm & fixed till full execution of order and F.O.R. GRSE Store at Kolkata basis. Freight and Insurance charges shall be paid by the Supplier.
- 3) **DOCUMENTS TO BE SUBMITTED BY THE VENDOR AT VARIOUS STAGES OF EXECUTION / MANUFACTURING:**
- a) Inspection Call.
 - b) Delivery Challan.
 - c) Inspection Reports of Items carried out at vendor's premises by authorized inspection agency with all correlated reports
 - d) Guarantee/Warranty Certificate.
 - e) Billing - Along with bill, vendor shall furnish following documents:-
 - (i) Gate stamped Delivery Challan duly received by store.
 - (ii) One copy of each of the Documents, as indicated (a) to (d) above.
 - (iii) ICGRN in case of inspection by GRSE.
- 4) **PAYMENT TERMS:**
- A. For Material:**
- i. 90% of order value will be paid through ECS/NEFT against receipt and acceptance of material and submission of ink signed invoice duly accompanied with Pre-dispatch Inspection clearance Certificate, Guarantee Certificate & Packing List and Receipted copy of challan /LR . (All in 03 copies).
 - ii. Balance 10% payment will be made through ECS/NEFT on submission of bill supported with clear receipt inspection certificate (ICGRN) with performance Bank Guarantee (PBG) of 3% of order value as per GRSE format, which shall remain valid till expiry of the guarantee period or balance 10% will be made after warrantee period provided their remains no pending liabilities.
- B. For Service:**
- 100% against ink signed invoice supported with work completion certificate duly certified by GRSE for the respective services.
- 5) **LIQUIDATED DAMAGE:**
- a) LD @ 0.25% per week of Delay or part thereof subject to maximum of 1% of the total order value will be recovered in case of delay in submission of Binding data, Drawing and QAP to the concerned authority for approval.
 - b) For delay in completion of work, Liquidated Damage will be imposed @ ½ % per week or part thereof on the undelivered portion of the material, subject to max 5% of the total value of the order.
- 6) **RISK PURCHASE:**

In case the supplier fails to deliver the equipment beyond 04 weeks from the stipulated delivery date, GRSE reserves the right to cancel the order at its discretion and procure the equipment from alternative sources. Difference in procured cost if any, will be recovered from any of his pending bills or through Debit Note.

- 7) **TAXES & DUTIES:** Vendors have to indicate HSN Code and GST % rate along with their offer.
- 8) YOU WILL HAVE TO SUBMIT BID IN TWO PART (TECHNO-COMMERCIAL BID & PRICE BID) IN E-PROCUREMENT MODE WHERE ALL DATA SHEET WILL BE AVAILABLE FOR DOWNLOAD, NEED TO FILL UP THE REQUIRED FIELD AND UPLOAD THE FILE. PRICE BID NEED TO BE FILLED UP IN GIVEN PRICE BID DATA SHEET ONLY, **NO OTHER ATTACHMENT REGARDING PRICE WILL BE ALLOWED IF SO THEN OFFER WILL BE TREATED AS CANCELLED.**
- 9) **VALIDITY OF OFFER:**
Your offer should remain at least valid for a period of 3 (Three) months from the due date of the submission of tender.
- 10) **TENDER FEE:** Tender Fee will be **500/-** (Five Hundred)(non- refundable). From Nationalized Bank through DD/PO in favor of "Garden Reach Shipbuilders & Engineers Ltd." payable at Kolkata. Vendor need to submit tender fees as detailed in prescribed format in e-procurement commercial data sheet and send the DD/PO to Deck Machinery Department, GRSE Taratala Unit, Address to DGM (DKMC) before due date of submission. Please scan the Draft copy and attach to General Documents part in e-procurement. Non- submission of value of tender documents may lead to offer rejection. SSI Units registered under single point registration with NSIC will be exempted from Tender Fee Deposit on submission of valid NSIC single point registration certificate for particular product under tender.
- 11) **EARNEST MONEY DEPOSIT (INTEREST FREE):**
- a) EMD amount of Rs.50,000 /- (Rupees Eighty Thousand only) (Interest free) issued from Nationalized Bank through DD / PO / Bank Guarantee (as per format and should valid till minimum six months from tender due date) in favour of Garden Reach Shipbuilders & Engineers Limited. Vendor need to submit EMD as detailed in prescribed format in e-procurement commercial data sheet and send the DD / PO to Manager(Project Management - DKMC), GRSE Taratala Unit and BG directly to General Manager (Finance) at GRSE Main, 43/46, Garden Reach Road, Kolkata – 700 – 024 before due date submission. Please scan the copy of DD/PO/BG and attach to General Documents part in e-procurement. Non-submission of EMD will lead to offer rejection. SSI Units registered under single point registration with NSIC will be exempted from Earnest Money Deposit on submission of valid NSIC single point registration certificate for particular product under tender.
- b) SSI unit registered under single point NSIC may be exempted from the earnest money deposit. However, this will be as per guidelines circulated by D.P.E. from time to time. A copy of the NSIC certificate with annexure is to be scanned and enclosed with the technical bid and that the list of activities contained in the NSIC certificate should cover the activity for which tender is issued and to be confirmed in Techno-Commercial part of offer.
- c) EMD of unsuccessful bidders will be refunded/ returned within 30 days of finalization of order on surrendering the original copy of money receipt with an application by bidders in TNC/CNC will be returned within 30 days from the date of submission of original copy of money receipt with an application by the bidder. EMD, if not claimed within 1 year from the date of notification will be forfeited.
- 12) **FORFEITURE OF EMD:**
The EMD may be forfeited, if
- (a) The bidder withdraws the bid after opening during the period of validity
- (b) The bidder does not accept the correction of error in bid price, if any.
- (c) The successful bidder fails within the specified time limit to:
- (i) Acknowledge the LOA / Order
 - (ii) Furnish the required Security Deposit
 - (iii) Non- performance of the contract by the Contractor.

- 13) **Indemnification:** The vendor & their employees, licenses, agents or Sub- Supplies/ sub- contractor, while on site of the GRSE for the purpose of this contract, indemnifies GRSE against direct damage and /or injury to the property and /or the person of GRSE or that of GRSE employees, agents, sub-contractors/ suppliers occurring and to the extent of negligence caused by you, your employees, licenses, agents or sub-contractor by making good such damages to the property, or compensating personal injury and total liability for such damages or injury shall be as mutually discussed and agreed to.
- 14) **SECURITY DEPOSIT (Interest free):** (a) Successful bidder will deposit an amount equivalent to 10% of the total Order value as interest free Security deposit in the form of Pay order/Demand Draft/Bank Guarantee (as per GRSE format) on any Scheduled National Bank other than Cooperative Bank at Kolkata, duly crossed favoring GRSE Ltd., within 30 days of the receipt date of LOI/P.O.
(b) If Security deposit is submitted in the form of Bank guarantee, then same to be forwarded directly to our General Manager (Finance) in Banker's sealed envelope failing which same will not be accepted. Details of Bank guarantee should also be confirmed to Ordering Cell.
(c) Security Deposit will be retained till completion of the contract and will be released provided a Performance bank guarantee is furnished by the bidder against 'warrantee' two months prior to completion of the of the contract or the BG for security deposit be extended till the completion of the warrantee period.
(d) Bank Guarantee shall be on Non-judicial stamp paper of Rs. 50/- each from a Nationalized Bank as per GRSE approved format and are to be submitted/forwarded by the Bank in a sealed cover directly to GM(F), GRSE Main Works at 43/46 Garden Reach Road) Kolkata-24.
- 15) **Micro & Small Enterprise: -**
MSEs will also be entitled for following benefits subject to they have to provide Enterprise Memorandum (EM Part-II)/ NSIC Certificate/ Udyog Aadhar Memorandum (UAM) for manufactures/ supply of concerned Equipment / items, along with the offer:-
(a) Tender documents will be issued at free of cost.
(b) Payment of Earnest Money will be exempted.
- 16) **Calculation of L-1 Bidder:**
NOTE: L1 bidder will be considered as per following:-
i) Upgradation of 15 KW and 22KW FLP soft starters, OBS along with Electrical connection of RLHTS system at GRSE and HAT On Board Ship SL No:- 1 to 172 and 285-286.
ii) B & D Spares of RLHTS system for MDL YD-12704-07 SL. No:- 173 to 207.
iii) B & D Spares of Anchor Capstan of SVL YD-3025-28 Sl. No:- 208 to 255.
iv) B & D Spares of Mooring Capstan of SVL YD-3025-28 Sl. No:- 256 to 284.
- 17) **Abnormally Low Quotes:**
a) No Additional Security deposit to be charged from the bidders in case of Abnormally Low Bids for all the upcoming tenders. In such case the quoted price to be analyzed w.r.t the tender requirement and if the bidder fails to justify their quoted rate, the obtained L1 quote may be rejected and the next quote will be considered as L1 rate to avoid re-tendering.
b) In case the price of L-1 bidder is found to quote unreasonably low /or express desires to withdraw from the tender then such bid will be cancelled and punitive action will be taken in line provision of Bid Security Declaration.
However, in case the L1 bidder agrees to take-up the job with such unreasonable low quote, lower by 30% or more than estimate and also if the difference in price to be analyzed w.r.t tender requirement and if the L1 bidder fails to justify their quoted rate, the obtained L1 quote will be rejected & next quote will be considered as L1.
- 18) When an order is issued to a Vendor/ Contractor for execution of a particular job, the Contractor shall not subcontract the job/a part of the job without approval from the employer and without intimation of the name and credentials of the said subcontractor.
- 19) **SUBMISSION OF DRAWINGS AND QAP:** Vendor have to submit the Binding data, Drawings and Quality Assurance plan for 15 KW & 22KW Motor for JB, Upgradation of Soft Starter for SVL RLHTS Yd-3025-28, B& D spares for P15B of RLHTS Project, B& D spares for Anchor Capstan and Mooring Capstan of SVL Yd-3025-28 to GRSE & IRS within 07 days from the date of Order/LOI. The drawing and QAP shall be approved by Inspection agency prior to commencement of the Bulk Production.

- 20) **Inspection Authority will be IRS** for 15 KW & 22KW Motor for JB, Upgradation of Soft Starter for SVL RLHTS Yd-3025-28, B& D spares for P15B of RLHTS Project, B& D spares for Anchor Capstan and Mooring Capstan of SVL Yd-3025-28 will be scrutinized by **IRS**. OEM (Control Panel Manufacturer) is to forward drawings and documents simultaneously to Naval Headquarters, IRS and GRSE. Comments of Inspection Authority IRS and GRSE will be forwarded to OEM for incorporation of final documents. The amended drawing will be forwarded to GRSE for final approval which will be sent to IRS for production/Inspection. **Inspection Charges shall be borne by GRSE for accepted material only. Inspection call shall be forwarded by the vendor well in advance before stipulated delivery period.**
- 21) **INDIVIDUALITY OF CONTRACT:** This Contract should be treated as an individual contract and should not be related with other orders with GRSE in respect of progress of work or payment.
- 22) **SECRECY OF INFORMATION:** All drawings/documents are confidential in nature. The contractor should not copy any part of the drawing and return the drawings on completion of job/along with the offer.
- 23) **VENDOR REGISTRATION:** The bidders, if registered with the vendor registration cell of GRSE, have to indicate Supplier's SAP codes. Others, who are not registered vendor of GRSE, have to get registered, if selected.
- 24) **FORCE MAJEURE:/ ARBITRATION:** GRSE's standard arbitration & Force Majeure Clauses are to be accepted by you.
- 25) Jurisdiction, Litigation, if any pertaining to this contract will come under the jurisdiction of High Court at Kolkata.
- 26) As a general rule, price negotiation with L1 vendor(s) will not be entered into as far as possible unless warranted by unreasonable price quoted, in the opinion of GRSE.
- 27) **PATENT RIGHT:** GRSE shall be completely absolved of any responsibility towards any infringement of Patent Right etc i.e. a clear and quite possession of goods should take place with the passing of title on execution of the order.
- 28) **GUARANTEE/WARRANTEE:** *The Equipment /items supplied shall be guaranteed / warranted for satisfactory performance for the period of 36 months from the date of commissioning/using of the respective ship or 48 months from the date of supply of equipment /items/materials whichever is later.* Whenever supply of material is made in more than one lot guarantee/warranty shall commence from the date of supply of last lot of material. You cannot absolve your responsibilities for warrantee of materials even though it is inspected by & approved by the Inspection Authorities. During the Guarantee period, all defects arising out of improper design, defective material and faulty workmanship shall be rectified by repairing or replacing part or whole of the Equipment, as necessary, on free of charges basis by you. If defects are not remedied within a reasonable/stipulated time, GRSE may proceed to rectify the defects at the supplier's risk and cost, but without prejudice to GRSE's rights under the Contract.
- 29) **EXTENSION OF GUARANTEE:** If GRSE desires to extend the contractual guarantee period, then beyond standard guarantee period the extension charges shall be available @1 % per annum of total basic price of main equipment's & OBS without tax.
- 30) **PERFORMANCE GUARANTEE:** On completion of the order, you will have to submit the Equipment Performance Bank Guarantee from a reputed Nationalized bank, for 10% of total order value valid for addition 4 weeks beyond the agreed of Guarantee period. Materials/Equipment to be supplied are guaranteed for free replacement/repairs, against defective design, material workmanship for a period of 48 months from the date of delivery of consignment or 24 months from the date of commissioning/using which-ever is earlier. GRSE reserves the right to invoke the above Bank Guarantee at any time during its validity period in the event of any breach of items stipulated in the order.
- 31) **TEST/GUARANTEE CERTIFICATE:** Manufacturer's Test Certificate is to be submitted along with the material. In case T.C is not made available at the time of dispatch a Guarantee Certificate from the

manufacture has to accompany the material confirming that the material/equipment has been manufactured strictly confirming to the specification mentioned in the order.

- 32) **RECEIPT INSPECTION:** All supplies will be subject to our inspection and approval in our Yard. The rejected materials if any will have to be removed within 10 days from the date of rejection at your expenses. Such rejected stores lie at the suppliers risk from the time of rejection, and if not removed within the specified date the purchaser has the right to dispose of the same. The purchaser shall also be entitled to recover ground rent on their rejected stores after the expiry of the specified date.
- 33) **RIGHT IF INVOCATION OF BANK GUARANTEE:** GRSE reserves the right to invoke the Bank Guarantee at any time during its validity period in the event of failure/delay in supply breakage any sorts of operational complication of ordered materials/breach of any terms of this contract.
- 34) **SUBMISSION OF DOCUMENTS:** For late submission of original dispatch documents/wrong documentation, demurrage / **wharf age charges if incurred shall be recovered from the supplier.**
- 35) **Eligibility Criteria:** As mentioned in SOTR.
- 36) **REJECTION:** Rejection of materials and also the late delivery will affect further business with GRSE.
- 37) **CANCELLATION OF ORDER:** GRSE reserves the right to cancel any order if placed in part/full without assigning any reason and with no financial implication.
- 38) **ARBITRATION:**
- i) If at any time, before during or after the contract period, any unsettled claim, question, dispute or difference arises between the parties, upon or in relation to or in connection with or in any way touching or concerning this order, the same shall be referred to the Chairman & Managing Director(" CMD" in short) of Garden Reach Shipbuilders & Engineers Limited ("GRSE Ltd" in short) for appointment of a sole arbitrator for adjudication of the said disputes or differences, in accordance with the provisions of the Arbitration and Conciliation Act, 1996.
 - ii) The CMD, GRSE Ltd. shall appoint a person, whom he thinks fit and competent, for adjudication of the disputes or differences, as the Sole Arbitrator.
 - iii) Such arbitration shall, in all respects, be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the rules framed there under or any statutory modification or re-enactment thereof for the time being in force.
 - iv) The Award of the Sole Arbitrator shall be final, conclusive and binding upon the parties.
 - v) In the event of the death or resignation for any reason whatsoever of the said Sole Arbitrator, appointed by the said CMD of GRSE Ltd., the CMD of GRSE Ltd., on an application from either of the parties in this behalf, shall appoint in place of the outgoing Arbitrator, another person whom he thinks fit and competent to adjudicate the said disputes and differences in accordance with law.
 - vi) Also in the event an Arbitration award is set aside by a competent court on an application from either party and unless otherwise ordered by the said court, the CMD of GRSE Ltd., on an application from either party, shall appoint a person whom he thinks fit and competent to adjudicate the disputes and differences in accordance with law.
 - vii) The cost of the arbitration, fees of the arbitrator, remuneration of the stenographer and clerk, stamp paper etc. as shall be decided by the Sole Arbitrator, shall be shared equally by the parties. The venue of arbitration shall be at Kolkata and unless otherwise decided by the parties or by the Sole Arbitrator himself the venue shall be the premises of Garden Reach Shipbuilders & Engineers Ltd. located at 43/46, Garden Reach Road, Kolkata 700 024.
 - viii) The language of the proceeding shall be in English.
- 39) **COMPLIANCE WITH LAWS:** Vendor is warranted that all goods purchased against the enquiry shall conform with all applicable. City, States and Central Laws, Ordinances and Regulations. Further vendor shall indemnify defend/relieve GRSE harmless from loss, cost of damage, by reason or any actual or alleged violation thereof.
- 40) The company shall not be liable under the Workmen's Compensation Act of 1923, in case any employee or workmen of any Contractor receives injury while actually serving his employer in connection with the latter's work inside the compound of GRSE Ltd.

41) FAT TRIAL ASSISTANCE: During FAT Trial at GRSE's Works, if any problem arises on Control System. Firm have to depute Service Engineer for FAT trial assistance & synchronization with the dedicated equipment at no extra cost to GRSE. Vendor have to undertake the job of commissioning, Factory acceptance trial at TU works, and Commissioning of the Equipment/ Starter/Control Panel at ON Board Ship for 8 times at GRSE or any PORT in India if required. If any observation arises on the Flame proof Control System during receipt Inspection at GRSE (DKMC), vendor have to undertake that defect without any extra cost. GRSE will intimate to Vendor 7 days advance for the said Job and Vendor have to depute Competent Service Engineer to carry out the Job at no extra cost at GRSE. During Guarantee period, if any problem/defect arises in the Control System, vendor have to rectify the Control system free of cost. During defect rectification if any components found defective, vendor have to provide new component at free of cost.

42) SERVICE ENGINEER ASSISTANCE: The supplier shall provide the necessary service support of Engineer to carry out the following activities at GRSE / Partner shipyard premises:

- a) Assistance during installation (if required)
- b) FAT trial assistance at GRSE(TU)
- c) Setting to Work (STW)
- d) Harbour an Sea Trials (HAT & SAT)

supplier shall depute experienced, qualified and expert Engineer / Technician to carry out the above activities on board ship completely matching to the ship's construction timeline . Above activities are to be undertaken to ensure satisfactory preformation of the system On Board towards proving the system to the Inspection agencies as per approved test procedure. No extra man days / payment on this account shall be admissible.

43) SPECIAL CONDITIONS OF CONTRACT (RELATING TO LABOUR LAWS):

1. It is expressed terms of this tender/contract that this tender/contract shall be governed strictly in accordance with all the terms and conditions as embodied in all other documents forming part of this tender/contract. The Contractor shall be responsible to produce to and /or complete the under the contract exclusively with his/it's duly employed workmen solely at his/it's own risk and responsibility.

2. The definition of "workmen", "Contractor", "principal Employer", "Wages" or any other statutory terms, used elsewhere in this tender/ contract, shall have the same meaning as are assigned to them by the Contract Labour (Regulation & Abolition) act, 1970 or any other applicable/ appropriate enactment.

3. While performing the contractual work, the contractor must ensure compliance with all the existing statutory labour enactment/ regulations, including the following:-

- a) Contractor Labour (R & A) Act, 1970 and Central & State Rules as applicable.
- b) Minimum Wages Act, 1948.
- c) ESI Act, 1948
- d) EPF & MP Act, 1952.
- e) The Building & other Construction Works (RE &CS) Act, 1996 & Rules

4. Contract Labour (R & A) Act, 1970 & rules framed thereunder. The Contractor is to comply with all the provisions of the Act including the following important requirements under the Act.

a) To obtain a labour License issued by the Competent Authority (i.e. Licensing Officer) where the execution of works are to be carried out. The contractor, on whom the contractor is awarded by the Principal Employer/GRSE is require to obtain License for all the Contractor Labours working under it/him , including the Contractor Labour of his/it's sub-agency's piece rated workers or any other labour engaged by it /him in any manner for the execution of the contract at the principal Employer/GRSE premises as applicable under the relevant provision of the Act. The Contractor is to contact the Office of the Asst. Labour Commissioner, 6, Church Lane Kolkata-700 001 or any other appropriate office/Authority for obtaining /renewal of the Labour License etc. in respect of contractual work executed by him /it for the principal Employer/GRSE.

b) The Contractor shall maintain a "muster Roll Register", "Register of Wages", "Deduction", "Overtime", "Fines" and "Advance" strictly as per the provisions of the Act. The Contractor shall issue Wage Slips to the workman at least a day prior to disbursement of wages. The Registers maintained by the Contractor shall be placed for inspection and scrutiny by the concerned officer of the Principal Employer/GRSE at regular intervals and also as and when required.

c) The Contractor shall be responsible for payment of wages to each workman employed by it/him in accordance with law and the disbursement of wages shall be made in presence of authorized representative of the Principal Employer/GRSE. No wage period shall exceed one month and wages of every workman shall be paid within three days from the end of the wage period, in case the wage period is one week or a fortnight and in all other cases before the expiry of the 7th day from the end of wage period.

d) Contractor is required to cover all the workmen under them including those workmen of the Sub-agencies, piece rated workers or any other workers engaged by him/it in any manner under ESI & EPF & MP Acts. All these workmen are to be covered under separate Code Nos. of the Contractor. Contractor should also ensure it's own PF & ESI Code while entering into the contract.

e) Notice showing the rates of wages, hours of work, wage period, date of payment of wages/unpaid wages, name, address and designation of Inspector, having jurisdiction, shall have to be displayed in conspicuous places and at the work site as per Rule 81(1)(i) of the Contract Labour (R & A) Act and the Rules framed there under. A Notice board shall have to be exclusively earmarked for above purpose.

f) A copy of the notice as per Rule 81 (2) of the Act shall be required to be sent to the inspector and wherever any change occurs, the same shall be required to be communicated to him forthwith.

g) As per Rule 81 (30) of the Act, information of commencement/completion of work of the Contractor shall have to be communicated to the Inspector within 15 days from such commencement/completion.

5. Photocopies of Registration Certificates of Code Nos. along with current documents/ Challans etc. in support of deposit of contribution as applicable under above Act/Rules are to be submitted with Techno-commercial part of tender.

6. COMPLIANCE OF EPF & MP ACT

a) The Contractor shall have own P. F Code no. against his Firm and submit the same to GRSE while entering into/finalizing tender.

b) P.F shall have to be deposited against own code of the Contractor and P.F Challan along with Annexure for P.F deposition against Contract Labour, name-wise, shall have to be submitted to the Principal Employer by the 20th of every month. Besides, all other statutory returns pertaining to P.F are to be submitted by the Contractor in time.

c) In the event of failure to show proof of P.F Deposit for all the workman working under the Contractor, including workers of it's Subcontractor, payment/clearance of the right to pay the bill after suitable deduction on account of P.F. Bills of such defaulted Contractor shall be settled only on satisfactory production of P.F deposit Challans in respect of Contractor Labour duly certified by the HR Dept. of the respective Unit/Main Yard of Principal Employer/GRSE.

7. COMPLIANCE OF ESI ACT:

The Contractor shall have own ESI Code No as against his Firm and submit the same to GRSE while entering into contract/finalizing tenders. The Contractor shall cover all the workman /employees engaged by him, under ESI Act/Scheme and pay the monthly contribution (both employer and employee) and shall furnish all necessary particulars to ESI Corporation as required by the said Act under their own ESI Code and also to the Principal Employer/GRSE.

The Contractor expressly undertake that nobody will be engaged by it/him without coverage under the Act. In case ESI Code No of the contractor is inoperative for whatever reasons , the Principal Employer/GRSE will be at liberty to deduct ESI Contributions at appropriate rates from the Contractor's Bill and deposit the same to the ESI Authority.

8. CONTRACTORS HAVING ESI CODE:

The Contractor will furnish a list containing details of workmen/employees to be engaged for work to the concerned Department before taking up the assigned job. Any subsequent change will have to be intimated forthwith to the concerned Department of the Principal Employer /GRSE for proper control. In addition, they will also submit documentary evidence showing all compliance with ESI formalities in respect of employees engaged in the job of the Principal Employer / GRSE. Such documents will be monthly Challans for ESI deposit and certified copy of all half-yearly returns submit to ESIC etc., subject to satisfactory compliance of all formalities.

9. All Contractors shall ensure that detailed responsibility be strictly complied with as envisaged in the enclosed list of Contractors responsibilities along with other provisions as applicable to them as per Appendix 'B'.

The Contractor engaged in Shipbuilding works is required to obtain registration under the Building & Other Construction Work Act, 1996 and Rules framed there under and is also required to maintain Registers and Records and submit returns strictly in line with the stipulated provisions of the said Act & Rules so framed.

APPENDIX- A

CONTRACTORS RESPONSIBILITIES

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1. Obtain Labour License from 'Licensing Authority', and to submit a copy of 'License' to the Retainer and concerned Unit HR Department.
 2. 'License' to be renewed by applying in Form-VII to 'Licensing Authority' at least 30 days before expiry and copy to be furnished to the Retainer and HR Department.
 3. The contractor shall be responsible for payment of wages to each workmen employed by him. The wages of every workman shall be paid within three day's from the end of the wage period, in case the wage period is one week or a fortnight and in all other cases within/ before the expiry of the seventh day from the end of the wage period. Date, Time, Place of payment wage /unpaid wages, minimum rate of wages, hours of work, wage period, name address and designation of Inspector having jurisdiction etc., are to displayed in a Notice Board at conspicuous place and copy to submitted to Retainer and HR Department. All other statutory payments are to be made within the due date as per statute.
 4. It shall be the duty of the Contractor to ensure that timely disbursement of wages is made in the presence of the authorized representative of the principal Employer - i.e. representative of the HR DEPT/ Retainer. Certification of the Register Wages by the representative of the Retainer/HR Dept. would be made with the following endorsement:
" Certified that the amount shown in Column No. has been paid to the workmen concerned in my/ our presence on at"
 5. Register of Workmen employed by the Contractors shall be maintained in Form XIII and produced before the Retainer and HR Dept.
 6. Muster Roll Register (Form-XVI), Register of Wages (Form- XVII), Register of Deduction of Damages or Loss (Form-XX), Register of Fines (Form-XXI), Register of Advance (Form-XXII), Register of Overtime (Form-XXIII) are to be maintained and produced before Retainer/HR Dept.
 7. Returns in Form-XXIV (in duplicate) to be sent by the Contractor to the Licensing Officer for the Half - year ending 30th June and 31st December each year endorsing copy to HR Dept./Retainer.
 8. Ensure issuance of Wage Slip to each labour at least a day prior to disbursement of wages and copy be submitted to Retainer/HR Dept.
 9. Copy of Nomination and Declaration Form -2 (REVISED) under EPF (MP) Act, 1952 in respect of all labourers to be submitted to Retainer/ HR Dept.
 10. Monthly Return (Statement of contribution) in Form -12A (Revised duly filled in along with Challans for deposit of PF contribution, is to be submitted to the Retainer by 20th days happens to be Sunday/Holiday, the same is to be submitted on 21st /next working day.
 11. Consolidated Annual Contribution Statement/Returns in Form 6A and contribution card for current period in Form- 3A (Revised) to be submitted to RPFC with a copy to Retainer/ HR Dept. within 30th April each year.
 12. Status on Employees Provident Fund Scheme in Form-19 and status on Form-10-C (EPS) for workmen ceasing employment and claiming withdrawal benefit, to be furnished forth with to Retainer /HR Dept.
 13. Every contractor shall send to the Commissioner EPF, within 15 (fifteen) days of close of each month, a Return in Form-5 under paragraph 36 (2)b of EPF Scheme 1952 & EPS 95 [Para 20(4)].
 14. ESI & PF Registration Certificate in original to be produced before the Retainer/ HR Dept. and copy submitted before/at the time of commencement of work.

15. ESI Challans against deposit of monthly contributions of workmen be submitted every month, by 10th day of the subsequent months, to ESI Authorities and copies be made available to HR Dept./Retainer along with ESI empanelment of all employees engaged by them latest by 20th day of each month.

16. Ensure Half- Yearly Returns is submitted to ESI Authorities endorsing copy to Retainer/ HR Dept. at the earliest.

17. Date of commencement/ completion of work with the Company is to be intimated to the HR Dept. through respective PLs/HODs/DGM as applicable.

18. The contractor engaged in Shipbuilding work with the Company is required to obtain registration under the Building & Other Construction Work Act, 1966 & Rules there under. All statutory obligations as per this Act/ Rules are to be strictly complied with Contractor is to maintain Register and Records and also submit the requisite Returns accordingly.

19. Any other statutory provisions as may be applicable are required to be complied with by the Contractor.

APPENDIX-'B'.

GENERAL REQUIREMENTS

(a) All your personnel will be subject to routine physical Test and checking of Identity Cards at any time during the deployment.

(b) During the engagement of Contractors, if any body gets involved in any police case or gets himself involved with quarrel with GRSE employees or other contractor's workmen engaged in GRSE, his entry permit will be withheld forthwith.

(c) A certificate from the contractor's labour, clearly endorsing that characters of all his labourers have been duly verified and found to be satisfactory be submitted to GRSE at the time of making gate Pass.

(d) Photo Identity Card /Gate Pass as required by GRSE will be arranged by the contractor for his employees at his own cost.

(e) No workman of the contractor will be allowed to join or participate in any Gate Meeting/ Demonstration inside or at GRSE Gate.

(f) During the course of engagement with GRSE, if any individual's character is found to be not satisfactory, on verification of specific complaint received, entry permit will be withdrawn forthwith. Entry/Exit will be allowed only in presence of proper Supervisory staff of the contractor. No workman of the contractor will be allowed to loiter around in the yard leaving the specified space of work.

(g). Police Verification certificates of character antecedents in respect of all employees of /contractors/Subcontractors for operating in GRSE Ltd. are required to be submitted to Security Dept./GRSE Ltd. before processing of Gate Passes.

This requirement is as per Official Secretariat Act, 1923 of Ministry of Home Affairs, Govt. of India.

(h) One fully responsible and qualified Site In-Charge has to be posted at the site during progress of work.

(i) The contractor will ensure that no damage is caused to the materials, equipment or any other property of GRSE due to negligence and/or any reason whatsoever by the Contractor's men.

(j) The contractor will work when the ship will be at FOJ/Main Yard/CPT Dry Dock/ any other place/Dock near GRSE in the event of work being carried out outside GRSE premises.

(k) The contractor shall have to follow all the rules and regulations of other Docks/places in the event of work being carried out outside GRSE premises.

(l) For any exigencies and for stock taking or for any other reason deemed valid by GRSE, GRSE reserves the right to suspend the work as required, without any compensation to the contractor.

APPENDIX-C

FIRE &SAFETY PRECAUTIONS:

(i) Necessary safety precautions, use of proper tools and equipment, including personnel protective equipment for contractors' men are to be arranged by the contractor for the safety of the personnel employed by them. Site-in-Charge in all matter related to safety at work and their site In-charge would be responsible to the respective AGM (W)/DGM (W)/SR. MGR (W)'s for their safe working.

(ii) The Contractor shall take all reasonable precautions to prevent fire of any nature in the general vicinity of his operations and shall be held responsible for all damages from fire directly for his own activities or his employees.

Use of proper tools and equipments/kits for contractor's men are to arranged by the contractor at his cost for the safety of personnel deployed by the contractor.

(iii) The Contractor will arrange for all safety precautions/ provisions for their employees deployed for the job as required and as per statutory rules.

The Contractors workers will have to follow the following Safety & Fire norms

- a) Wear Boiler Suits, Safety Shoes and Helmets while at work.
- b) Ventilation must be arranged in confined spaces throughout the period of carrying hot work.
- c) Prior to commencement of hot work, surrounding (including other side of the bulkheads & decks) should be inspected for the presence of any inflammable materials.
- d) All inflammable wastes like cotton waste, plastic, broken wooden parts, battens, jute, cloth, paper/electrode packets etc. should be removed by the contractors from the ship everyday.
- e) Portable Hand Lamp (maximum of 110 volts) should be used on board vessel.
- f) All electrical connections should be of permanent type as far as possible. Plug & Sockets should be fitted for outgoing connections. Use of any electrical outlet without using a plug & socket connection is prohibited.
- g) Use of oil drums for staging purpose is strictly prohibited. Steel stools/staging materials are to be used for staging purpose.
- h) Painting work should not be undertaken, while hot work is in progress either in the compartments or in the adjacent areas.
- i) A board indicating "painting in Progress" in Hindi, Bengali & English be displayed near entrance of the compartment.
- j) While painting, only safety hand lamp fitted with insulated handle, wire case and glass cover over the lamp shall be used.
- k) While painting in closed compartments, one person must be posted near the entry point.
- l) Any moving part used in production should be provided with guards/covers.
- m) All welding cables, temporary light cables etc. should be properly insulated at all times.
- n) Damaged hoses should not be used for gas cutting work.
- o) Gas line should be separated from welding cables & electrical cables should be laid properly.
- p) Welding Holders, if energized, should not be left unattended.
- q) All ventilation blowers should be provided with protective covers/guards. Chain Pulley Blocks/Lifting Tackles/Rigging screws/Lugs etc. used in the production shall be duly tested.
- r) 440/220 supply lines should be provided with distinguishing mark & identified with red stickers at every meter distance. 440 volt should be covered by MS Angle.
- s) Contractors' workmen should wear badges for their personal identification.
- t) Full proof welding holders must be used in construction stages, considering successive fatal accidents caused from our hand made electrodes holders.
- u) All pneumatic grinding/electrical grinders should be provided with cover guards.
- v) During recess period (Lunch time and at the end of day's work) or when work is suspended for more than half hour, the gas hoses shall be disconnected from the cylinder valves.
- w) All gas equipment shall be subjected to "Water Dip" test daily before taking those on board. A record of the testing to be maintained by the person carrying out such test.
- x) Electric power shall be cut off from transformer end during process period & at the end of days work and whenever the work is stopped for at least half an hour.
- y) Wooden planks are to be provided on all the scaffolding with lashing arrangement.

APPENDIX-D

Free Issue materials and Material Reconciliation Statement

(1) Materials supplied by GRSE shall be retained with proper care and processed in their own factory premises of the vendor and shall not be taken out.

(2) Free issue material shall be supplied against:

(a) Submission of a Corporate Indemnity Bond (format enclosed) of the vendor under company's common seal/legally enforceable seal executed by Managing Director/CEO/Official with requisite "Power of Attorney/Partner/Proprietor/Official having requisite power of attorney.

(b) Special contingency Insurance Policy shall be arranged by the vendor of suitable value for a period of two years to cover risk of Loss due to:

(i) Strike, Riot (SRCC), Fire, Flood, Earthquake and other Natural calamities,

(ii) Burglary and theft at vendor's premises

(iii) Transit insurance

(iv) Fidelity Guarantee of the contractor/vendor during storage at contractor's/Vendor's site

(v) Spoilage of materials at the hand of contractor's/Vendor due to bad workmanship and wastage

- (vi) Blockage materials at contractor's premises due to lockout or any other Force Majeure condition.
- (c) Cost of Free issue materials rejected during processing will be recovered in full from the vendor.

44) All other terms and conditions will be as per GRSE's STACs.

Note:

- a) Techno-commercial bid will be opened on the due date and time of tender.
- b) In case of non-receipt of filled in NIT/SOTR/STAC acceptance format matrix, it would be presumed that you have accepted all our terms & conditions as per GRSE tender until & unless deviation is specially mentioned in offer.
- c) For any discrepancy between NIT (Notice Inviting Tender) and STAC, NIT statement may be taken as final.
- d) Clarification required, if any, regarding Tender Document, should be got resolved by contacting competent authority of GRSE prior to submission of bid.

ANNEXURE: XV

GARDEN REACH SHIPBUILDERS & ENGINEERS LTD
(A Govt. of India Undertaking)
43/46, Garden Reach Road, Calcutta- 700 024.
Fax : 033-469-8150/2020 ; Telephone : 469-8100 to 8113

STANDARD TERMS AND CONDITIONS OF SUPPLY

(INDIGENOUS EQUIPMENT / MACHINERY)

REF. NO. GRSE-STACS-PE-INDG (AUGUST, 2006)

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IN-1 GENERAL

IN-101 The word '**Purchaser**' refers to GARDEN REACH SHIPBUILDERS & ENGINEERS LIMITED, (GRSE), a Company registered under the Indian Companies Act 1913 and includes its successors or assigns.

IN-102 The word '**Sub-contractor / Supplier / Vendor**' means the person / firm / Company who undertakes to manufacture and / or supply and / or undertake work of any nature assigned by the Purchaser from time to time and includes its successors or assigns.

IN-103 The word '**Owner**' means the person or authority with whom Garden Reach Shipbuilders & Engineers Limited (Purchaser) has contracted to carry out work in relation to which orders are placed by the Purchaser on the Sub-contractor / Supplier / Vendor under this contract for supply or manufacture of certain items and would include Department of Defence Production & Supplies, Ministry of Defence, Government of India, the Indian Navy, the Coast Guard and any other specified authority.

IN-104 The equipment / products / items to be supplied shall be strictly in accordance with the Drawings / Specifications / Requirements indicated in the Tender / Inquiry / Order with deviations, if any, as mutually accepted.

IN-105 The Sub-contractor / Supplier / Vendor shall not either wholly or partly sell, transfer, assign or otherwise dispose of the rights, liabilities and obligations under the contract between him and the Purchaser without prior consent of the Purchaser in writing.

IN-106 The Sub-contractor / Supplier / Vendor shall hold harmless and keep the Purchaser indemnified against all claims arising as a result of infringement of any patent / copy rights on account of manufacture, sale or use of articles covered by the order. A clear & quiet possession of goods should take place with the passing of the title on execution of order.

IN-107 Any letter, facsimile message, e-mail intimation or notice sent to the Sub-contractor / Supplier / Vendor at the last known address mentioned in the offer / order shall be deemed to be valid communication for the purpose of the contract.

IN-108 Governing Jurisdiction and Compliance with Laws

- (a) All contracts shall be deemed to have been wholly made in Kolkata and all claims thereunder are payable in Kolkata City and it is the distinct condition of the order that no suit or action for the purpose of enforcing any claim in respect of the order shall be instituted in any Court other than that situated in Kolkata City, West Bengal State, India.
- (b) The Sub-contractor/Supplier/vendor is warranted that all goods purchased against the enquiry shall conform with all applicable city, states & central laws, ordinances and regulations. Further, the supplier shall indemnify / defend / relieve GRSE harmless from loss, cost of damage, by reason or any actual or alleged violation thereof.
- (c) GRSE shall not be liable under the workmen's compensation Act of 1923, in case any employee or workmen of any contractor receives injury while actually serving his employer in connection with the latter's work inside the compound of GRSE Ltd.
- (d) The existing Laws on employment of Child Labor shall be binding for the contract.
- (e) Sub-contractor/Supplier/vendor working at GRSE site, shall have ESI and PF registration no. of their own and shall ensure compliance with all provisions of ESI & PF act & rules, failing which withholding / deductions from Sub-contractor/Supplier/vendor's bills /dues as applicable or termination of the contract will be effected. Sub-contractor/Supplier/vendor working at GRSE site, are required to submit evidence showing compliance with ESI & PF formalities in respect of employees engaged in job of GRSE viz. monthly challan of ESI deposit, certified copy of half yearly returns submitted to ESIC, proof of P.F. deposition etc.
- (f) Sub-contractor/Supplier/vendor working at GRSE site are required to comply with all statutory obligations as per Contract Labour (R & A) Act 1970 and Contract Labour (R & A) Central Rules 1971 including obtainance /renewal of Labour Licence from Regional Labour Commissioner (Central) failing which deductions as applicable from bills / dues of contractor or termination of the contract may be effected.
- (g) All Sub-contractors/Suppliers/vendors engaged in shipbuilding work are required to obtain registration under the Building and Other Construction works (RE & CS) Act 1996 & Rules and are also required to maintain registers & records and submit returns.

IN-109 The Sub-contractor / Supplier / Vendor shall unconditionally and free of cost to the Purchaser transfer information on technological developments / innovations / modifications which the Sub-contractor / Supplier / Vendor would evolve in future (within 3 years) in relation to the supplied equipment. To enable this, the Purchaser's address shall be added to the Sub-contractor's / Supplier's / Vendor's mailing list or database or any other document maintained for dissemination of product information and the Purchaser shall be informed of the action taken in this regard. If such improvements / modifications are brought in by the Sub-contractor's / Supplier's / Vendor's Design Department in course of manufacture of equipment ordered by the Purchaser, the Sub-contractor / Supplier / Vendor shall incorporate such improved versions in the equipment without any extra cost to the Purchaser.

IN-110 If the Purchaser be desirous of getting incorporated all post supply modifications / improvements arising out of technological developments to the original equipment supplied by the Sub-contractor / Supplier / Vendor, the Sub-contractor / Supplier / Vendor, shall quote for and carry out all such modifications to the equipment.

- (a) Where the whole or a portion of the equipment has been specifically developed by the Sub-contractor / Supplier / Vendor for the Owner and the latter would, through the Purchaser, be bearing the entire or part of the development cost incurred by the Sub-contractor / Supplier / Vendor, the design rights for the whole or portion thereof, of the equipment as appropriate, shall vest in the Owners.
- (b) Prior approval of the Owner should be obtained before similar articles are sold / supplied to any other party other than the Owner. If such approval is given and sale is effected, the Sub-contractor / Supplier / Vendor shall pay to the Owner royalty at the rate mutually agreed to.

IN-111 Secrecy:

All property (such as materials, drawings, documents etc) issued by the Purchaser or any other individual or firm on behalf of the Purchaser in connection with the contract shall remain confidential, being the property of the Purchaser and the Sub-contractor / Supplier / Vendor shall undertake to return all such property so issued and will be responsible for any or all loss thereof and damage thereto resulting from whatever causes and shall reimburse the Purchaser the full amount of loss and damage.

All information given to the supplier for the execution of the order is to be treated as **SECRET / CONFIDENTIAL**. The Technical information, Drawings, Specification and other related Documents forming part of this Enquiry /Order are the property of the Purchaser and shall not be used for any other purpose except for the execution of order. Any information / drawing etc. shall not be copied, transcribed, traced or reproduced in any other form or otherwise in whole / part or duplicated, modified, divulged and / or disclosed to a third party, not misused, used in any other form whatsoever without Purchaser's prior consent in writing except to the extent required for the execution of this order. At the time of tendering, the tenderer has to give an undertaking in favour of GRSE that in the event of any breach of the above provisions, he would make good of any loss /cost/damage / any other claim whatsoever preferred by anybody to GRSE in this respect.

IN-112 Preservation:

A detailed procedure for long and short term preservation of the equipment and periodicity of preservation alongwith special preservatives, if required, prior to installation of the equipment shall be furnished by the Sub-contractor / Supplier / Vendor. The detailed procedure for de-preservation prior to commissioning shall also be furnished.

Should any material require any additional preservation till its final installation / fitment on board the Ship, the materials should be supplied in preserved (sealed or in cocoons) condition for long duration of time as per order. Detailed procedures for subsequent de-preservation / re-preservation are to be stated by Sub-contractor / Supplier / Vendor.

The preserved sealed cases / cocoons will not be opened on receipt and same will be opened when the first preservation is due or if required on board earlier. The short fall, discrepancy or damage, if any, found during the inspection after opening these cases will have to be replaced / made good by the supplier free of cost within reasonable period.

IN-113 The Sub-contractor / Supplier / Vendor shall render free of cost guidance in case the Purchaser intends to set-up testing, repair / maintenance facility to overhaul the equipment supplied by the Sub-contractor / Supplier / Vendor.

IN-114 The Sub-contractor / Supplier / Vendor shall continue to support the equipment for a minimum period of 20 years from the date of supply by making available spare parts and assemblies of the equipment supplied. Should the Sub-contractor / Supplier / Vendor decides to discontinue the product, for any reason whatsoever, adequate notice shall be given to the Purchaser / Owner to enable procurement of the requisite lifetime spares.

IN-115 Purchase preference in respect of equipment / product and or services of Central Public Enterprises will be applicable for such / similar equipment / product / services on tender as per extant policy promulgated by Department of Public Enterprises, Government of India.

IN-116 The Purchaser reserves the right to accept and or reject any or all tenders and / or to withdraw the tender in toto without assigning any reason whatsoever.

IN-117 Registration as Approved Vendor:

- (a) The Sub-contractor/Supplier/vendor is to confirm whether they are registered with GRSE as approved Sub-contractor / Supplier / Vendor under 5-digit Supplier Code and indicate Product Group Code. If not registered, the Sub-contractor / Supplier / Vendor will have to approach GRSE's V R Cell for completion of all formalities for permanent

registration with GRSE immediately after submission of any quotation/offer. Failure to comply to this requirement will result in rejection of offer and restriction of further business.

- (b) The bidder is to confirm whether they are registered with DGQA as approved vendor for supply of the category of item as tendered. If not registered, the bidder is to approach DGQA immediately for registration after complying with all formalities like capacity assessment for supply of the required category of equipment / item within a time frame of 6 weeks from placement of conditional order, if issued.

IN-118 **MOU** : Regular suppliers are requested to enter into Memorandum of Understanding with GRSE as regards Commercial Terms & Conditions contained in this STACS.

IN-119 **Examination of price**: Where the contract price has not been fixed in effective competition and the contract is not for articles whose prices are controlled, the owner reserves the right to investigate reasonableness of the price paid and negotiate directly with the sub-contractor/supplier/vendor for reduction of price where appropriate. The Owner can also ask for declaration that less basic price is not charged to other customers including Govt. and PSU.

IN-120 **Individuality of contract**: In the event of the offer getting converted into an order, the said order shall be treated as an individual contract, shall not allow any general lien to the parties and shall not get prejudiced in execution due to situation arising out of some other contract that the supplier may have with GRSE.

IN-2 Quotations and Order Acceptance Terms:

IN-201 *Tenderer shall pay special attention to the following points. Failure to comply with these may disqualify the tenderer.*

- (a) Tender number and due date to be superscribed on all the envelopes.
- (b) Tender to be submitted on or before the due date and time.
- (c) Offer to be as per specifications and complying with tender conditions.
- (d) The envelopes to be sealed properly.

IN-202 Unless otherwise stated, the offers shall be in 'Two Bid System' only, in two separately sealed envelopes: -

- (a) PART-I - 'Techno-Commercial Bid' and marked thus. In addition, Part-I shall include-
 - (i) Proforma Price Schedule blanking the prices and indicating 'Quoted / Not Quoted' (as applicable against each item on tender).
 - (ii) Duties / Taxes, Octroi, freight charges, insurance and/or any other Statutory levies payable, specifying incidence clearly / separately against each head.
 - (iii) The cost incidence against each head clearly indicating for Door Delivery or F. O. R. or Ex-works alongwith charges for packing and forwarding.
 - (iv) Compliance Statement clearly highlighting deviations / exceptions, if any, to Technical Specifications, Standard Terms and Conditions of Supply and Specific Tender Conditions. Non-specifying of deviations against any or all clauses would be construed as compliance to any / all conditions of tender. Any deviations to STACS, having financial implications, would be considered suitably for loading the quoted price. (STACS Acceptance Format is placed at Annexure 5).
 - (v) Earnest Money Deposit (interest free) as stipulated in the tender by way of D.D. / Pay Order / B.G. (as per GRSE format & guide line at Annx.-1) issued by any scheduled Bank other than Co – operative Bank to be provided by the bidder / tenderer in favour of GRSE as per discretion of the Purchaser.
 - (vi) Copy of ISO 9000 or equivalent Quality System Standards certificate valid as of date.
 - (vii) Delivery Schedule.
 - (viii) IIG Form regarding Codification of Defence Equipment enclosed with SOR is to be filled -in and submitted. The same is included as deliverables by the supplier.
 - (ix) Standard format for data to be provided by OEM as per ILMS requirement (Integrated Logistic Management System):- As required by Indian Navy for operation of ILMS successfully at their end, detail information regarding ILMS compatibility as per format provided in SOR is to be filled in by OEMs and submitted to GRSE as part of their contractual obligations and to be included as deliverables.
- (b) PART-II – 'Price Bid' - Quotes to be written in figures and words duly authenticated / signed by the authorised person and marked thus.

IN-203 (a) Both these sealed envelopes-Part I and Part II, shall be put in a third envelope duly superscribing the Tender number and Due Date and sealed properly and deposited as specified in the enquiry in the securely locked Tender Box kept in the concerned deptt.
(b) Outstation Bidder / Tenderer shall forward their offers addressed to concerned Authority either by courier service or by speed post so as to reach well in advance of the due date of tender or by hand delivery before due date and time of tender closing. Purchaser shall not be responsible for any postal / courier delay and it is attributable solely to the tenderer.
(c) Offer in "Two Bid System" received by fax / e-mail and / or offers received beyond due date and time of tender is liable to be rejected.

IN-204 (a) The price per 'Ship set' shall be quoted and breakup price of individual items of equipment and its accessories must be clearly stated.
(b) The cost incidence against each head shall be clearly indicated for –

- Door delivery
- F. O. R.
- Ex-Works - with charges for packing and forwarding

(c) The offer shall indicate the discounted price, if more than one shipset is ordered.
(d) The offer shall clearly indicate the Foreign Exchange content, if any, and base Exchange Rate and cut off date for Import. If any item/s is / are required to be imported by the Sub-contractor / Supplier / Vendor for use in the manufacture of final product, Import Licence for such product/s is to be arranged by him only.
(e) The vendor/supplier/sub-contractor shall indicate the bill of materials for intended import for incorporation in order. The purchaser shall issue Customs Duty Exemption Certificate on receipt of request from the vendor/supplier/sub-contractor along with the copies of bill of lading and invoice. The price advantage for Customs Duty Exemption will be passed on to the purchaser.
(f) The purchaser reserves the right to investigate the reasonableness of the price and ask the vendor/supplier/sub-contractor for detail break up of their cost.

IN-205 (a) The offer shall be valid for 90 days for acceptance and the prices shall remain firm and fixed until delivery of the full quantity of the goods in the Purchaser's Yard. If not, the Sub-contractor / Supplier / Vendor shall indicate the period during which the quoted price shall remain valid for supply of the equipment / article contracted for. Should the Purchaser desire postponement of delivery of the equipment / article within or beyond validity date of the offer, the Sub-contractor / Supplier / Vendor shall indicate –

- (i) The date by which such communication must be received by him for deferring delivery without any financial implication to the Purchaser,
- and*
- (ii) Terms and conditions for effecting postponement of delivery beyond the price validity period.

(b) Purchaser reserves the right to consider placement of Purchase Order in part or in full against the tendered quantity.

IN-206 The Sub-contractor / Supplier / Vendor shall inform the Purchaser in advance in case he is unable to participate in the tender for whatsoever reason. Failure to comply with this will be viewed seriously and consecutive three failures on the part of Sub-contractor / Supplier / Vendor to do so is liable for disqualification / debarring of the Sub-contractor / Supplier / Vendor from all future tender enquiries and or delisting from the list of 'Approved Registered Vendors.'

IN-207 **Spares:**

- (a) Offers for Testing and tuning / commissioning spares shall be supplied along with the main equipment, as specified in the requisition.
- (b) The Sub-contractor / Supplier / Vendors offer shall include a list of manufacturer's recommended spares together with itemised prices for
 - One year uninterrupted operation – validity of offer shall be a minimum for 90 days.
 - Five year operation – validity of offer shall be a minimum for 180 days. (Minimum order quantity against each item, if applicable, may also be stated.)
- (c) While the spares for one year are ordered by the Purchaser, the spares for 5 years Operation will be ordered by the Owners or Purchaser. In case of 5 years operation spares, the Sub-contractor / Supplier / Vendor shall indicate a base price applicable to the year of quotation and indicate an acceptable annual escalation formula based on which prices for future requirements could be established during the life cycle of the equipment in service.

- (d) In the event of inability to make an offer for these spares at the time of quoting for main equipment, the Sub-contractor / Supplier / Vendor shall commit a date by which such an offer can be made and adhere to it. Non-receipt of offer as committed will render the order for main equipment liable for cancellation without notice from the purchaser and without any financial implication to the Purchaser.
- IN-208 Tenders will be opened on the specified date and time in the concerned department. Only authorised representatives of tenderers are permitted to witness the Part I tender opening for Press tenders only. Tender opening shall neither be delayed nor withheld / postponed on account of absence of any one or more Tenderers. All the envelopes marked as 'PRICE BID' received at the time of Tender opening will be noted and held unopened separately.
- IN-209 Authorised representatives of only technically qualified tenderers, in case of Press Tenders only, who have submitted EMD as applicable, and complied with tender terms, will only be permitted to be present and note the proceedings of the Price Bid - Part II opening in a manner as directed by the tender opening officers. Qualifying tenderers not present during price bid opening will not be furnished with information on prices at a later date. EMD of unsuccessful tenderers will be refunded / returned within 30 days of finalisation of order on surrendering the Original copy of Money Receipt and upon instruction of Purchaser. EMD, if not claimed within one year from the date of notification to the tenderer for refund, will be forfeited.
- IN-210 With the acceptance of the successful bidder's offer by the Purchaser, which is as per the Terms and Conditions of the tender, by means of LOA / Purchase Order, the Contract is concluded.
The Sub-contractor / Supplier / Vendor shall, on receipt of the order, communicate his unconditional acceptance within two weeks of from the date of mailing / receipt of the same in its entirety by returning a copy of the Purchase Order duly signed by the authorised person and without any qualification. Communicating acceptance of the order subject to any other terms and conditions of the contract on the part of the Sub-contractor / Supplier / Vendor shall not bind the Purchaser in respect of these conditions which are less favourable to the Purchaser as compared with the conditions mutually agreed to and / or stipulated in the order. It shall be the responsibility of the Sub-contractor / Supplier / Vendor to enumerate specifically any error or discrepancy in the order at the time of acceptance. Failure to do so shall make the order binding on the Sub-contractor / Supplier / Vendor in all respects.
Any delay in acknowledging the receipt of the Purchase Order within the specified time limit or any qualification or modification of the Purchase Order in the acknowledgement of the Purchase Order by the Sub-contractor / Supplier / Vendor shall be a breach of the contract on the part of Sub-contractor / Supplier / Vendor. Compensation for the loss caused by the breach will be recovered by the Purchaser by forfeiting the Earnest Money, given by the Sub-contractor / Supplier / Vendor. If the Sub-contractor's / Supplier's / Vendor's bid contains any condition and any correspondence which are contrary to the Notice Inviting Tender (NIT) then they shall be considered as superseded and void on the acceptance of the bid by the Purchaser.
Recovery of compensation by the Purchaser from the Sub-contractor / Supplier / Vendor by forfeiting the Earnest Money shall be regarded as cancellation of the contract which has come in to existence on the acceptance of the offer by the Purchaser.
- IN-211 **Security Deposit (Interest free) :**
The successful Tenderer shall submit a Security Deposit as specified in the tender in the form of Demand Draft / Pay Order / Bank Guarantee (as per GRSE format & guide lines at Annex-2) issued by any scheduled Bank other than Co-operative Banks in favour of Purchaser. The Security Deposit will be returned only after the successful execution of the order. In the event of failure to execute the order satisfactorily or default by the Sub-contractor / Supplier / Vendor, the Security Deposit will be forfeited.
- IN-212 Unless otherwise specified in the 'Statement of Requirement' / 'Technical specifications for Procurement', the supply shall include one set of reproducible Velographs stamped 'Approved' by the Inspecting Authority, micro-films, floppies / CDs and six sets of paper prints. It shall also include 15 sets each of the Operation / Maintenance Manuals, Part Identification List, Comprehensive Part List, Test Certificates / Shop Trial reports etc. of the article/s supplied.
- IN-30 **Packing, Shipping, Insurance & Freight details and Delivery:**
- IN-301 **Identification of Deliverables And Penalty For Non-Compliance:**
- (a) The Supplier on receipt of Purchase Order and by a date not later than 8 weeks from receipt of P.O., shall list out and confirm all deliverables including Main Equipment, Accessories, On Board Spares, Tools, Technical Documentations and other items. Each item shall have the firm's part no. and break up price. The same is required essentially for incorporating GRSE material code nos. into the Purchase Orders and computer systems. In the event of delay in submission of the required details penalty @ ½% per week or part thereof upto the maximum of 5% of total value of all deliverables, shall be levied on the Supplier.
GRSE shall issue amendment to Purchase Orders incorporating the details receipt from the Supplier with GRSE Code numbers , individual prices etc. in advance of contractual delivery. While despatching the Supplier shall identify each item with GRSE code no. and the firm's part number. Packing list should indicate all deliverable items specially mentioning/ mounted on main equipment or loose items. Each item should be identified with metallic or plastic tag indicating both GRSE code no. and firm's part no. In case of any deviation, GRSE shall not be in any way responsible for delay in issue of receipt inspection report and payment.
All OBS are to be PIP packed. OBS and tools are to be supplied in separate boxes with clear identification and part numbers in metallic or plastic tag. Supplier's rep. is required during receipt inspection of loose items, accessories, spares and tools for easy identification and detection of shortfall.
- (b) All material shall be strongly and securely packed for shipment / transportation as applicable in minimum cubic space in such a manner as to prevent damage and pilferage in transit from point of shipment to final destination. Metal parts wherever necessary shall be well slushed with preservatives to prevent rusting in transit. Should it be proved that loss and damage has arisen from inadequate packing, the losses shall be borne by Sub-contractor / Supplier / Vendor. Each packing shall be plainly marked and numbered upon four sides and the top thereof as directed in the Purchase Order. Letters and numbers shall be atleast 80 mms. high wherever possible. Packing should indicate Case No., Order No., Gross Weight in Kgs., Nett Weight in Kgs. and outside dimensions LxWxH (The information on outside dimensions and weight shall be furnished to Purchaser atleast one (1) month prior to shipment / despatch). No marking other than as directed shall be inscribed on the said packages.
- (c) Every package shall contain a packing list in triplicate and the order number, package number, number of cases in the consignment, description and quantity of each item packed shall be clearly shown in the packing list. The description and quantity of each item shall tally with that specified in the order, wherever applicable.
- IN-302 **Insurance:**
- IN-302.1 In cases where the Sub-contractor's / Supplier's / Vendor's offers are for 'Free Delivery to Purchaser's Yard,' transit Insurance charges shall be borne by the Sub-contractor / Supplier / Vendor.
- IN-302.2 In case of Ex-works / Ex-Transporter's warehouse or Railway godown offers, the Sub-contractor / Supplier / Vendor shall give details of materials with despatch particulars and their value to Purchaser immediately after the despatch. The Insurance Charges will be borne by Purchaser.
- IN-303 Storage and Demurrage will be claimed from the Sub-contractor / Supplier / Vendor for all shipments that reach the purchaser without proper despatch documentations, Lorry Receipts not accompanied by packing lists, invoices etc. The Sub-contractor/ Supplier/ Vendor shall be responsible for fines due to errors or omissions in description, weight or measurements and for increased handling charges due to improper packing. Demurrage, if any, due to wrong/non-availability of shipping documents will borne by supplier/vendor.
- IN-304 Where so stipulated in the order, the Sub-contractor / Supplier / Vendor shall render such reports from time to time as regards the progress of the contract and in such a form as may be called for by the Purchaser. The Purchaser reserves the right to cancel the order forthwith without any financial implications on either side, if on completion of 50% of the scheduled delivery period the progress of manufacture is not to the satisfaction of Purchaser / Owner and failure on the part of the Sub-contractor / Supplier / Vendor to comply with the delivery schedule is inevitable. In such an event the Sub-contractor / Supplier / Vendor shall repay all the advances together with interest at prevailing bank rates from the date of receipt of such advances till date of repayment. The title of any property delivered to Purchaser will be reverted to the Sub-contractor / Supplier / Vendor at his cost.
- IN-305 The Sub-contractor / Supplier / Vendor shall arrange despatch of goods by Rail / Road consigned to GRSE through GRSE nominated transporter.. An Advance Copy of the invoice along with copies of other relevant documents shall be forwarded to Purchaser sufficiently in advance to avoid demurrage. In case of door delivery contracts, the Transporter shall be directed to deliver the ordered equipment without insisting for consignee copy of Lorry Receipt.
However, for manufacture of Naval Ships under Cost plus Contracts, GRSE is acting in the capacity of an Agent since Purchase Orders are issued by GRSE on behalf of Indian Navy under MOD, Govt. of India. Accordingly, in case of orders for supply to Naval Ships under cost plus contract, despatch document (challan / Consignment Note etc) and Invoice should be marked with the words "GRSE A/C INDIAN NAVY".
- IN-306 (a) The binding drawings called for as per the 'S. O. R.' / 'T. S. P.' or the Purchase Order shall be supplied within stipulated time frame as indicated in the Purchase Order, free of cost. Failure to comply may lead to cancellation of Purchase Order without any financial implications to the Purchaser.

- (b) The drawings shall be submitted to Inspecting Authority and or DGQA / NSM / GRSE / Classification Society, as appropriate, as specified in the Order. The onus of getting the drawings approved within the stipulated time frame shall lie with the supplier/vendor/sub-contractor.
- (c) Wherever applicable, pilot sample shall be submitted to the authorities within the stipulated time as specified in the Order.
- (d) In case of patternised items the vendor/supplier/sub-contractor must confirm that the relevant drawings are held by them and no waiver of contractual terms of order shall be considered for non-performance on this account.
- (e) For repeat orders, unless otherwise some changes in design had taken place, fresh approval of drawings will not be required if the same has already been approved. Supplier/vendor/sub-contractor shall go ahead with manufacture of the items which are already developed for same / deferment ships for Navy based on earlier approved drawings. Immediately on receipt of order, Supplier/vendor/sub-contractor shall submit 6 copies of drawings for stamping and distribution.

IN-4.0 Guarantee / Warranty

IN-401 The equipment/materials are to be guaranteed/warranted for satisfactory performance for the period of 12 months from the date of satisfactory commissioning of the vessel on which the equipment/materials/items are installed OR for the period of 36 months from the date of final dispatch, whichever expires earlier, against improper design, defective materials and faulty workmanship. During guarantee/warranty period any equipment or component thereof supplied by the vendor/sub-contractor, suffers due to defective material and or due to improper design and or due to defective drawing or due to faulty workmanship the vendor/sub contractor will assume full responsibility of rectification of such defective equipment or component thereof including direct expenses related to removal and re-positioning of the replacement/repaired equipment or component thereof and subsequent test & trial, incurred thereon without any financial implication to GRSE.

In the event Purchaser/Owner desires to have extension of Guarantee/Warranty period beyond the stipulated period, as above, the vendor/sub-Contractor/supplier shall quote for the same on monthly basis for the period of such extension.

IN-402 If the defects intimated during the Guarantee period are not remedied within a reasonable / stipulated time, the Purchaser may proceed to rectify the defects at the Sub-contractor / Supplier / Vendor's risk and cost, but without prejudice to any other rights which the Purchaser may have against the Sub-contractor / Supplier / Vendor in respect of the failure of the Sub-contractor / Supplier / Vendor to remedy such defects.

IN-403 Inspection and approval of the equipment or material by the Inspecting Authority/ies does not absolve the Sub-contractor / Supplier / Vendor of the responsibility of guarantee for the equipment / material. It will be the sole responsibility of the Sub-contractor / Supplier / Vendor to ensure that the equipment / material supplied is complete in all respects and performs to its / their designed parameters.

IN-404 In the event of Sub-contractor's / Supplier's / Vendor's failure to attend the Guarantee defects within a reasonable period of time, the Performance Bank Guarantee will be encashed by the Purchaser. The Purchaser's decision shall be final and binding on Sub-contractor / Supplier / Vendor in this regard.

IN-405 Issues/Defects related to Guarantee/Warranty shall have to be liquidated at the location of vessel and as desired by the Purchaser / Owner.

IN-5.0 Quality Certification:

IN-501 Purchase preference will be considered in case the Sub-contractor / Supplier / Vendor is accredited with ISO 9000: 2000 or equivalent International Quality System Standards in respect of equipment / Products and or items on tender.

IN-502 The Sub-contractor / Supplier / Vendor shall submit as proof, in Part-I of the bid documents, a copy of ISO 9000: 2000 or equivalent International Quality System Standards certificate valid as of date.

IN-503 The Sub-contractor / Supplier / Vendor shall preferably engage sub-contractors and avail supplies from suppliers with prior approval of Purchaser and such sub-contractors and suppliers shall also be accredited with ISO 9000: 2000 or equivalent International Quality System Standards.

IN-504 In the event the Sub-contractor / Supplier / Vendor is not being ISO 9000: 2000 accredited firm, the fact shall clearly be stated and the Quality Assurance / Quality Control organisation of the company be described in detail. Pursuant to scrutiny of such statement / documentation, the Purchaser may decide to accept the offer with pre-conditions specified for acceptance or reject the bid submitted.

IN-6.0 Terms of Payment:

IN-601 (a) Unless or otherwise mutually agreed upon and stipulated in the Purchase Order, the terms of payment shall be 90% of Order value within 45 days from the date of receipt inspection and acceptance of material and presentation of bill supported with complete set of documents as under: -

- (i) Seven copies of signed invoice indicating Vendor Code Number and item wise price (indicating GRSE material code no. if in the order) along with packing lists. In case of orders for supplies to Naval Ships, invoice should be marked with the words "GRSE A/C INDIAN NAVY" for cost plus contract, as detailed in para IN- 305. However in case of fixed cost contract, Invoice will be in the name of GRSE.
- (ii) Warranty Certificate in triplicate.
- (iii) 3 copies of Manufacturer's Works Test Certificate.
- (iv) 3 copies of Certificate of Inspection and approval from LRS / IRS / ABS / DQA (WP) / DQAN / CQAE / WOT / GRSE (whichever is applicable).
- (v) 3 copies of GRSE's unqualifying Inspection Cum Goods Receipt Note (ICGRN)
- (vi) Complete set of Classification / On board spares as per the Purchase Order.
- (vii) Complete set of operation / Maintenance / Instruction Manuals as per the Purchase Order and also in Electronic Medium.
- (viii) Complete set of Parts Identification List / Comprehensive Parts List as per the Purchase Order and also in Electronic Medium.
- (ix) Complete set of "As fitted" drawing and reproducible drawings.
- (x) Quotations for B & D spares for (a) 2 years operation and (b) 5 years operation.
- (xi) IIG Forms duly filled in.
- (xii) Standard Format for data provided by OEM as per ILMS requirement (Integrated Logistic Management System).
All the documents shall clearly indicate the GRSE's Purchase Order No. and date.

(b) Balance 10% will be released after G.P. or against submission of PBG for equivalent amount (as per GRSE format & guidelines at Annex-3) valid till G.P. Issue of GRN: For materials received at GRSE without Inspection report of 3rd party, GRN will be issued to Local supplier for their submission of bill with GRN. But for materials received at GRSE with 3rd party Inspection report received from outstation suppliers, balance payment bill is to be submitted by suppliers with copy of clear & accepted ICGRN for further linking by Corporate Finance with GRN for processing balance payment.

(c) Payment may be made to the vendors through Electronic Clearing System (ECS). Vendors are to furnish requisite documents / information on receipt of the order. (ECS Format for Bank Particulars and Payment Procedure enclosed at Annex.- 6)

(d) In special cases and/or for development equipment where advance / stage payment is specified in order, all such payments shall be made against Bank Guarantee of equivalent amount in GRSE format valid till receipt and acceptance of material. No advance payment shall, however, be claimed without submission of binding drawing to Approving Authority. The advance payment may be released in stages depending upon the progress of work and mobilization of required equipments etc.

(e) All advance payments should be interest bearing. Penal interest is to be charged on the advance in case of delay in delivery of supplies beyond the agreed schedule. Amount of Advance & Rate of interest will be decided by the Management / TC as appropriate.

(f) Where order is cancelled and advance payments already released to the contractor, the contractor shall refund all such advance payments received to GRSE with prevailing Bank interests and GRSE shall also have the right to recover the amount from outstanding dues to the Contractor against any other Purchase Orders placed by GRSE.

(g) Works Contract : In case of works contract following payment terms shall be followed:-

(i) Material Portion :

75% payment against despatch document, 15% payment against receipt & acceptance of material and balance 10 % will be released after G.P. or against PBG for equivalent amount valid till G.P.

(ii) Labour Portion :

90% payment on job completion and certification. Balance 10% will be released after G.P. or against PBG for equivalent amount valid till G.P.

OR

Where unit rate is mentioned, 90% payment progressively on job completion and Certification. Balance 10% will be released after G.P. or against PBG for equivalent amount valid till G.P.

(h) If GRSE material code no. & itemised price is not incorporated in the order, supplier will submit detailed list of items (separately deliverables) and price break-up latest within 6 weeks of receipt of order to enable GRSE amend the order indicating material code no. of each item with its price. All Invoices, Packing list etc should invariably indicate GRSE material code no. against each item for recording receipt and issue of ICGRN as well as for processing payment.

IN-602.1 Octroi Duty at present is not applicable in West Bengal. However, Octroi Duty if applicable, at a later date, will be re-imbursed by Purchaser at actuals against submission of 'Original Octroi paid money receipt' and copy of Form 'B'. Octroi receipts are to be issued in the name of 'GARDEN REACH SHIP BUILDERS & ENGINEERS LTD.' only.

IN-602.2 Way Bill – In West Bengal, Way Bill is to be issued for entry of materials from outside the state. GRSE will issue the Way Bill on submission of copy of Invoice and Consignment Note. Consignment Note should be in the name of GRSE.

In case of Transit Sale, the name of the Consignors (other than seller) are to be mentioned in the P.O. and Consignment Note will be in the name of GRSE as consignee.

IN-603 The Sales Tax Registration Number and Central Sales Tax Number, Service Tax Number, as applicable, are to be quoted on all invoices. Invoices shall be accompanied by a certificate to the effect that the Sub-contractor's / Supplier's / Vendor's registration certificate was in force on the day the sale was effected.

IN-604 Unless otherwise stated Excise Duty, Sales Tax and any other statutory levies will be payable extra at actuals. However, the Sub-contractor / Supplier / Vendor shall submit the proof of having paid the duties / levies along with the Invoices / Bills.

In case of orders for supplies to Naval vessels, Excise Duty exemption certificate issued by Indian Navy will be provided on readiness of items for despatch & GRSE is to be intimated by supplier / vendor / sub-contractor regarding readiness of items at least a month before despatch. Such exemption certificates shall be issued to Sub-contractors / Sub-vendors of Sub-contractor / Supplier / Vendor on whom Purchaser had placed a Purchase Order.

IN-604.1 For supplies from States outside the state of West Bengal, Declaration Form "C" or "D" as applicable will be issued to the supplier for concessional rate of Sales Tax. In case of sale within the state of West Bengal, W.B.S.T. Form will be issued for concessional rate of Sales Tax.

IN-604.2 Declaration Form can be issued to suppliers in case of transit sale, i.e. transfer of documents during the period of transit of the materials to obtain Sales Tax benefit.

Invoice shall clearly indicate cost incidentals against each head, as applicable:

Basic Cost, Excise Duty, Packing & forwarding charges, Central / State Sales Tax, Service Tax, Freight, Insurance, etc.

IN-605 Payment made under one order shall not be assigned or adjusted to any other order except to the extent agreed upon in writing by the Purchaser. During the currency of the contract, if any sum of money is payable by the Sub-contractor / Supplier / Vendor the same shall be deducted from any sum then due or thereafter may become due to the Sub-contractor / Supplier / Vendor under the contract or any other contract with the Purchaser.

IN-606 Works Contract Tax, wherever applicable, will have to be borne by Sub-contractor / Supplier / Vendor. In addition, Employees State Insurance premium, Provident Fund, Service Tax and other statutory dues of workers deployed at Purchaser's premises by Sub-contractor / Supplier / Vendor will have to be borne by him. In case of Works Contract Form 58 or 59 as applicable is to be submitted by the vendor/supplier/sub-contractor.

IN-607 **Liquidated Damages / Risk Purchase:**

IN-607.1 In the event that-

(a) Sub-contractor / Supplier / Vendor (SELLER) fails to deliver the equipment / product or documentation meeting the requirement of the Purchase Order on or before the dates specified, or

(b) The equipment / product when tested in accordance with the performance requirement of the Purchase Order, fails to meet those performance parameters, the buyer (Purchaser) will suffer damages in an amount that is not susceptible to calculation with reasonable certainty. Therefore, any Liquidated Damages set forth in the Purchase Order represent a reasonable determination of the amount of damages that the Purchaser will suffer, and are not in the way of penalties. Seller hereby waives any defence to Purchaser's recovery of such Liquidated Damages on the plea that actual damages are ascertainable or that such Liquidated Damages do not represent a reasonable determination of damages suffered by Purchaser or are penalties.

IN-607.2 Sub-contractor / Supplier / Vendor (Seller) will be liable to pay Liquidated Damages for late delivery of Products, Manuals, Drawings and Documentation as stated in the Purchase Order. Unless otherwise expressly specified, the rate of Liquidated Damages for late delivery shall be at the rate of 0.5% of the total order value per week or part thereof of delay upto a maximum of 5% of the total order value. Such Liquidated Damages shall be deducted by the Purchaser from any monies due to Sub-contractor / Supplier / Vendor (Seller). Payments made by the Sub-contractor / Supplier / Vendor (Seller) of Liquidated Damages shall be in addition to any other remedies (other than any other remedy for the recovery of damages) available to the Purchaser, including without limitation the remedy of cancellation of Order for default.

IN-607.3 Sub-contractor / Supplier / Vendor (Seller) will be liable to pay Liquidated Damages for late submission of Drawings for approval as agreed to by Purchaser and Sub-contractor / Supplier / Vendor (Seller) and as stated in the Purchase Order. The amount of such damages will be clearly defined in the Purchase Order and may extend upto 5% of the Order value.

IN-607.3.1 Drawings submitted by the Sub-contractor / Supplier / Vendor (Seller) will be the property of Indian Navy.

IN-607.4 If the equipment / article or any portion thereof be not delivered by the scheduled delivery date, the Purchaser shall be at liberty, without prejudice to the right of the Purchaser to recover Liquidated Damages / penalty as provided for in these conditions or to any other remedy for breach of contract, to terminate the contract either wholly or to the extent of such default. Amounts advanced or part thereof corresponding to the undelivered supply shall be recoverable from the Sub-contractor / Supplier / Vendor at the prevailing bank rate of interest.

IN-607.5 The Purchaser shall be at liberty to purchase, manufacture or supply from stock as it deems fit, other articles of the same or similar description to make good such default and or in the event of the contract being terminated, the balance of the articles of the remaining to be delivered thereunder. Any excess over the purchase price, cost of manufacture or value of any articles supplied from the stock, as the case may be, over the contract price shall be recoverable from the Sub-contractor / Supplier / Vendor.

IN-607.6 In case of unsatisfactory progress of supply at any point of time after placement of order GRSE reserve the right to cancel the order without assigning any reason and to procure the ordered material from any alternative source at your complete risk and cost. GRSE also reserves the right to cancel the order forthwith without any financial implications on either side if upon lapse of 50% of the scheduled delivery time the progress of manufacture is not up to the satisfaction of GRSE/Owner and the failure on the part of the sub-contractor/ supplier/vendor to conform to the delivery schedule is inevitable.

IN-608 **Submission of Bills to SLP Section (Corporate Finance/GRSE)**

The bills presently submitted to SLP Section by vendors for purchase orders placed by NCM / Purchase Department in respect of "SHIP DIVISION ONLY" will now be deposited in the Box kept at the entrance of the Corporate Finance Department (in front of Pantry). All suppliers are requested to drop their bills in sealed cover in the Box earmarked for, effective from 01st April, 2002.

Computer generated acknowledgement for the bills dropped during the previous day may be collected in the next working day from the Central Despatch Section, except Saturday.

Corporate Finance (SLP Section) will forward the computer generated receipts to Central Despatch Department by 11-00 hrs. everyday.

The supplier should ensure that all the bills are kept in a separate envelope orderwise and also mention their vendor code number for easy identification and registration. All enclosures are also be firmly fixed with the bills and no responsibility will be taken by the SLP Section for alleged missing of documents. Bank Guarantee must be submitted separately in sealed closed cover of the Bank to the SLP Section AND NOT TO BE ENCLOSED WITH BILL.

For payment through ECS, bills will be deposited in the Box kept at the entrance of Corporate Finance Dept. as elaborated above. ECS Format of Bank particulars and Payment Procedure are enclosed at Annexure – 6 reference Clause IN 601(c) above.

IN-7.0 Quality Assurance, Inspection, Testing and Commissioning Assistance:

IN-701 The equipment will be inspected by one or more agencies indicated below and an inspection certificate(s) shall accompany the equipment.

Statutory : M. M. D. or N. M. D.

Regulatory: Classification Society–L.R.S./A.B.S/D.N.V/ I.R.S. etc.

Specification: Survey, DQA(WP)/DQAN/CQAE, Classification Society.

Others: Owners, W. P. S. (KOLKATA), GRSE

IN-702 The articles to be supplied shall be strictly in accordance with the drawings/specification/statement of requisition (SOR) / samples indicated in the order.

IN-703 The supplier /vendor/sub-contractor shall not sell, transfer, assign or otherwise dispose off the rights, liabilities and obligations under the contract without the previous consent of the purchaser in writing.

IN-704 The articles shall be subject to Inspection and Quality Assurance by QA Authorities or their agents (Inspecting Officer) as specified in the order. The supplier/vendor/sub-contractor shall give 30 days' notice for inspection and will make necessary arrangements / provide necessary facilities to inspectors / nominated agency to carry out inspection / testing during course of manufacture/final inspection and testing as required. Formal Inspection Certificates will be issued by the relevant QA Authorities /Agents.

IN-705 Immediately on receipt of order the supplier/vendor/sub-contractor shall get in touch with the Inspection Authority and submit Quality Assurance Plan. Exact scope, stages and parameters of inspection and test schedule shall be as per QA Plan duly approved by the QA Authority. All charges for inspection shall be borne by the suppliers/vendors/sub-contractor.

IN-706 Receipt Inspection shall be carried out by GRSE-QA

For materials supplied with long term preservation in sealed cases / cocoons, receipt inspection will be followed as per PRESERVATION at Cl. IN-112 above.

IN-707 The price should be inclusive of inspection/approval/certification cost to meet the relevant requirement of the technical specification. This should also include the cost of furnishing shock calculations and type test results wherever applicable.

IN-708 The supplier/vendor/sub-contractor shall furnish all relevant Inspection Certificates and Test & Guarantee Certificates along with each consignment and copies of same in triplicate shall also be mailed / forwarded to GRSE immediately on despatch of articles. The supplier/vendor/sub-contractor shall also provide 3 copies of weighed Weight Certificate for items supplied.

IN-709 The decision of the inspecting authority or his agent, as the case may be, on any question of the intent, meaning and the scope of specifications / standards shall be final, conclusive and binding on the Sub-contractor / Supplier / Vendor.

IN-710 REPLACEMENT FOR REJECTION :

(a) Should the articles, or any portion thereof be rejected, the contractor shall collect the same from the purchaser's yard within 15 days from the date of intimation of such rejection to the supplier/vendor/sub-contractor and replace/rectify the same on top priority basis. Before collection of rejected items the supplier/vendor/sub-contractor shall furnish Bank Guarantee/Bank Draft of equivalent amount or accept GRSE holding back payment of their qualifying bills of equivalent amount till deficiencies are made good. The purchaser reserve the right to dispose off the rejected items at the end of a total period of 90 days in a manner to the best advantage to the purchaser and recover storage charges and any consequential damages, from sale proceeds of such disposal. Rejection of materials and also the late delivery will affect further business with GRSE.

(b) The guarantee period of replaced parts /items shall however be reckoned from the date of replacement.

(c) If the defects are not remedied within a reasonable/stipulated time, the purchaser may proceed to rectify the defects at the supplier/vendor/sub-contractor's risk & cost but without prejudice to any other rights which the purchaser may have against the supplier/vendor/sub-contractor in respect of their failure to remedy such defects.

IN-711 The services of the Sub-contractor's / Supplier's / Vendor's Engineers shall be provided free of cost till Guarantee period / extended Guarantee period as required by the Purchaser to assist / supervise the installation, setting to work, commissioning of the equipment supplied by the Sub-contractor / Supplier / Vendor.

IN-712 The Sub-contractor / Supplier / Vendor shall provide the requisite training for the Purchaser's / Owner's Personnel at Sub-contractor's / Supplier's / Vendor's/ GRSE's premises or on board the vessel where the equipment is installed, in respect of the equipment received from the Sub-contractor / Supplier / Vendor. The cost of travelling, lodging, boarding etc. shall be borne as mutually agreed to and detailed in the order.

IN-713 The services of the Sub-contractor's / Supplier's / Vendor's Engineers shall be provided free of cost as required by the Purchaser to assist/supervise the installation, setting to work, commissioning, harbour and sea trials of the equipment supplied by the Sub-contractor / Supplier / Vendor for the periods as mutually agreed upon and as per the terms and conditions of the order.

Should the Purchaser / Owner desire to avail services beyond the free service periods available against the contract, the Sub-contractor / Supplier / Vendor shall quote for the same on hourly / daily rate basis along with other terms and conditions, if any.

IN-714 Conditions of tests and inspection requirements, if not held by the Sub-contractor / Supplier / Vendor are to be obtained from the Inspection Authority. Any / all other technical clarifications may be obtained from Inspection Authority directly, under intimation to Purchaser.

IN-715 The Sub-contractor / Supplier / Vendor shall accord all facilities to Purchaser's Inspectors / Nominated Agency to carry out Inspection / Testing during course of manufacture / final testing.

IN-8.0 Miscellaneous:

IN-801 Force Majeure (as vetted by Min. of Law) : -

Should any force majeure circumstances arise, each of the contracting party shall be excused for the non fulfilment or for the delayed fulfilment of any of its contractual obligations, if the affected party within 15 days of its occurrence informs the other party in writing.

Force majeure shall mean fires, floods, natural calamities or other acts such as war, turmoils, strikes (as not limited to be establishment of the seller), sabotage, explosions, quarantine restrictions beyond the control of either party.

It is understood and agreed between the parties hereto that the rights and obligations of the parties shall be deemed to be in suspension during the continuance of the force majeure event as aforesaid and the said rights and obligations shall automatically revive upon the cessation of the intervening force majeure event. The period within which the rights and obligations of the parties shall be in suspension due to force majeure event shall not be considered as a delay with respect to the period of delivery and / or acceptance of delivery under the contract or otherwise to the detriment of either party.

Notwithstanding the provisions of the immediately foregoing clauses it is further understood and agreed between the parties hereto that in the event of any force majeure persisting for an uninterrupted period exceeding 6 (six) months, either party hereto reserves the right to terminate this contract upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in this agreement for the goods received.

IN-802 **Arbitration:**

Any dispute / differences between the parties arising out of and in connection with the contract shall be settled amicably by mutual negotiations. CMD/GRSE will be the Arbitrator. However unresolved disputes/ differences, if any, shall be settled by Arbitration and the arbitration proceedings shall be conducted at Kolkata (India) in English language, under the Indian Arbitration and Conciliation Act, 1996. If, at any time, before, during or after the contract period, any unsettled claim, question, dispute or difference arises between the parties, upon or in relation to or in connection with or in any way touching or concerning this tender / agreement / supply order (*retain whichever is applicable*) the same shall be referred to the Chairman & Managing Director (‘CMD’ in short) or the Managing Director (‘MD’ in short), as the case may be of Garden Reach Shipbuilders & Engineers Ltd. (GRSE Ltd’ in short) for adjudication of the said disputes or differences, as Sole Arbitrator, in accordance with the provisions of the Arbitration and Conciliation Act, 1996.

The CMD or MD, GRSE Ltd. if he so desires, may nominate / appoint another officer of GRSE Ltd. or a person, whom he thinks fit and competent, for adjudication of the disputes or differences, referred to him as the Sole Arbitrator.

Such arbitration shall, in all respects, be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the rules framed thereunder or any statutory modification or re-enactment thereof for the time being in force.

The Award of the Sole Arbitrator shall be final, conclusive and binding upon the parties.

In the event of the death or resignation for any reason whatsoever of the said Sole Arbitrator, appointed by the said CMD or MD of GRSE Ltd., the CMD or MD of GRSE Ltd., on an application from either of the parties in this behalf, shall act himself as the Sole Arbitrator or nominate / appoint, in place of the outgoing Arbitrator, another officer of GRSE Ltd. or a person whom he thinks fit and competent to adjudicate the said disputes and differences in accordance with law.

Also in the event of an arbitration award is set aside by a competent court on an application from either party and unless otherwise ordered by the said court, the CMD or MD of GRSE Ltd., on an application from either party, shall himself act as Sole Arbitrator or nominate / appoint another officer of GRSE Ltd. or a person whom he thinks fit and competent to adjudicate the disputes and differences in accordance with law.

The cost of the arbitration, fees of the arbitrator, remuneration of the stenographer and clerk, stamp paper etc., as shall be decided by the Sole Arbitrator, shall be shared equally by the parties. The venue of arbitration, unless otherwise decided by the parties or by the Sole Arbitrator himself, shall be the premises of Garden Reach Shipbuilders & Engineers Ltd. located at 43/46, Garden Reach Road, Kolkata 700 024.

IN-803 **Indemnification:**

The Sub-contractor/Supplier/Vendor, his employees, licencees, agents or Sub-Vendor / Sub-contractor, while on site of the Purchaser for the purpose of this contract, shall indemnify the Purchaser against direct damage and / or injury to the property and/ or the person of the Purchaser or that of Purchaser’s employees, agents, Sub-Contractors / Suppliers occurring and to the extent caused by the negligence of the Sub-contractor / Supplier / Vendor, his employees, licencees, agents or Sub-contractor by making good such damages to the property, or compensating personal injury and the total liability for such damages or injury shall be as mutually discussed and agreed to.

IN-804 **Use of Undue Influence / Corrupt Practices:**

(a) The Sub-contractor / Supplier / Vendor should give an undertaking that he has not given, offered or promised to give, directly or indirectly any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Purchaser or otherwise in procuring the contract or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the Contract with the Purchaser for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Purchaser. Any breach of the aforesaid undertaking by the Sub-contractor / Supplier / Vendor or any one employed by him or acting on his behalf (whether with or without the knowledge of the Sub-contractor / Supplier / Vendor) or the commission of any offence by the Sub-contractor / Supplier / Vendor or any one employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1980 or the Prevention of Corruption Act, 1947 or any other Act enacted for the prevention of corruption shall entitle the Purchaser to cancel the contract and all or any other contracts with the Sub-contractor / Supplier / Vendor and recover from the Sub-contractor / Supplier / Vendor the amount of any loss arising from such cancellation. A decision of the Purchaser or his nominee to the effect that a breach of the undertaking has been committed shall be final and binding on the Sub-contractor / Supplier / Vendor.

(b) The Sub-contractor / Supplier / Vendor shall not offer or agree to give any person in the employment of Purchaser any gift or consideration of any kind as “Inducement” or “reward” for doing or forbearing to do or for having done or foreborne to do any act in relation to the obtaining or execution of the contract/s. Any breach of the aforesaid condition by the Sub-contractor / Supplier / Vendor or any one employed by them or acting on their behalf (whether with or without the knowledge of the Sub-contractor / Supplier / Vendor) or the commission of any offence by the Sub-contractor / Supplier / Vendor or by any one employed by them or acting on their behalf which shall be punishable under the Indian Penal Code 1980 or the Prevention of Corruption by Public Servants, shall entitle Purchaser to cancel the contract/s and all or any other contracts and then to recover from the Sub-contractor / Supplier / Vendor the amounts of any loss arising from such contracts’ cancellation, including but not limited to imposition of penal damages, forfeiture of Security Deposit, encashment of the Bank Guarantee and refund of the amounts paid by the Purchaser.

(c) In case, it is found to the satisfaction of the Purchaser that the Sub-contractor / Supplier / Vendor has engaged an Agent or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents / Agency Commission and use of undue Influence, the Sub-contractor / Supplier / Vendor, on a specific request of the Purchaser shall provide necessary information / inspection of the relevant financial document / information.

IN-805 **Banned or de-listed Contractors:**

The bidders shall give a declaration that they have not been banned or de-listed by any Government or quasi Government agencies or PSUs. If a bidder has been banned or de-listed by any Government or quasi Government agencies or PSUs, this fact must be clearly stated and it may not necessarily be a cause for disqualifying him.

IN-806

- a) As a general rule, price negotiation with L1 vendor(s) will not be entered into as far as possible, unless warranted by unreasonable price quoted in the opinion of GRSE.
- b) During Technical and / or commercial negotiation in case the participating vendors indicate the need of submission of revised price bid but the same is not acceptable by competent authority in due course, GRSE reserves the right to consider such bid(s) to be disqualified on this ground under intimation to the relevant vendor(s) before price bid opening.
- c) Delivery schedule as mentioned above is our essential requirement. GRSE reserves the right to cancel the bid if the delivery requirement is not met.
- d) Please forward your confirmation on all commercial points for acceptance of your offer in tender data sheet.
- e) In case your offer is not submitted in two separate given data sheet, the same is liable to be rejected.

ANNEXURE-XVI

FORMAT OF BANK GUARANTEE

GUARANTEE BOND

(To be used by all scheduled Banks)

1. In consideration of M/s. Garden Reach Shipbuilders & Engineers Limited, 43/36, Garden Reach Road, Calcutta – 700024 (hereinafter called “the Buyer”) having agreed to exempt M/s.(hereinafter called “the Party”) from the demand, under the terms and conditions contained in the Tender No. dated..... (hereinafter called “the said “) of Security Deposit for the due fulfillment by the said Party’s of the terms and conditions contained in the said Tender, on production of a Bank Guarantee for Rs..... (Rupees..... only) we,..... Bank Limited (hereinafter referred to as “the Bank”) do hereby undertake to pay to Buyer an amount not exceeding Rs.against any loss of any breach by the said Party of any of the terms & conditions contained in the said Tender.
2. We,Bank.....do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from the Buyer stating that the amount claimed is due by way of loss of damage caused, to or would be caused to or suffered by the Buyer by reason of any breach by the said Party of any of the terms of conditions contained in the said Tender or by reason of the Party’s failure to perform the said Tender. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee.
3. We,Bank Limited further agree to the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Tender/Order and that it shall continue to be enforceable till all the dues of the Buyer under or by virtue of the said Tender/Order have been fully paid and its claims satisfied or discharged or till the Managing Director, Garden Reach Shipbuilders & Engineers Limited, certifies that the terms and conditions of the said Tender/Order have been fully a properly and carried out by the said Party and accordingly discharge the Guarantee. Unless a demand or claim under this Guarantee is made on us in writing on or before the We shall be discharged from all liability under this Guarantee thereafter.
4. We,Bank Limited further agree with the Buyer that the Buyer shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said Tender/Order or to extend time of performance by the said Party from time to time or to postpone for any time or from time to time any of the powers exercisable by the Buyer against the said Party and to forbear or enforce any of the terms and conditions relating to the said Tender/Order and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Party or for any forbearance, act of omission on the part of the Buyer or any indulgence by the Buyer to the said Party or by any such matter of thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
5. We,Bank Limited lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Buyer in writing.
6. Notwithstanding anything contained hereinabove, the liability of the Guarantor under this Guarantee is restricted to Rs.(Rupees.....) and that this Guarantee shall remain enforce until its expiry on the(date), unless a suit or action to enforce a claim under this Guarantee is made against the Guarantee within six months from the aforesaid date of expiry, all the rights of the beneficiary under the said Guarantee shall be forfeited and the Guarantee shall be released and discharged from all liabilities thereof.

for.....Bank Limited.

Dated theday of20.....

ANNEXURE-XVII

**FORM NO.
QS / 03. 0082**

FORMAT OF BANK GUARANTEE TOWARDS EARNEST MONEY

(to be used by all scheduled banks)

In consideration of M/s. Garden Reach Shipbuilders & Engineers Limited, 43/46, Garden Reach Road, Kolkata – 700 024 (herein after called "the Buyer") having agreed to exempt M/s. _____ (hereinafter called "the Party") from the demand, under the terms and conditions contained in the Tender / Purchase Order No. _____ dated _____ (thereinafter called "the said tender") of Security Deposit for the due fulfillment by the said party of the terms and conditions contained in the said tender, on production of a Bank Guarantee for Rs. _____ (Rupees _____ only). We, _____ Bank Limited (hereinafter referred to as "the Bank") do hereby undertake to pay to the Buyer an amount not exceeding Rs. _____ against any loss or damage caused to or suffered by the Buyer by reason of any breach by the said Party of any of the terms or contained in the said Tender.

2. We, _____ Bank _____ do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from the buyer stating that the amount claimed is due by way of loss of damage caused, to or would be caused to of suffered by the Buyer by reason of any beach by the said Party of any of the terms or conditions contained in the said Tender or by reason of the Party's failure to perform the said Tender. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee.

3. We, _____ Bank Limited further agree to the Guarantee herein contained shall remain in full force and affect during the period that would be taken for the performance of the said Tender / Order and that it shall continue to be enforceable till all the dues of the Buyer under or by virtue of the said Tender/Order have been fully paid and its claims satisfied or discharged or till the Managing Director, Garden Reach Shipbuilders & Engineers Limited, certified that the terms and conditions of the said Tender/Order have been fully & properly and carried out by the said Party and accordingly discharges the Guarantee. Unless a demand or claim under this Guarantee is made on us in writing on or before the _____ we shall be discharged from all liability under this Guarantee thereafter.

Contd. 2

-2-

4. We, _____ Bank Limited further agree with the Buyer that the Buyer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender / Order or to extend time of performance by the said party from time to time or to postpone for any time or from time to time any of the powers exercisable by the Buyer against the said Party and to forbear or enforce any of the terms and conditions relating to the said Tender / Order and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said party for any forbearance, act or omission on the part of the Buyer or any Indulgence by the Buyer to the said Party or by any such matter of thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

5. We, _____ Bank Limited lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Buyer in writing.

6. Notwithstanding anything contained hereinabove, the liability of the Guarantor under this Guarantee is restricted to Rs. _____ (Rupees _____) and that this guarantee shall remain inforce until its expiry on the _____ (date), unless a suit or action

to enforce a claim under this Guarantee is made against the Guarantor within six months from the aforesaid date of expiry, all the rights of their beneficiary under the said Guarantee shall be forfeited and the Guarantee shall be released and discharged from all liabilities thereof.

For _____ Bank Limited.

Dated the _____ day of _____ 20_____

ANNEXURE-XVIII

FORM NO. QS/03/0020

GARDEN REACH SHIPBUILDERS & ENGINEERS LIMITED

43/46, GARDEN REACH ROAD

KOLKATA – 700 024.

**FORMAT OF BANK GUARANTEE TOWARDS
SECURITY DEPOSIT.**

Ref : 1. BPE Notification No. BPE/G:032/78/1(4)/Adv(F)/69 dated 24.10.78.

2. F.No.0(7)/B.O.III/75 dated 2.11.77.

GUARANTEE BOND

(to be used by all scheduled banks)

1. In consideration of M/s. Garden Reach Shipbuilders & Engineers Limited, 43/46, Garden Reach Road, Kolkata – 700 024(hereinafter called "The Buyer") having agreed to exempt M/s..... (hereinafter called "The Party") from the demand,under the terms and conditions contained in the Tender/ Purchase order no.....dated (hereinafter called "the said Tender/ Order") of security deposit for the due fulfillment by the said Party's of the terms and conditions contained in the said Tender,on production of a Bank Guarantee for Rs..... (Rupees..... only), we Bank Limited (hereinafter referred to as "the Bank") do hereby undertake to pay to the Buyer an amount not exceeding Rs..... against any loss or damage caused to or suffered by the Buyer by reason of breach by the said Party of any of the terms or conditions contained in the said Tender.
2. We.....Bank do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from the Buyer stating that the amount claimed is due by way of loss or damage caused, to or would be caused to or suffered by the Buyer by reason of any breach by the said Party of any of the terms or conditions contained in the said Tender or by reason of the Party's failure to perform the said Tender. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this guarantee.
3. We.....Bank Limited further agree to the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Tender. Order and that it shall continue to be enforceable till all the dues of the Buyer under or by virtue of the said

Contd....2

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Tender/Order have been fully paid and its claims satisfied or discharged or till the Chairman & Managing Director, Garden Reach Shipbuilders & Engineers Limited, certifies that the terms & conditions of the said Tender have been fully and properly carried out by the said Party and accordingly discharges the Guarantee. Unless a demand or claim under this Guarantee is made on us in writing on or before the..... we shall be discharged from all liability under this Guarantee thereafter.

4. We.....Bank Limited further agree with the Buyer that the Buyer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms & conditions of the said Tender/Order or to extended time of performance by the said party from time to time or to postpone for any time or from time to time any of the powers exercisable by the Buyer against the said Party and to forbear or enforce any of terms and conditions relating to the said Tender/Order and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Party or for any

for bearance, act or omission on the part of the Buyer or any indulgence by the Buyer to the said Party or by any such matter of thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

5. We.....Bank Limited lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Buyer in writing.
6. Notwithstanding anything contained here in above, the liability of the Guarantor under this Guarantee is restricted to Rs..... (Rupees.....only) and that this Guarantee shall remain in force until its expiry on the(date), unless a suit or action to enforce a claim under this Guarantee is made against the Guarantor within six months from the date of expiry, all the rights of the beneficiary under the said Guarantee shall be released and discharged from all liabilities thereof.

ForBank Limited.

(seal)

Dated theday of2016