



**GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.**

**(A GOVERNMENT OF INDIA UNDERTAKING)**

**43/46, Garden Reach Road, Kolkata 700-024**

**Phone: 2469-8100 to 8114 Extn 648/749**

**FAX : 2469-3932**

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**NOTICE INVITING TENDER (NIT)**

**NIT No . Main/Contract/OT/Rod Gearing/3018/046/ET-00207 Dated 07.09.2012**

**SUB: - Fitment of Rod Gearing of Valves and Remote stopping arrangement on Board Yard 3018**

1) Bids in single stage two bid system (Part-I: Techno-Commercial Bid and Part-II: Price Bid) are invited for Fitment of Rod Gearing of Valves and Remote stopping arrangement on Board Yard 3018 as per the enclosed technical specification SOR no. RN/3017-20/E/000, R1 & RN/3017-20/E/160 **(Annexure-I)** from resourceful and financially solvent vendors having experience in execution of same job for sea going vessels.

(i) Part -I : Techno-Commercial bid – ANNEXURE – A & B (it must contain only technical & commercial points and should not contain any price. If any price is indicated in Part-I, the offer will be treated as CANCELLED)

(ii) Part - II : Price bid (containing only price) – ANNEXURE –C

2) You will have to submit bid in two part (Techno-Commercial & 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 (ANNEXURE-C). No other attachment regarding price will be allowed if so then offer will be treated as cancelled. You should mention your offer ref. no. and date in ANNEXURE – A, B & C.

3. a) Vendor should furnish the following details in their Techno-Commercial bid:

- i. Documentary evidence by the Firm in terms of execution of similar order(s).
- ii. Details of workman/ staff on roll of the company.
- iii. PAN No.
- iv. Copy of Labor license certificate.
- v. Copy of registration of the company.
- vi. Solvency certificate from Banker.
- vii. Copies of registration with PF/ESI/Service Tax authorities.
- viii. Audited annual accounts for last three years along with annual report.

Vendors registered with GRSE, need not submit the documents (iii) to (viii) 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.

4. **Tender Fee:** Tender Fee will be 500/- (Five Hundred) (non-refundable). from Nationalized/Scheduled Bank through DD/PO in favour 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

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Contract Cell, GRSE MAIN. Addresses to Manager (Contract Cell) 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.

5. EMD amount of Rs. 15,000/- (Fifteen thousand only) (interest free) issued from Nationalized/Scheduled Bank other than co-operative Bank through DD/PO/Bank Guarantee (as per format) in favour of Garden Reach Shipbuilders & Engineers Limited (Detailed in ANNEXURE-II). Vendor need to submit EMD as detailed in prescribed format in e-procurement commercial data sheet and send the DD/PO to Manager (Contract), Contract Cell, GRSE MAIN and BG directly to GM(F) 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.

**6. Micro & Small Enterprise -**

i) For 20% value of a tender, purchase preference to the tune of 15% to be accorded to all participating MSEs in that particular tender subject to acceptance of lowest quoted price.

ii) In case of multiple bidders falling under the above category, purchase preference to be accorded in equal proportion within a limit of quantity allocated for this purpose as above.

iii) In case of such MSE is owned by SC/ST category entrepreneur, then that organization will be entitled for 4% out of 20% reserved for this purpose and of equal proportion of the 16%.

iv) MSEs will also be entitled for following benefits: -

a) Tender documents will be issued free of cost.

b) Payment of Earnest Money will be exempted.

7. Last date of submission of Bid / Date of opening of bid is indicated in Tender Document. Bidders may attend the opening of tenders (Technical Bid). Tender is liable to be rejected if the requisite documents are not enclosed with the technical offer.

8. 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 and will be opened in presence of all participating bidders.

9. GRSE at its discretion may engage multiple vendors to maintain the construction schedule.

10. Acceptance Format Matrix should be filled up and attached with techno-commercial bid as marks of acceptance of NIT/SOTR/STAC. 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 tender until & unless deviation is specially mentioned in offer.

11. Queries if any on SOR or other Terms may be got clarified from PL (3018)/AGM (H&HOF) prior to submission of offer.

12. GRSE reserves the right to accept / reject any Tender in full or in part without assigning any reason.



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**FAX : 2469-3932**

**NIT No . Main/Contract/OT/Rod Gearing/3018/046/ET-00207 Dated 07.09.2012**

**SUB: - Fitment of Rod Gearing of Valves and Remote stopping arrangement on Board Yard 3018**

1. Last date of receipt of Tender : 08.10.2012 up to 1400 hrs.
2. Date of opening Tender:- Part I - Techno-Commercial Bid : 08.10.2012 at 1410 hrs.
3. Date of opening Tender - Part II – Price Bid : Date of opening to be notified after conclusion of TNC/CNC meetings and acceptance of Techno- commercial offer.
4. Earnest Money to be deposited along with the offer by vendor : Rs. 15,000/-
5. Details of work, Terms & Condition etc. : As per Enclosure, (Annexure I to III)

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**List of Enclosures:**

ANNEXURE-I –	Technical Specification & Drawings	- 28 Pages.
ANNEXURE- II-	Standard Terms & Conditions.	- 09 Pages.
ANNEXURE- III-	Guidelines of Bank Guarantee & Format of Bank Guarantee towards EMD	- 03 Pages.

**DGM (CONTRACT)**

**SOTR NO: - RN/3017-20/E/000, R1**

[R1 – modified as per yard msg dated 25.01.2011 – 09.03.2011]

**STATEMENT OF REQUIREMENT OF ROD GEARING  
OF VALVES FOR P-28 CLASS OF SHIPS**

**GRSE LTD**

16 Dec 2010



### List of Annexures

1. Annexure - A:- Drawing no. 3017-20/438001 (02 shts)
2. Annexure - B:- Matrix of valves with valve operating position (10 pages)

1. On board work related to Remote control of valves by means of Rod Gearing through mitre gear box, universal joint and flush deck fitting will have to be undertaken by contractor. Arrangement & list of such valves with remote valve operating position will be as per Annexure "A" and Annexure "B".

**Note: Status of erection of various valves at the time of handing over to sub-contractor will be indicated by GRSE Planning / Berth.**

2. Detailed description of the jobs will be given in the following paragraphs: -

i. The contractor is required to carry out rod gearing work in accordance with approved schematic, layout drawings and on-board lining out. The workmanship should be carried out to the entire satisfaction of GRSE / WOT (KOL).

ii. Should there be any requirement of modification during on-board erection considering site conditions / maintainability aspect / recommendation of GRSE / WOT reps, the same is to be carried out, without any commercial implication.

iii. Should there be any occasional requirement for removal of finally erected items to allow spaces for installation of other items / equipment; the same is to be done without any commercial implication

iv. All consumables for welding will be free issue item to the contractor.

v. The contractor is required to furnish weekly work plan along with requisition for material two weeks in advance. All requisitions are to be raised in format furnished by planning department of GRSE.

v. All welding sets / gas sets including TIG welding sets (for on-board / shop work) are to be arranged by the contractor.

vi. Requirement of service bolts / temporary support as required during erection is to be arranged by the contractor.

vii. All temporary structure / scaffolding as required during erection are to be arranged by the contractor. However, material will be supplied by GRSE. Available scrap material may be utilized for temporary support in consultation with the machinery / berth Officer.

viii. Drilling / tapping and marking required to be done for any fitting as per interface particulars are to be done by the contractor.

ix. Adequate care is to be taken to avoid any damage to machinery / materials / structure during on-board hot work. The contractor will have to reimburse actual cost of item in case of any damage attributable to contractor.

x. The contractor is not allowed to weld any temporary or permanent item or do any hot work on the ship structure without concurrence of GRSE.

xi. Marking, cutting on deck / bhd and tack welding are to be executed by the contractor after getting clearance from yard. Contractor will have to provide **qualified**

**welder** for tacking and Running Welding since the structural steel is of special grade. (To be deliberated further during TNC).

xii. Drawings:

- a) All drawings required for carrying out work will be provided by GRSE.
- b) Routing of rod gearing (i.e. valve to flush deck fitting control position) are generally not identified separately in the drawing. This is to be finalized by way of lining out.
- c) In case of any discrepancy observed during lining out and drawing, the contractor is required to carry out work as per approved on-board lining out. Any doubt during installation of rod gearing is to be recorded in register for scrutiny / approval by Machinery Officer / CDO.
- d) Immediately after completion of work, the contractor should incorporate all the changes made in system and composite layouts including routing of rod gearing carried out as per approved lining out. One set of system drawing and composite layout drawings duly incorporating the "As-fitted" changes / layout in red, duly certified by authorized GRSE officer, is to be handed over to GRSE for necessary preparation of "As-fitted" drawing. **Job will not be treated as complete unless certification is available regarding submission of As fitted changes to and acceptance by CDO.**

Since all the drawings are restricted in nature, the contractor will ensure proper care while using the drawings and return all used drawings to PCO / Machinery officer after completion of job.

xiii. **Measurement:** - Quantum of actual work carried out is to be certified by GRSE/WOT. Actual measurement shall be as follows:- (a) GI pipe in running meters laid by the contractors [All measurement shall be taken along central line of pipe and shall not include the fittings as detailed in sl (b)] (b) No. of fittings viz. GM gland, GM Flush Deck Socket, Universal Joint, Mitre gear box, Support Bracket

xiv. Prior to final installation, each item / pipe piece is to be weighed. A certificate duly certified by WOT / GRSE is to be forwarded to CDO.

xv. Quality assurance authority – GRSE, WOT (KOL)

xvi. All fabrication and erection work are to be carried out in accordance with good engineering and shipbuilding practices.

xvii. Complete laying and erection of the rod gearing piping along with all fittings to be done by the contractor as per line out / system / layout drawings. Installation of all free issue items which are in the pipe line / system is to be done by the contractor with required fasteners, gaskets, clamps, supports, brackets, hangers for fixing above.

xviii. After erection on board, remote control of valves through rod gearing is to be shown by the contractor to the entire satisfaction of GRSE/ Naval inspecting agencies.



xix. Deficiency of any nature observed either during construction, trial or at the time of acceptance and recorded in form D448 will be made good by the contractor on board the ship at any part of India at no cost within the guarantee period.

xx. Prior to erection of system in a particular zone, the contractor must obtain clearance from GRSE rep.

xxi. Following support facilities will be provided by GRSE to the contractor for execution of the contract and will cease to be provided on completion of the contract:-

- a) Crane facilities for handling of materials
- b) Compressed air as is available on the dockside
- c) Water
- d) Lockable Store near the vessel
- e) Power for operation of tools
- f) Temporary lighting

This will be further deliberated in TNC.

xxii. Following items will be supplied to subcontractor as “Free Issue Item”. Any other item required to complete the system, is to be supplied by the subcontractor.

<u>Sl No.</u>	<u>DOA(WP) Patt No. / GRSE Drg No.</u>	<u>Item</u>	<u>GRSE Code No.</u>
(a)	LF-300-254	GM Gland with MS (IS 2062) deck pad (Patt no. LF-300-245)	489811010015
(b)	LF-1199 -254	GM Flush Deck Socket with MS (IS 2062) deck pad	489837011611
(c)	LF-1061-254	GM Universal Joint	489830010012
(d)	LF-684-254	Mitre gear box (25mm), 90° with bracket – GM / MS [Body :- Steel/ MCI; Internals (Gears & Shaft) :- GM / Bronze]	489801011610
(e)	LF-420-254	GM Support Bracket (ID to be drilled to 27.5 mm dia)	489835050022
(f)		Deck Gland solid spindle (25Ø, 225 mm long) – MS (Gal)	489844068002
(g)	LF-1051-254F	Coupling Sleeve – MS (Gal)	489813051610
(h)		U-Fork for valve – MS (Gal)	489815060001
(i)	LF-1080-PB 2248	S. S. Tension Pin	489846050020
(j)		Coupling Sleeve (Stepped ID Ø26 / Ø28 mm) – MS (Gal)	489810068004
(k)	LF-1089-060	Tension Pin Punch	489839001000
(l)	TK 4, LF-1958	Deck socket Turnkey - MS	489877050020
(m)		Valve Adaptor / Connecting piece – MS (Gal)	489815068005
(n)		20 NB GI pipe	
(o)		Refer NOTE at page 7	

## SCOPE OF SUPPLY

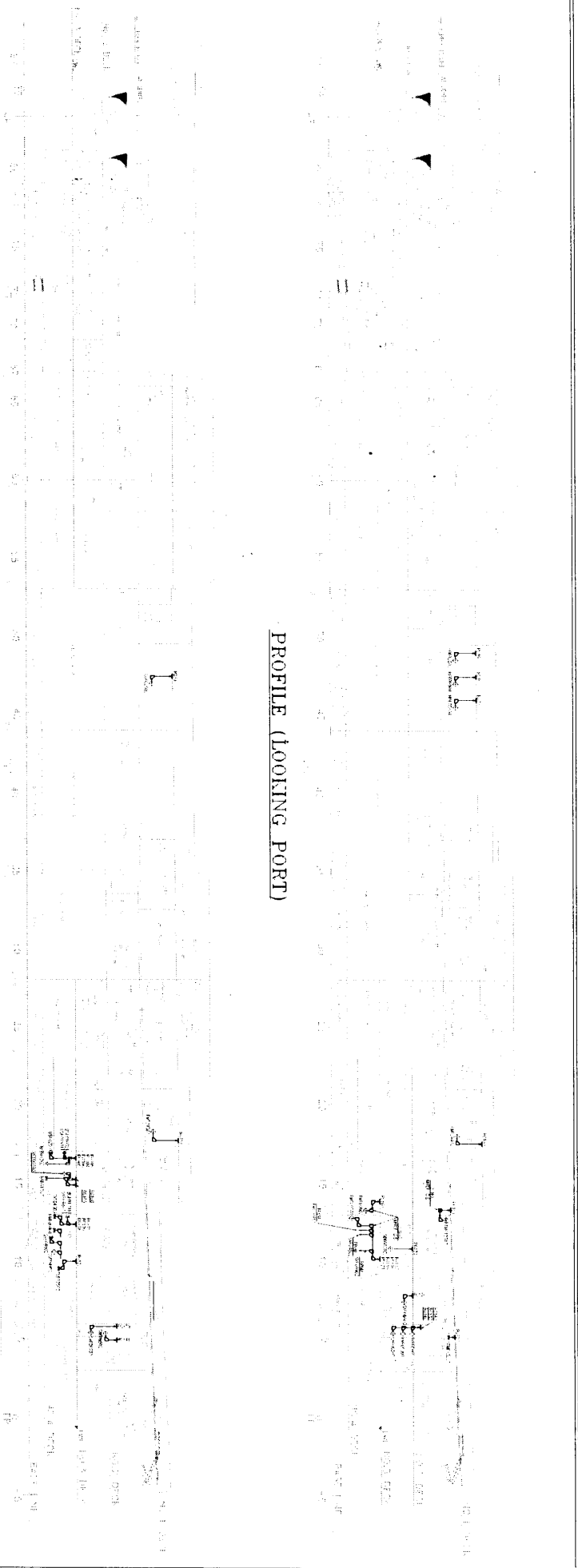
1. The activities to be carried out by the contractors are generally defined as below:
  - i. Lining out of spaces (as required).
  - ii. Marking, cutting of deck / bulkhead, tack welding and running welding (by qualified welders) / installation of deck gland / flush deck fitting etc.
  - iii. Lifting of templates from site, as required.
  - iv. Final installation on-board and connecting up the entire system. Any addition / alteration to install the same on board the ship considering site condition to be made by the contractor. Sundry Raw material required for such work will have to be supplied by contractor.
  - v. Painting of pipes with primer. Necessary primer will be supplied by GRSE.
  - vi. Inspection of installation of the system by GRSE / WOT. Defect, if any, is to be rectified.
  - vii. Modification, as suggested by quality assurance authorities, is to be carried out.
  - viii. Proper sequence of work is essential to prove that rod gearing system is preserved & protected in totality for desired use. Proper upkeep, preservation & maintenance method is to be followed for all materials & Equipment used.
2. Quality Assurance:- GRSE(QA) / WOT(KOL)
3. The sub-contractor shall ensure necessary safety precautions, use of proper tools and equipments including Personal protective equipment for their personnel. All safety precautions to be taken as per GM(S)(FOJ)'s circular no. GM(S)(FOJ)/25/05 dated 02.09.05 and GM(S)(FOJ)/25/22/05 dated 03.09.05.

[R1] NOTE – Raw Material for MS Back plate for holding the Miter Gear box, MS plates for holding GM bracket and angles for securing the MS back plates of Miter Gear box & MS plate for GM bracket will be supplied as 'Free Issue Item" to sub-contractor. However, shape and size to be made by sub-contractor. Name Tally Plates, which are to be fitted by the sub contractor, have to be manufactured by the sub contractor as per the list, which will be given by the Yard Officer.

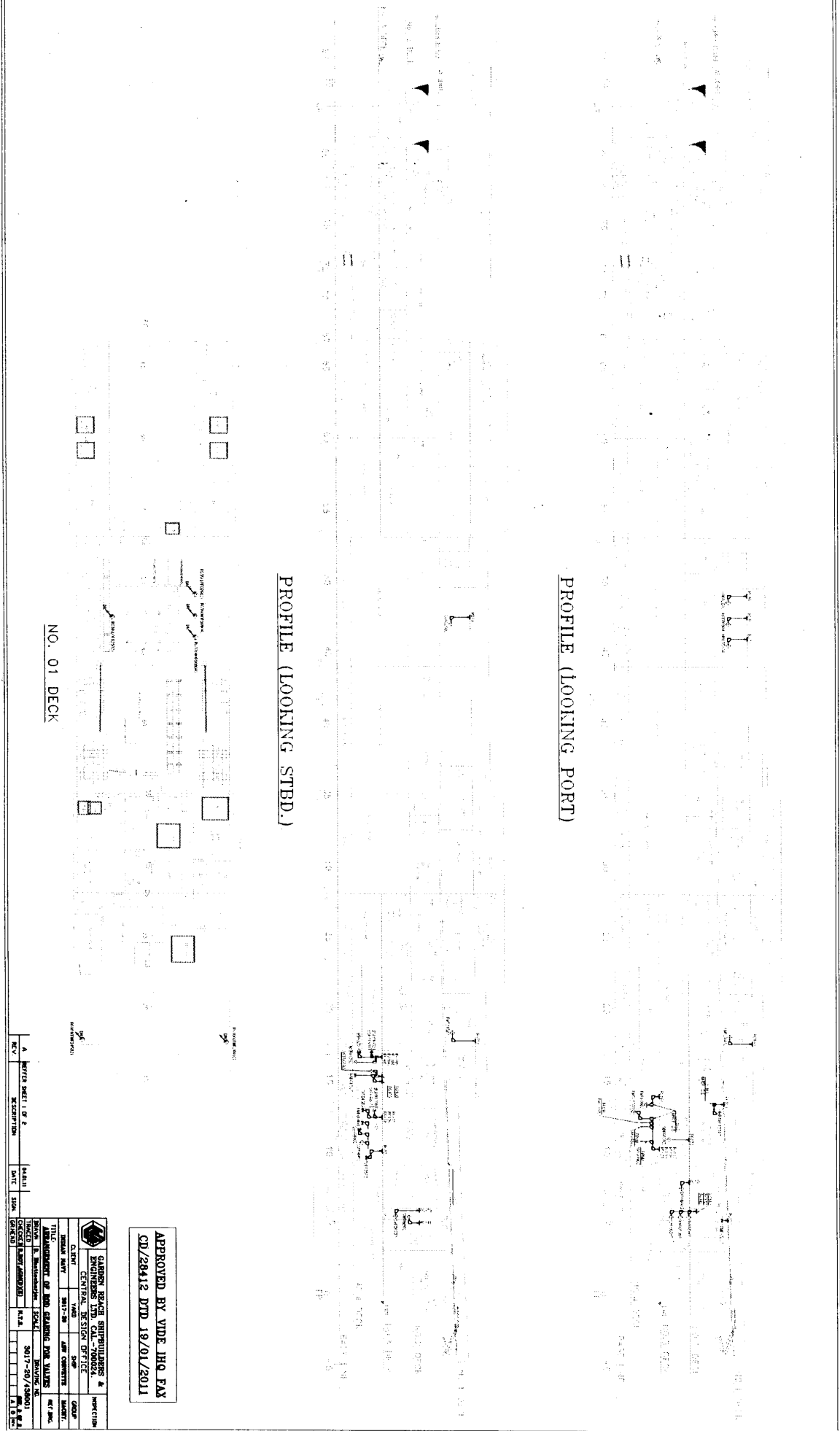




PROFILE (LOOKING PORT)



PROFILE (LOOKING STBD.)



NO. 01 DECK

APPROVED BY VIDE HQ FAX  
CD/28412 DTD 19/01/2011

		GARDEN REVENUE SHIPBUILDERS & SHIPREPAIRERS CENTRAL DESIGN OFFICE	
DESIGN NAME	NO. 01 DECK	DATE	19/01/2011
TITLE	MANAGEMENT OF SHIP DESIGN AND YARD	SCALE	3017-20/15001
PROJECT NO.	CD/28412	DATE	19/01/2011
REV.	A	NO. 01 DECK	DATE

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
1	AVF00302	BAVV80.07136-07	80	CAST STEEL	FIRE SAFE BALL VALVE 80 NB ( FLANGE ENDED )	2	Sailors' Galley	67 to 68 (S)			1	Weather Deck	67 to 68 (S)	1	AVCAT
2	AVF06701	BAVV25.07101-07	25	GM	FIRE SAFE BALL VALVE 25 NB ( FLANGE ENDED )	3	Avcat Pump Room	72 to 73 (P)	RG147	Nil	2	Aft D.C. Post	72 to 73 (P)	1	AVCAT
3	BSF01202	STVV80.11224-09	80	NAB	COMBINED NR STOP VALVE (REMOTE OPERATED) 80 NB	4	Fwd. S. T. P.	16 to 17 (S)	RG102	Nil	3	J.S. Mess ( 24 Men )	16 to 17 (S)	1	BALLAST & DE-BALLAST
4	BSF01303	STVV80.11224-09	80	NAB	COMBINED NR STOP VALVE (REMOTE OPERATED) 80 NB	4	Fwd. S. T. P.	15 to 16 (S)	RG103	Nil	3	J.S. Mess ( 24 Men )	15 to 16 (S)	1	BALLAST & DE-BALLAST
5	BSF01501	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	4	Fwd. S. T. P.	16 to 17 (S)	RG104	Nil	3	J.S. Mess ( 24 Men )	16 to 17 (S)	1	BALLAST & DE-BALLAST
6	BSF01602	BFVV125.06224-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	4	Fwd. S. T. P.	16 to 17 (S)	RG105	Nil	3	J.S. Mess ( 24 Men )	16 to 17 (S)	1	BALLAST & DE-BALLAST
7	BSF01701	BAVV65.01324-07	65	NAB	BALL VALVE 65 NB WITH BOTH END FLANGED	4	Fwd. Pump Room	12 to 13 (S)	RG115	Nil	3	SRGM Magazine	12 to 13 (S)	1	BALLAST & DE-BALLAST
8	BSF02001	BAVV65.01324-07	65	NAB	BALL VALVE 65 NB WITH BOTH END FLANGED	4	Fwd. S. T. P.	16 to 17 (S)	RG106	Nil	3	J.S. Mess ( 24 Men )	16 to 17 (S)	1	BALLAST & DE-BALLAST
9	FMF00401	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	4	Fwd. Pump Room	12 to 13 (S)	RG116	Nil	3	Lobby	9 to 10.5 (P)	1	FIRE MAIN
10	FMF00501	RTVV150.33324-07	150	NAB	RIGHT ANGLE SDNR GLOBE VALVE 150 NB, BOTH END FLANGED, MATL. - NAB	4	Fwd. Pump Room	12 to 13 (P)	RG117	Nil	3	Lobby	9 to 10.5 (P)	1	FIRE MAIN
11	FMF00602	STVV40.02324-07	40	NAB	ST. SDNR VALVE 40 NB, FLANGE ENDED, MATL. - NAB	4	Fwd. S. T. P.	13 to 14 (P)	RG107	Nil	3	J.S. Mess ( 24 Men )	13 to 14 (P)	1	FIRE MAIN
12	FMF01801	BFVV125.09324-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	Fwd. A.C.	23.5 to 24.5 (P)	RG80	Nil	3	Lobby	25 to 26 (P)	1	FIRE MAIN
13	FMF01902	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	4	Fwd. A.C.	23.5 to 24.5 (S)	RG81	Nil	3	Lobby	25 to 26 (S)	1	FIRE MAIN
14	FMF02306	STVV150.02324-07	150	NAB	150 NB STRAIGHT SDNR VALVE, BOTH ENDS FLANGED, MATL. - NAB	Below Dk. 4	Fwd. D.A.	33 to 34 (S)	RG64	Nil	2	Lobby	33 to 34 (S)	1	FIRE MAIN
15	FMF02801	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	3	Fwd. D.A.	30 to 31 (S)	RG65	Nil	2	A/F Compt.	30 to 31 (S)	1	FIRE MAIN
16	FMF02902	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	4	Fwd. M.E.R.	39 to 40 (S)	RG47	Nil	1	ENCLOSED DECK	39 to 40 (S)	1	FIRE MAIN
17	FMF04102	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	4	Fwd. M.E.R.	43 to 44 (P)	RG48	Nil	2	Main Passage Way	43 to 44 (P)	1	FIRE MAIN
18	FMF05701	BFVV100.09324-07	100	NAB	B.F. VALVE 100 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	3	Naval Store - 2	21 to 22 (P)	RG98	Nil	2	SIR	21 to 22 (P)	1	FIRE MAIN
19	FMF05901	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	3	Lobby aft of Cable Locker	5 to 6 (P)	RG138	Nil	2	Hawser Reel Store	5 to 6 (P)	1	FIRE MAIN

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
20	FMF06602	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	3	Aft M.E.R.	44 to 45 (P)	RG26	Nil	1	ENCLOSED DECK	44 to 45 (P)	1	FIRE MAIN
21	FMF07101	STVV50.02324-07	50	NAB	ST. SDNR VALVE 50 NB, FLANGE ENDED, MATL. - NAB	4	Aft A.C.	60 to 65 (S)	RG2	Nil	3	Lynx C.M.R.	64 to 65 (S)	1	FIRE MAIN
22	FMF07402	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	4	Aft M.E.R.	51 to 52 (S)	RG49	Nil	2	ENGG. OFFICE	51 to 52 (S)	1	FIRE MAIN
23	FMF07501	STVV50.02324-07	50	NAB	ST. SDNR VALVE 50 NB, FLANGE ENDED, MATL. - NAB	4	Aft D.A.	53 to 54 (S)	RG13	Nil	3	Combined Workshop	53 to 54 (S)	1	FIRE MAIN
24	FMF08001	STVV80.02324-07	80	NAB	ST. SDNR VALVE 80 NB, FLANGE ENDED, MATL. - NAB	3	Aft M.E.R.	44 to 45 (P)	RG25	Nil	1	ENCLOSED DECK	44 to 45 (P)	1	FIRE MAIN
25	FMF08401	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	4	Aft D.A.	53 to 55 (P)	RG11	Nil	3	Catwalk over Aft D.A.	53 to 55 (P)	1	FIRE MAIN
26	FMF09202	RTVV150.33324-07	150	NAB	RIGHT ANGLE SDNR GLOBE VALVE 150 NB, BOTH END FLANGED, MATL. - NAB	4		60 to 65 (P)	RG3	Nil	3	Lobby	60 to 61 (P)	1	FIRE MAIN
27	FMF10902	BFVV100.09324-07	100	NAB	B.F. VALVE 100 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	3	Void Space - Port of St. Gear Compt.	78 to 79 (P)	RG156	Nil	2	Deck Store	78 to 79 (P)	1	FIRE MAIN
28	FMF12810	BFVV150.09324-07	150	NAB	B.F. VALVE 150 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Passage Way	15 to 16 (P)	RG112	Nil	1	Passage Way	15 to 16 (P)	1	FIRE MAIN
29	FMF12817	BFVV150.09324-07	150	NAB	B.F. VALVE 150 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Passage Way	12 to 13 (P)	RG124	Nil	1	Weather Deck	13 to 14 (P)	1	FIRE MAIN
30	FMF12820	BFVV150.09324-07	150	NAB	B.F. VALVE 150 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	LOBBY	08 to 09 (P)	RG125	Nil	1	Weather Deck	08 to 09 (P)	1	FIRE MAIN
31	FMF12823	BFVV150.09324-07	150	NAB	B.F. VALVE 150 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Hawser Reel Store	05 to 06 (P)	RG127	Nil	1	Weather Deck	05 to 06 (P)	1	FIRE MAIN
32	FMF14403	BFVV150.09324-07	150	NAB	B.F. VALVE 150 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Passage Way	27 to 28 (P)	RG128	Nil	1	Main Passage Way	27 to 28 (P)	1	FIRE MAIN
33	FMF14413	BFVV150.09324-07	150	NAB	B.F. VALVE 150 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Passage Way	43 to 44 (P)	RG129	Nil	1	Weather Deck	43 to 44 (P)	1	FIRE MAIN
34	FMF19010	BFVV150.09324-07	150	NAB	B.F. VALVE 150 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Air Lock	59 to 60 (S)	RG130	Nil	1	Helicopter Hanger	59 to 60 (S)	1	FIRE MAIN
35	FMF19016	BFVV150.09324-07	150	NAB	B.F. VALVE 150 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Passage Way	66 to 67 (S)	RG131	Nil	1	Helicopter Hanger	66 to 67 (S)	1	FIRE MAIN

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
36	FMF19020	BFVV150.09324-07	150	NAB	B.F. VALVE 150 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Passage Way	71 to 72 (S)	RG132	Nil	1	Weather Deck	71 to 72 (S)	1	FIRE MAIN
37	FMF22204	BFVV80.09324-07	80	NAB	B.F. VALVE 80 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Atas Space	Aft of Fr. 78 (P)	RG153	Nil	1	Helicopter Hanger	Aft of Fr. 78 (P)	1	FIRE MAIN
38	FMF24402	STVV40.02324-07	40	NAB	ST. SDNR VALVE 40 NB, FLANGE ENDED, MATL. - NAB	1	Undressing Station	17 to 18 (P)	RG100	Nil	1	Weather Deck	17 to 18 (P)	1	FIRE MAIN
39	FMF24502	STVV40.02324-07	40	NAB	ST. SDNR VALVE 40 NB, FLANGE ENDED, MATL. - NAB	1	H.E. Compt.	17 to 18 (S)	RG101	Nil	1	Weather Deck	17 to 18 (S)	1	FIRE MAIN
40	FMF30901	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	4	Aft A.C.	60 to 61 (S)	RG4	Nil	3	Lobby	62 to 64 (S)	1	FIRE MAIN
41	FMF31001	BAVV80.01324-07	80	NAB	BALL VALVE 80 NB WITH BOTH END FLANGED	3	Lobby beside Aft S.T.P.	72.5 to 73.5 (P)	RG152	Nil	2	Aft D.C. Post	72.5 to 73.5 (P)	1	FIRE MAIN
42	FMF32202	STVV40.02324-07	40	NAB	ST. SDNR VALVE 40 NB, FLANGE ENDED, MATL. - NAB	3	Aft S. T. P.	73 to 74 (P)	RG144	Nil	2	Atas Post	73 to 74 (P)	1	FIRE MAIN
43	FMF32302	STVV65.02324-07	65	NAB	ST. SDNR VALVE 65 NB, FLANGE ENDED, MATL. - NAB	3	Engg. Store-2	83.5 to 84.5 (P)	RG158	Nil	2	Atas Space	83.5 to 84.5 (P)	1	FIRE MAIN
44	FMF32402	STVV40.02324-07	40	NAB	ST. SDNR VALVE 40 NB, FLANGE ENDED, MATL. - NAB	3	Atas Hydraulics	72 to 78 (S)	NOT REQUIRED						FIRE MAIN
45	FMF32901	STVV50.02324-07	50	NAB	ST. SDNR VALVE 50 NB, FLANGE ENDED, MATL. - NAB	4	Fwd. D.A.	34 to 35 (S)	RG66	Nil	2	Ship's Office	34 to 35 (S)	1	FIRE MAIN
46	FMF33301	BFVV125.09324-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	Fwd. A.C.	24 to 25 (P)	RG82	Nil	3	Lobby	25 to 26 (P)	1	FIRE MAIN
47	FMF33401	STVV50.02324-07	50	NAB	ST. SDNR VALVE 50 NB, FLANGE ENDED, MATL. - NAB	4	Fwd. A.C.	25.5 to 26.5 (S)	RG83	Nil	3	E.M.R.	25.5 to 26.5 (S)	1	FIRE MAIN
48	FMF33602	STVV40.02324-07	40	NAB	ST. SDNR VALVE 40 NB, FLANGE ENDED, MATL. - NAB	3	Engg. Store-2	83.5 to 84.5 (P)	RG159	Nil	2	Atas Space	83.5 to 84.5 (P)	1	FIRE MAIN
49	VCF00103	STVV65.331-7	65	GM	GM ST. SDNR GLOBE VALVE 65 NB (FLANGE ENDED)	4	Fwd. S. T. P.	15 to 16 (S)	RG108	Nil	3	J.S. Mess ( 24 Men )	15 to 16 (S)	1	VACCUM TOILET
50	VCF01206	STVV65.331-7	65	GM	GM ST. SDNR GLOBE VALVE 65 NB (FLANGE ENDED)	3	Aft S. T. P.	72 to 73 (P)	RG145	Nil	2	Atas Post	72 to 73 (P)	1	VACCUM TOILET
51	ROF00401	RTVV40.02124-09	40	NAB	RIGHT ANGLE SDNR VALVE 40 NB (FLANGE ENDED) (44.5 OD)	3	R.O. Plant	24 to 25 (S)	RG91	Nil	2	OP's Room	24 to 25 (S)	1	R. O.
52	ROF01201	RTVV40.02124-09	40	NAB	RIGHT ANGLE SDNR VALVE 40 NB (FLANGE ENDED) (44.5 OD)	4	Aft D.A.	57.5 to 58.5 (P)	RG135	Nil	3	C.M.R. - 2	57 to 58 (P)	1	R. O.
53	SWF81105	STVV150.02324-07	150	NAB	150 NB STRAIGHT SDNR VALVE, BOTH ENDS FLANGED, MATL. - NAB	4	Fwd. A.C.	27 to 28 (P)	RG84	Nil	3	CMR - 1	27 to 28 (P)	1	A.C. S.W.
54	SWF81205	STVV150.02324-07	150	NAB	150 NB STRAIGHT SDNR VALVE, BOTH ENDS FLANGED, MATL. - NAB	4	Fwd. A.C.	26 to 27 (S)	RG85	Nil	3	E.M.R.	26 to 27 (S)	1	A.C. S.W.
55	SWF85305	STVV150.02324-07	150	NAB	150 NB STRAIGHT SDNR VALVE, BOTH ENDS FLANGED, MATL. - NAB	4	Aft A.C.	60 to 65 (S)	RG5	Nil	3	Lynx C.M.R.	62 to 65 (S)	1	A.C. S.W.



**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
56	SWF40501	RTVV200.30224-07	200	NAB	RIGHT ANGLE SDNR GLOBE VALVE 200 NB, BOTH END FLANGED, MATL. - NAB	4	Fwd. D.A.	34 to 35 (S)	RG67	Nil	2	Air Lock	34 to 35 (P)	1	D.G. S.W.
57	SWF40601	RTVV200.30224-07	200	NAB	RIGHT ANGLE SDNR GLOBE VALVE 200 NB, BOTH END FLANGED, MATL. - NAB	4	Fwd. D.A.	34 to 35 (P)	RG68	Nil	2	Air Lock	34 to 35 (P)	1	D.G. S.W.
58	SWF41302	BFVV80.09224-07	80	NAB	B.F. VALVE 80 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	3	Fwd. D.A.	31 to 32 (P)	RG69	Nil	2	Fwd. Switch Board Room	31 to 32 (P)	1	D.G. S.W.
59	SWF42003	BFVV80.09224-07	80	NAB	B.F. VALVE 80 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	3	Fwd. D.A.	29.5 to 30.5 (S)	RG70	Nil	2	A/F Compt.	30 to 31 (S)	1	D.G. S.W.
60	SWF42202	BFVV125.09224-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	3	Fwd. D.A.	32 to 33 (P)	RG71	Nil	2	Fwd. Switch Board Room	32 to 33 (P)	1	D.G. S.W.
61	SWF45101	RTVV100.30224-07	100	NAB	RIGHT ANGLE SDNR GLOBE VALVE 100 NB, BOTH END FLANGED, MATL. - NAB	4	Aft D.A.	53 to 54 (S)	RG14	Nil	2	Main Passage Way	53 to 54 (S)	1	D.G. S.W.
62	SWF45502	BFVV125.09224-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	Aft D.A.	53 to 55 (S)	RG12	Nil	3	Combined Workshop	53 to 55 (S)	1	D.G. S.W.
63	BF01703	RTVV50.02124-07	50	NAB	RIGHT ANGLE SDNR VALVE 50 NB, BOTH END FLANGED, MATL. - NAB	3	Fwd. D.A.	28 to 29 (P)	RG72	Nil	2	Fwd. Switch Board Room	29 to 30 (P)	1	Bilge, Sullage & OWS
64	BF07303	RTVV50.02124-07	50	NAB	RIGHT ANGLE SDNR VALVE 50 NB, BOTH END FLANGED, MATL. - NAB	4	Aft D.A.	53 to 54 (S)	RG15	Nil	3	Combined Workshop	53 to 54 (S)	1	Bilge, Sullage & OWS
65	SWF01202	STVV40.02324-07	40	NAB	ST. SDNR VALVE 40 NB, FLANGE ENDED, MATL. - NAB	3	Ref. Plant	60 to 61 (P)	RG136	Nil	2	S.S. Mess ( 12 Men )	60 to 61 (P)	1	REF. PLANT
66	SWF70001	BAVV50.01324-07	50	NAB	BALL VALVE 50 NB WITH BOTH END FLANGED	Below Dk. 4	Fwd. M.E.R.	42 to 43 (S)	Nil	H2	4	Fwd. M.E.R.	42 to 43 (S) [ Nearer to C.L. ]	1	Comp. S.W. Cooling
67	SWF70601	BAVV50.01324-07	50	NAB	BALL VALVE 50 NB WITH BOTH END FLANGED	4	Aft M.E.R. (Below Chq. Floor)	52 to 53 (P)	Nil	H5	4	Aft M.E.R. (Below Chq. Floor)	52 to 53 (P)	1	Comp. S.W. Cooling
68	SWF71201	RTVV50.02324-07	50	NAB	RIGHT ANGLE SDNR VALVE 50 NB, BOTH END FLANGED, MATL. - NAB	4	Aft D.A.	53 to 54 (S)	RG16	Nil	2	Main Passage Way	53 to 54 (S)	1	Comp. S.W. Cooling
69	SWF71702	BAVV25.01324-07	25	NAB	BALL VALVE 25 NB WITH BOTH END FLANGED	4	Aft D.A.	56 to 57 (S)	RG17	Nil	3	Combined Workshop	56 to 57 (S)	1	Comp. S.W. Cooling
70	SWF50605	BFVV200.11324-07	200	NAB	B.F. VALVE 200 NB, GEAR BOX OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	3	Aft M.E.R.	45 to 46 (P)	RG29	Nil	1	ENCLOSED DECK	45 to 46.5 (P)	1	M.E. S.W. Cooling
71	SWF50705	BFVV200.11324-07	200	NAB	B.F. VALVE 200 NB, GEAR BOX OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	3	Aft M.E.R.	45 to 46 (P)	RG28	Nil	1	ENCLOSED DECK	45 to 46 (P)	1	M.E. S.W. Cooling
72	SWF52002	BFVV300.10324-07	300	NAB	B.F. VALVE 300 NB, GEAR BOX OPERATED, FLANGED TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	Aft M.E.R.	44 to 45 (P)	RG31	Nil	1	ENCLOSED DECK	44 to 45 (P)	1	M.E. S.W. Cooling

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
73	SWF52010	BFVV300.10324-07	300	NAB	B.F. VALVE 300 NB, GEAR BOX OPERATED, FLANGED TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	Aft M.E.R.	46.5 to 47.5 (P)	RG32	Nil	1	ENCLOSED DECK	44 to 45 (P)	1	M.E. S.W. Cooling
74	SWF52905	BFVV200.11324-07	200	NAB	B.F. VALVE 200 NB, GEAR BOX OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	3	Fwd. M.E.R.	36 to 37 (S)	RG49	Nil	1	ENCLOSED DECK	36 to 37 (S)	1	M.E. S.W. Cooling
75	SWF53005	BFVV200.11324-07	200	NAB	B.F. VALVE 200 NB, GEAR BOX OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	3	Fwd. M.E.R.	36 to 37 (S)	RG50	Nil	1	ENCLOSED DECK	36 to 37 (S)	1	M.E. S.W. Cooling
76	SWF53802	BFVV400.10324-07	400	NAB	B.F. VALVE 400 NB, GEAR BOX OPERATED, FLANGED TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	Fwd. M.E.R.	37.5 to 38.5 (P)	RG51	Nil	2	Main Passage Way	37.5 to 38.5 (P)	1	M.E. S.W. Cooling
77	SWF53810	BFVV400.10324-07	400	NAB	B.F. VALVE 400 NB, GEAR BOX OPERATED, FLANGED TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	Fwd. M.E.R.	35 to 36 (S)	RG52	Nil	1	ENCLOSED DECK	35 to 36 (S)	1	M.E. S.W. Cooling
78	ASF00901	RTVV50.02324-07	50	NAB	RIGHT ANGLE SDNR VALVE 50 NB, BOTH END FLANGED, MATL. - NAB	4	Aft A.C.	60 to 65 (P)	RG6	Nil	3	Lobby	62 to 65 (P)	1	Aux. S.W. Cooling
79	ASF01301	RTVV100.02324-07	100	NAB	RIGHT ANGLE SDNR VALVE 100 NB, BOTH END FLANGED, MATL. - NAB	4	Aft M.E.R.	50 to 51 (P)	RG41	Nil	2	ENGG. STORE - 1	50 to 51 (P)	1	Aux. S.W. Cooling
80	ASF02502	RTVV50.02324-07	50	NAB	RIGHT ANGLE SDNR VALVE 50 NB, BOTH END FLANGED, MATL. - NAB	3	Aft M.E.R.	46 to 46.5 (S)	RG24	Nil	2	S.C.C.	46 to 47 (S)	1	Aux. S.W. Cooling
81	ASF02901	RTVV200.02324-07	200	NAB	RIGHT ANGLE SDNR VALVE 200 NB, BOTH END FLANGED, MATL. - NAB	4	Aft D.A.	53 to 60 (S)	RG18	Nil	2	Main Passage Way	53 to 54 (S)	1	Aux. S.W. Cooling
82	ASF03501	RTVV50.02324-07	50	NAB	RIGHT ANGLE SDNR VALVE 50 NB, BOTH END FLANGED, MATL. - NAB	3	Fwd. M.E.R.	40 to 41 (P)	Nil	H3	3	Fwd. M.E.R.	40 to 41 (P)	1	Aux. S.W. Cooling
83	ASF04701	RTVV100.02324-07	100	NAB	RIGHT ANGLE SDNR VALVE 100 NB, BOTH END FLANGED, MATL. - NAB	4	Fwd. M.E.R.	39 to 40 (S)	RG53	Nil	1	ENCLOSED DECK	39 to 40 (S)	1	Aux. S.W. Cooling
84	ASF06404	RTVV40.02324-07	40	NAB	RIGHT ANGLE SDNR VALVE 40 NB, BOTH END FLANGED, MATL. - NAB	3	Fwd. D.A.	28 to 29 (S)	RG73	Nil	2	A/F Compt.	28 to 29 (S)	1	Aux. S.W. Cooling
85	ASF08301	RTVV50.02324-07	50	NAB	RIGHT ANGLE SDNR VALVE 50 NB, BOTH END FLANGED, MATL. - NAB	4	Fwd. A.C.	26 to 27 (P)	RG86	Nil	3	CMR - 1	26 to 27 (P)	1	Aux. S.W. Cooling
86	ASF08702	RTVV65.02324-07	65	NAB	RIGHT ANGLE SDNR VALVE 65 NB, BOTH END FLANGED, MATL. - NAB	3	Fwd. D.A.	31 to 32 (P)	RG74	Nil	2	Fwd. Switch Board Room	31 to 32 (P)	1	Aux. S.W. Cooling
87	SWF60002	BFVV200.10324-07	200	NAB	B.F. VALVE 200 NB, GEAR BOX OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	4	Aft M.E.R.	52 to 53 (P)	RG43	Nil	2	Main Passage Way	52 to 53 (P)	1	G.B. S.W. Cooling
88	SWF60503	BFVV125.06224-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Aft M.E.R.	52.5 to 53 (P)	RG40	Nil	2	ENGG. STORE - 1	52 to 53 (P)	1	G.B. S.W. Cooling
89	SWF61702	BAVV40.01224-07	40	NAB	BALL VALVE 40 NB WITH BOTH END FLANGED	4	Aft M.E.R.	49 to 50 (S)	RG46	Nil	2	S.C.C.	49 to 50 (S)	1	G.B. S.W. Cooling
90	SWF61901	BAVV25.01324-07	25	NAB	BALL VALVE 25 NB WITH BOTH END FLANGED	3	C.M.R. - 2	57 to 58 (P)	RG133	Nil	2	NBC Store	56.5 to 58 (P)	1	G.B. S.W. Cooling

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
91	SWF63202	BFVV200.10324-07	200	NAB	B.F. VALVE 200 NB, GEAR BOX OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	4	Fwd. M.E.R.	43 to 44 (S)	RG54	Nil	2	Main Passage Way	43 to 44 (S)	1	G.B. S.W. Cooling
92	SWF63703	BFVV125.06224-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Fwd. M.E.R.	43 to 44 (S)	RG55	Nil	2	Main Passage Way	43 to 44 (S)	1	G.B. S.W. Cooling
93	SWF65002	BAVV40.01224-07	40	NAB	BALL VALVE 40 NB WITH BOTH END FLANGED	3	Fwd. M.E.R.	43 to 44 (P)	Nil	H4	3	Fwd. M.E.R.	43 to 44 (P)	1	G.B. S.W. Cooling
94	SWF65401	BAVV25.01324-07	25	NAB	BALL VALVE 25 NB WITH BOTH END FLANGED	3	Combined Workshop	57 to 58 (S)	Nil	H6	3	Combined Workshop	57 to 58 (S)	1	G.B. S.W. Cooling
95	SWF65501	BAVV25.01324-07	25	NAB	BALL VALVE 25 NB WITH BOTH END FLANGED	3	Aft M.E.R.	50 to 50.5 (S)	RG23	Nil	2	S.C.C.	50 to 51 (S)	1	G.B. S.W. Cooling
96	SDF00503	STMVV80.021-7	80	GM	STORM VALVE 80 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	SRGM Mag.	10.5 to 11.5 (P)	RG123	Nil	2	Passage Way	10.5 to 11.5 (P)	1	Scupper Discharge
97	SDF00802	STMVV100.021-7	100	GM	STORM VALVE 100 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	Fwd. D.A.	33 to 34 (P)	RG75	Nil	2	Fwd. Switch Board Room	33 to 34 (P)	1	Scupper Discharge
98	SDF05303	STMVV100.021-7	100	GM	STORM VALVE 100 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	J.S. Mess ( 8 Men )	70.5 to 71.5 (P)	RG143	Nil	2	S. S. Dining Hall (20 Men)	70.5 to 71.5 (P)	1	Scupper Discharge
99	SDF06404	STMVV100.021-7	100	GM	STORM VALVE 100 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	J.S. Mess ( 24 Men )	16 to 17 (S)	RG109	Nil	2	Passage Way	15 to 16 (S)	1	Scupper Discharge
100	SDF06903	STMVV100.021-7	100	GM	STORM VALVE 100 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	E.M.R.	26.5 to 27.5 (S)	RG90	Nil	2	OP's Room	26 to 28 (S)	1	Scupper Discharge
101	SDF08103	STMVV100.021-7	100	GM	STORM VALVE 100 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	Lynx C.M.R.	66 to 67 (S)	RG137	Nil	2	J.S. Dining Hall (30 Men)	66 to 67 (S)	1	Scupper Discharge
102	SDF13003	STMVV80.021-7	80	GM	STORM VALVE 80 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	Degaussing Eqpt. Room	77 to 78 (P)	RG154	Nil	2	Aft D.C. Post	72 to 73 (P)	1	Scupper Discharge
103	SDF18703	STMVV100.021-7	100	GM	STORM VALVE 100 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	Naval Store - 2	18 to 19 (P)	RG99	Nil	2	J.S. Mess ( 6 Men )	18 to 19 (P)	1	Scupper Discharge
104	SDF21203	STMVV100.04024-07	100	GM	STORM VALVE 100 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	C.M.R. - 2	55 to 56 (P)	RG134	Nil	2	NBC Store	56.5 to 58 (P)	1	Scupper Discharge
105	SDF35004	STMVV100.021-7	100	GM	STORM VALVE 100 NB ( ANGLE TYPE ) (WITH POSITIVE CLOSING ARRGT.)	3	Atas Hydraulics	72 to 78 (S)	RG161	Nil	2	Lobby	72 to 78 (S)	1	Scupper Discharge
106	FTF01602	BFVV100.08336-07	100	CAST STEEL	FIRE SAFE B.F. VALVE 100 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	J.S. Mess ( 6 Men )	16 to 17 (P)	RG110	Nil	1	Weather Deck	16 to 17 (P)	1	F.O. Filling & Transfer
107	FTF01703	BFVV100.08336-07	100	CAST STEEL	FIRE SAFE B.F. VALVE 100 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	J.S. W.C. & Bath	16 to 17 (S)	RG113	Nil	1	Weather Deck	16 to 17 (S)	1	F.O. Filling & Transfer
108	FTF09803	BFVV100.08336-07	100	CAST STEEL	FIRE SAFE B.F. VALVE 100 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Close Dk. No. 1	52 to 53 (P)	RG45	Nil	1	ENCLOSED DECK	52 to 53 (P)	1	F.O. Filling & Transfer

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
109	FTF09903	BFVV100.08336-07	100	CAST STEEL	FIRE SAFE B.F. VALVE 100 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	2	Sailors' Galley	67 to 72 (S)			1	Weather Deck	67 to 72 (S)	1	F.O. Filling & Transfer
110	FTF10103	BFVV100.08336-07	100	CAST STEEL	FIRE SAFE B.F. VALVE 100 NB, RATCHET OPERATED, WAFER TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	Within Cofferdam	72 to 73 (P)	RG1	Nil	3	Avcat Pump Room	72 to 73 (P)	1	F.O. Filling & Transfer
111	CWF10702	BAVV65.011-7	65	GM	BALL VALVE 65 NB WITH BOTH END FLANGED	2	J.S. Mess ( 6 Men )	16 to 17 (P)	RG111	Nil	1	Weather Deck	16 to 17 (P)	1	DOMESTIC F.W.
112	CWF12302	BAVV65.011-7	65	GM	BALL VALVE 65 NB WITH BOTH END FLANGED	2	J.S. W.C. & Bath	16 to 17 (S)	RG114	Nil	1	Weather Deck	16 to 17 (S)	1	DOMESTIC F.W.
113	CWF01902	BAVV65.011-7	65	GM	BALL VALVE 65 NB WITH BOTH END FLANGED	2	Main Passage Way	49 to 51 (S)	RG74	Nil	1	Towing Gear Store	49 to 51 (S)	1	DOMESTIC F.W.
114	LOF02502	BAVV50.011-7	50	GM	BALL VALVE 50 NB WITH BOTH END FLANGED	1	Close Dk. No. 1	45 to 50 (S)	RG75	Nil	No. 01	Dk. No. 01	45 to 50 (S)	1	LO HO Filling & Transfer
115	LOF02602	BAVV50.011-7	50	GM	BALL VALVE 50 NB WITH BOTH END FLANGED	1	Close Dk. No. 1	45 to 50 (P)	RG35	Nil	No. 01	Dk. No. 01	45 to 50 (P)	1	LO HO Filling & Transfer
116	HOF00804	BAVV50.01101-07	50	GM	BALL VALVE 50 NB WITH BOTH END FLANGED	1	Close Dk. No. 1	44 to 49 (P)	RG37	Nil	No. 01	Dk. No. 01	44 to 49 (P)	1	LO HO Filling & Transfer
117	HOF00904	BAVV50.01101-07	50	GM	BALL VALVE 50 NB WITH BOTH END FLANGED	1	Close Dk. No. 1	44 to 49 (P)	RG36	Nil	No. 01	Dk. No. 01	44 to 49 (P)	1	LO HO Filling & Transfer
118	HOF01602	BAVV50.01101-07	50	GM	BALL VALVE 50 NB WITH BOTH END FLANGED	3	St. Gear Compt.	83 to 84 (P)	RG157	Nil	2	Atlas Space	83 to 84 (P)	1	LO HO Filling & Transfer
119	DFF04101	STVV50.2506-07	50	FORGED STEEL	FIRE SAFE QUICK CLOSING GLOBE VALVE 50 NB BOTH END FLANGED	2	Fwd. of Open Deck	35 to 36 (S)	RG56	Nil	1	ENCLOSED DECK	35.5 to 36.5 (S)	1	M.E. F.O.
120	DFF04102	STVV50.2506-07	50	FORGED STEEL	FIRE SAFE QUICK CLOSING GLOBE VALVE 50 NB BOTH END FLANGED	2	Fwd. of Open Deck	35 to 36 (S)	RG57	Nil	1	ENCLOSED DECK	35.5 to 36.5 (S)	1	M.E. F.O.
121	DFF04201	STVV50.2506-07	50	FORGED STEEL	FIRE SAFE QUICK CLOSING GLOBE VALVE 50 NB BOTH END FLANGED	2	Port of Open Deck	44 to 45 (P)	RG30	Nil	No. 1	ENCLOSED DECK	44 to 45 (P)	1	M.E. F.O.
122	DFF04202	STVV50.2506-07	50	FORGED STEEL	FIRE SAFE QUICK CLOSING GLOBE VALVE 50 NB BOTH END FLANGED	2	Fwd. of Open Deck	44 to 45 (P)	RG38	Nil	No. 1	ENCLOSED DECK	44 to 45 (P)	1	M.E. F.O.
123	DFF40101	BAVV40.07206-07	40	FORGED STEEL	FIRE SAFE TYPE BALL VALVE 40 NB WITH BOTH END FLANGED	4	Fwd. D.A.	28 to 29 (P)	RG76	Nil	2	Fwd. Switch Board Room	28 to 29 (P)	1	D.G. F.O.
124	DFF40105	BAVV40.07206-07	40	FORGED STEEL	FIRE SAFE TYPE BALL VALVE 40 NB WITH BOTH END FLANGED	4	Fwd. D.A.	28 to 29 (P)	RG77	Nil	2	Fwd. Switch Board Room	28 to 29 (P)	1	D.G. F.O.
125	DFF40501	BAVV40.07206-07	40	FORGED STEEL	FIRE SAFE TYPE BALL VALVE 40 NB WITH BOTH END FLANGED	4	Aft D.A.	55 to 57 (S)	Nil	H1	3	Catwalk over Aft D.A.	55 to 57 (S)	1	D.G. F.O.
126	SVF00102	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	4	Aft A.C.	60 to 65 (S)	RG7	Nil	3	Lynx C.M.R.	63 to 65 (S)	1	Salvage & Secondary Drain
127	SVF00202	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Aft A.C.	60 to 65 (S)	RG8	Nil	3	Lobby	60 to 61 (S)	1	Salvage & Secondary Drain

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
128	SVF00301	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	3	Lobby	72 to 73 (P)	RG151	Nil	2	Aft D.C. Post	72 to 73 (P)	1	Salvage & Secondary Drain
129	SVF00401	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	3	Avcat Pump Room	72 to 73 (P)	RG148	Nil	2	Aft D.C. Post	72 to 73 (P)	1	Salvage & Secondary Drain
130	SVF00802	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	4	Aft D.A.	53 to 59 (P)	RG10	Nil	3	Catwalk over Aft D.A.	55 to 59 (P)	1	Salvage & Secondary Drain
131	SVF00901	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	3	Avcat Pump Room	72 to 73 (S)	RG149	Nil	2	Lobby	72 to 73 (S)	1	Salvage & Secondary Drain
132	SVF01002	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Aft D.A.	53 to 57 (P)	RG9	Nil	3	Catwalk over Aft D.A.	55 to 57 (P)	1	Salvage & Secondary Drain
133	SVF01502	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Aft M.E.R.	52 to 53 (S)	RG19	Nil	2	Air Lock	52 to 53 (S)	1	Salvage & Secondary Drain
134	SVF01504	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Aft M.E.R.	51.5 to 52.5 (S)	RG20	Nil	2	Air Lock	51.5 to 52.5 (S)	1	Salvage & Secondary Drain
135	SVF01802	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Aft M.E.R.	52 to 53 (S)	RG21	Nil	2	ENGG. OFFICE	52 to 53 (S)	1	Salvage & Secondary Drain
136	SVF01902	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Aft M.E.R.	44 to 45 (P)	RG27	Nil	1	ENCLOSED DECK	44 to 45 (P)	1	Salvage & Secondary Drain
137	SVF02002	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Aft M.E.R.	44 to 45 (P)	RG33	Nil	1	ENCLOSED DECK	44 to 45 (P)	1	Salvage & Secondary Drain
138	SVF02702	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Fwd. M.E.R.	43 to 44 (P)	RG58	Nil	2	Main Passage Way	43 to 44 (P)	1	Salvage & Secondary Drain
139	SVF02802	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. M.E.R.	43 to 44 (P)	RG59	Nil	2	Main Passage Way	43 to 44 (P)	1	Salvage & Secondary Drain
140	SVF02902	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	St. Gear Compt.	79 to 80 (P)	RG160	Nil	2	Atas Space	79 to 80 (P)	1	Salvage & Secondary Drain
141	SVF03002	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. M.E.R.	39 to 40 (S)	RG60	Nil	1	ENCLOSED DECK	39 to 40 (S)	1	Salvage & Secondary Drain

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
142	SVF03102	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Fwd. M.E.R.	38 to 39 (S)	RG61	Nil	1	ENCLOSED DECK	38 to 39 (S)	1	Salvage & Secondary Drain
143	SVF03203	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. D.A.	30 to 31 (S)	RG78	Nil	2	A/F Compt.	30 to 31 (S)	1	Salvage & Secondary Drain
144	SVF03302	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Fwd. D.A.	29 to 30 (S)	RG79	Nil	2	A/F Compt.	29 to 30 (S)	1	Salvage & Secondary Drain
145	SVF04002	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. A.C.	26 to 27 (S)	RG87	Nil	3	E.M.R.	26 to 27 (S)	1	Salvage & Secondary Drain
146	SVF04102	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	4	Fwd. A.C.	27 to 28 (S)	RG88	Nil	3	E.M.R.	27 to 28 (S)	1	Salvage & Secondary Drain
147	SVF04202	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. A.C.	26.5 to 27.5 (S)	RG89	Nil	3	E.M.R.	26.5 to 27.5 (S)	1	Salvage & Secondary Drain
148	SVF04303	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. Pump Room	12.5 to 13 (S)	RG118	Nil	3	SRGM Magazine	12 to 13 (S)	1	Salvage & Secondary Drain
149	SVF04601	BFVV200.21124-07	200	NAB	B.F. VALVE 200 NB, GEAR BOX OPERATED, FLANGED TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	IRL Magazine	18 to 19 (P)	RG92	Nil	2	Passage Way	18 to 19 (P)	1	Salvage & Secondary Drain
150	SVF04603	BFVV200.21124-07	200	NAB	B.F. VALVE 200 NB, GEAR BOX OPERATED, FLANGED TYPE WITH EXTENDED SPINDLE FOR R.G. ARRGT.	4	IRL Magazine	17 to 18 (P)	RG93	Nil	2	Passage Way	17 to 18 (P)	1	Salvage & Secondary Drain
151	SVF04802	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. Pump Room	11.5 to 12.5 (S)	RG119	Nil	3	Lobby	9 to 10.5 (P)	1	Salvage & Secondary Drain
152	SVF04807	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. Pump Room	12 to 13 (S)	RG120	Nil	3	SRGM Magazine	12 to 13 (S)	1	Salvage & Secondary Drain
153	SVF04902	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	4	Fwd. Pump Room	10 to 11 (S)	RG121	Nil	3	Lobby	9 to 10.5 (P)	1	Salvage & Secondary Drain
154	SVF05102	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	IRL Magazine	21.5 to 22.5 (P)	RG94	Nil	3	Naval Store - 2	21.5 to 22.5 (P)	1	Salvage & Secondary Drain
155	SVF05203	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	IRL Magazine	22.5 to 23 (P)	RG95	Nil	3	Naval Store - 2	22.5 to 23 (P)	1	Salvage & Secondary Drain

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO. -3017-20/438001 REV-A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
156	SVF05402	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Void Space - Port of St. Gear Compt.	78 to 79 (P)	RG155	Nil	2	Deck Store	78 to 79 (P)	1	Salvage & Secondary Drain
157	SVF05502	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Aft S. T. P.	72 to 73 (P)	RG146	Nil	2	Atas Post	72 to 73 (P)	1	Salvage & Secondary Drain
158	SVF05602	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	3	Avcat Pump Room	72.5 to 73.5 (S)	RG150	Nil	2	Lobby	72.5 to 73.5 (S)	1	Salvage & Secondary Drain
159	SVF06102	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	4	IRL Magazine	22.5 to 23 (P)	RG96	Nil	3	Naval Store - 2	22.5 to 23 (P)	1	Salvage & Secondary Drain
160	SVF06203	BAVV65.21124-07	65	NAB	BALL VALVE 65 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	3	Lobby aft of Cable Locker	5 to 6 (P)	RG139	Nil	2	Hawser Reel Store	5 to 6 (P)	1	Salvage & Secondary Drain
161	SVF06302	BAVV65.21124-07	65	NAB	BALL VALVE 65 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	3	Lobby aft of Cable Locker	5 to 6 (P)	RG140	Nil	2	Hawser Reel Store	5 to 6 (P)	1	Salvage & Secondary Drain
162	SVF06502	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Lobby aft of Cable Locker	5 to 6 (S)	RG141	Nil	2	Hawser Reel Store	4 to 5 (S)	1	Salvage & Secondary Drain
163	SVF06603	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	3	Naval Store - 1	07 to 08 (P)	RG126	Nil	2	Lobby	7.5 to 8.5 (P)	1	Salvage & Secondary Drain
164	SVF06605	BAVV80.21124-07	80	NAB	BALL VALVE 80 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	3	Lobby aft of Cable Locker	5 to 6 (P)	RG142	Nil	2	Hawser Reel Store	5 to 6 (P)	1	Salvage & Secondary Drain
165	SVF06702	BFVV125.21124-07	125	NAB	B.F. VALVE 125 NB, RATCHET OPERATED WITH EXTENDED SPINDLE FOR R.G. ARRGT. (BOTH END FLANGED)	3	Naval Store - 2	22 to 23 (P)	RG97	Nil	2	SIR	22 to 23 (P)	1	Salvage & Secondary Drain
166	SVF07102	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. M.E.R.	43 to 44 (P)	RG62	Nil	2	Main Passage Way	43 to 44 (P)	1	Salvage & Secondary Drain
167	SVF07302	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Aft M.E.R.	52 to 53 (S)	RG22	Nil	2	Air Lock	52 to 53 (S)	1	Salvage & Secondary Drain
168	SVF07502	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. Pump Room	9.5 to 10.5 (S)	RG122	Nil	3	SRGM Magazine	9.5 to 10.5 (S)	1	Salvage & Secondary Drain
169	SVF07702	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Aft M.E.R.	45 to 46 (P)	RG34	Nil	1	ENCLOSED DECK	44 to 45 (P)	1	Salvage & Secondary Drain

**MATRIX OF VALVES REQUIRED TO BE OPERATED BY "ROD GEARING" FOR ASW CORVETTE,**

**DWG NO - 3017-20/438001 REV - A**

SL. NO.	VALVE PART NO.	VALVE COMP. NO.	NB	MATL.	DESCRIPTION	VALVE LOCATION [ TENTATIVE ]			FLUSH DK. FITT. NO.	HAND WHEEL	LOCATION OF VALVE OPERATING POSITION [ TENTATIVE ]			QTY.	SYSTEM NAME
						DK. NO.	COMPT. NAME	FRAME LOCATION			DK. NO.	COMPT. NAME	FRAME LOCATION		
170	SVF07902	BAVV50.21124-07	50	NAB	BALL VALVE 50 NB WITH EXTENDED SPINDLE FOR ROD GEARING ARRGT. (BOTH END FLANGED)	4	Fwd. M.E.R.	43 to 44 (S)	RG63	Nil	4	Main Passage Way	43 to 44 (S)	1	Salvage & Secondary Drain
TOTAL QTY. =													170 NOS.		

**N.B. :- 'RG42' this no. for 'Rod Gearing Deck Socket' should be utilised against any item in the list.**



**SOTR NO: - RN/3017-20/E/160**

**STATEMENT OF REQUIREMENT FOR REMOTE  
STOPPING ARRGT OF QCV FOR P-28 SHIPS**

**GRSE LTD**

15 Sep 2011

## List of Annexures

1. Annexure - A:- Drawing no. ASW(E)/SKT/143
2. Annexure - B:-

1. On board work related to Remote stopping arrangement of Quick Closing valves by means of pulley wire through pulley, stretching screw and control box will have to be undertaken by contractor. Typical arrangement & list of Quick Closing valves with control box operating position will be as per Annexure "A".

**Note: Status of erection of Quick Closing valves at the time of handing over to sub-contractor will be indicated by GRSE Planning / Berth.**

2. Detailed description of the jobs will be given in the following paragraphs: -

i. The contractor is required to carry out remote stopping arrangement work in accordance with schematic, layout drawings and on-board lining out. The workmanship should be carried out to the entire satisfaction of GRSE / WOT (KOL).

ii. Should there be any requirement of modification during on-board erection considering site conditions / maintainability aspect / recommendation of GRSE / WOT reps, the same is to be carried out, without any commercial implication.

iii. Should there be any occasional requirement for removal of finally erected items to allow spaces for installation of other items / equipment; the same is to be done without any commercial implication

iv. All consumables for welding will be free issue item to the contractor.

v. The contractor is required to furnish weekly work plan along with requisition for material two weeks in advance. All requisitions are to be raised in format furnished by planning department of GRSE.

v. All welding sets / gas sets including TIG welding sets (for on-board / shop work) are to be arranged by the contractor.

vi. Requirement of service bolts / temporary support as required during erection is to be arranged by the contractor.

vii. All temporary structure / scaffolding as required during erection are to be arranged by the contractor. However, material will be supplied by GRSE. Available scrap material may be utilized for temporary support in consultation with the machinery / berth Officer.

viii. Drilling / tapping and marking required to be done for any fitting as per interface particulars are to be done by the contractor.

ix. Adequate care is to be taken to avoid any damage to machinery / materials / structure during on-board hot work. The contractor will have to reimburse actual cost of item in case of any damage attributable to contractor.

x. The contractor is not allowed to weld any temporary or permanent item or do any hot work on the ship structure without concurrence of GRSE.

xi. Marking, cutting on deck / bhd and tack welding are to be executed by the contractor after getting clearance from yard. Contractor will have to provide **qualified**

**welder** for tacking and Running Welding since the structural steel is of special grade. (To be deliberated further during TNC).

xii. Drawings:

- a) All drawings required for carrying out work will be provided by GRSE.
- b) Routing of pulley wire (i.e. valve to flush deck fitting control position) are generally not identified separately in the drawing. This is to be finalized by way of lining out.
- c) In case of any discrepancy observed during lining out and drawing, the contractor is required to carry out work as per approved on-board lining out. Any doubt during installation of remote stopping arrgt is to be recorded in register for scrutiny / approval by Machinery Officer / CDO.
- d) Immediately after completion of work, the contractor should incorporate all the changes made in system and composite layouts including routing of remote stopping arrangement carried out as per approved lining out. One set of system drawing and composite layout drawings duly incorporating the "As-fitted" changes / layout in red, duly certified by authorized GRSE officer, is to be handed over to GRSE for necessary preparation of "As-fitted" drawing. **Job will not be treated as complete unless certification is available regarding submission of As fitted changes to and acceptance by CDO.**

Since all the drawings are restricted in nature, the contractor will ensure proper care while using the drawings and return all used drawings to PCO / Machinery officer after completion of job.

xiii. Prior to final installation, each item is to be weighed. A certificate duly certified by WOT / GRSE is to be forwarded to CDO.

xiv. Quality assurance authority – GRSE, WOT (KOL)

xv. All fabrication and erection work are to be carried out in accordance with good engineering and shipbuilding practices.

xvi. Complete laying and erection of the remote stopping arrangement of QCV along with all fittings to be done by the contractor as per line out / system / layout drawings. Installation of all free issue items which are in the system is to be done by the contractor with required fasteners, gaskets, clamps, supports, brackets, hangers for fixing above.

xvii. After erection on board, remote stopping arrangement of quick closing valves through handle in control box and pulley wire is to be shown by the contractor to the entire satisfaction of GRSE/ Naval inspecting agencies.

xviii. Deficiency of any nature observed either during construction, trial or at the time of acceptance and recorded in form D448 will be made good by the contractor on board the ship at any part of India at no cost within the guarantee period.

xix. Prior to erection of system in a particular zone, the contractor must obtain clearance from GRSE rep.

xxi. Following support facilities will be provided by GRSE to the contractor for execution of the contract and will cease to be provided on completion of the contract:-

- a) Crane facilities for handling of materials
- b) Compressed air as is available on the dockside
- c) Water
- d) Lockable Store near the vessel
- e) Power for operation of tools
- f) Temporary lighting

This will be further deliberated in TNC.

xxii. Following items will be supplied to subcontractor as “Free Issue Item”. Any other item required to complete the system, is to be supplied by the subcontractor.

<u>Sl No.</u>	<u>Item</u>	<u>Material</u>	<u>Qty/Ship</u>
(a)	Air tight control box with 2 handle & 200 mm control pipe including eye plate, lug, wing nut & bolt	MS to IS 226	3 nos
(b)	Air tight control box with 1 handle & 200 mm control pipe including eye plate, lug, wing nut & bolt	MS to IS 226	1 no
(c)	Pulley with bracket	MS to IS 226	80 nos
(d)	Pulley wire, 4 mm Flex 6X7 constn. _IS 2581 OR Equivalent 4 mm 6X19 construction Fibre core _IS 3459	MS (Galv)	100 Metres
(e)	Handle	MS to IS 226	7 nos
(f)	Stretching screw – ¼” dia	BS 970 EN-3A	14 nos
(g)	Sleeve – 16 mm OD x 10 mm ID X 50 mm LG	MS (Galv)	19 nos
(h)	Sleeve for control pipe	MS to IS 226	As Reqd

## SCOPE OF SUPPLY

1. The activities to be carried out by the contractors are generally defined as below:
  - i. Lining out of spaces (as required).
  - ii. Marking, cutting of deck / bulkhead, tack welding and running welding (by qualified welders) / installation of deck gland / flush deck fitting etc.
  - iii. Lifting of templates from site, as required.
  - iv. Final installation on-board and connecting up the entire system. Any addition / alteration to install the same on board the ship considering site condition to be made by the contractor. Sundry Raw material required for such work will have to be supplied by contractor.
  - v. Painting of pipes with primer. Necessary primer will be supplied by GRSE.
  - vi. Inspection of installation of the system by GRSE / WOT. Defect, if any, is to be rectified.
  - vii. Modification, as suggested by quality assurance authorities, is to be carried out.
  - viii. Proper sequence of work is essential to prove that remote stopping arrgt is preserved & protected in totality for desired use. Proper upkeep, preservation & maintenance method is to be followed for all materials & Equipment used.
2. Quality Assurance:- GRSE(QA) / WOT(KOL)
3. The sub-contractor shall ensure necessary safety precautions, use of proper tools and equipments including Personal protective equipment for their personnel. All safety precautions to be taken as per GM(S)(FOJ)'s circular no. GM(S)(FOJ)/25/05 dated 02.09.05 and GM(S)(FOJ)/25/22/05 dated 03.09.05.

NOTE – Name Tally Plates (2 mm thick brass plate), which are to be fitted at remote control position of each valve by the sub contractor, have to be manufactured by the sub contractor as per the list, which will be given by the Yard Officer.



**STANDARD TERMS & CONDITIONS (STAC)**

1. **PAYMENT TERMS :**

a) 90% payment will be released with full service tax on monthly progressive bill basis within 30 days of receipt of bill duly certified by PL/AGM (H&HOF) & supported with satisfactory Work Done Certificate duly certified by Site Engineer/ PL and on clearance of ESI & P.F. liabilities from the concerned department.

b) Balance 10% payment will be released after guarantee period or on submission of performance Bank Guarantee of equivalent amount valid till expiry of Guarantee period.

c) Payment will be made on actual certification basis.

Bills are to be submitted in the Bill Drop Box maintained at Finance Department along with filled up checklist as per Appendix-F attached with Tender Enquiry/ NIT. In case of outstation vendors, bills are to be sent to DGM (Finance-SLP).

2. **WORK DONE CERTIFICATE (W.D.C.):** Firm will put up Work Done for certification to site engineer/PL along with clear inspection report signed by Quality Assurance Authority. W.D.C. is to include whether work has been completed as per delivery schedule or the delay in days/weeks occurred in completion of work.

3. **LIQUIDATED DAMAGE:**

The vendor will be liable to pay the minimum Liquidated Damages @ ½ % per week or part thereof on the undelivered work subject to a maximum of 5 % of the value of the order for delayed part.

4. **GUARANTEE PERIOD:**

Workmanship will be guaranteed for satisfactory performance for a period of 12 months from the date of final inspection clearance (Any faulty work carried out by the sub-contractor is to be rectified by them within the time stipulated by the GRSE. In case of failure of sub-contractor to meet the ship's programme, outstanding deficiencies shall be rectified by GRSE and all costs of such work shall have to be borne by the sub-contractor).

During guarantee/ warranty period if any equipment or any component thereof supplied by the contractor, suffers due to defective material and/ or due to improper design and/ or due to defective drawing or due to faulty workmanship the contractor will assume full responsibility of rectification of such defective equipment or component thereof including all direct expenses relating 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.

5. **RISK PURCHASE:**

In case the progress of work is not satisfactory and the contractor fails to maintain the schedule, GRSE reserves the right to get the work done by alternative source at the risk and cost of sub-contractor.



GRSE shall be at liberty to purchase/obtain the service from the alternative source as it deems fit, to make good such default and or in the event of the contract being terminated, the balance of the remaining service to be delivered there under. Any excess over the job price / service rates, paid and incurred by GRSE, as the case may be, over the contract price shall be recoverable from the firm. To make good the recoverable excess amount paid, GRSE shall be at liberty to invoke Bank Guarantee and/or with other available dues of the firm.

6. **JOB STARTING & COMPLETION DATE:**

Job requires to be started within 7 days of LOA/Order as per front availability and to be completed before 31.03.2013.

7. **MOBILISATION TIME:**

7days notice will be given for commencement of work.

8. **PRICE:**

a) 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 so then offer will be treated as cancelled.

b) L1 bidder will be decided GROUP WISE (Group A & Group B).

c) 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.

The quoted price should be inclusive of all statutory Taxes/Levies and other charges as applicable. The price should remain firm & fixed till satisfactory execution of the entire contract with no escalation applicable whatsoever. Service tax will be paid extra as per the ruling rate. Service tax registration certificate for the service being tendered is to be enclosed with the techno-commercial bid. If the certificate is not obtained so far, copy of the application for registration for the service under consideration is to be enclosed. Service tax registration number is to be quoted in all bills.

9. **VALIDITY OF OFFER:**

Your offer should remain valid for a period of 90 days from the due date of the tender.

10. The bids submitted by a joint-venture or Consortium of two or more firms as partners shall comply with the following requirements:

i) One of the partners responsible for performing a key component of the contract, shall be designated as a leader; this authorization shall be evidenced by submitting with the bid a Power of Attorney signed by legally authorized signatories of all the partners

ii) The leader shall be authorized to incur liabilities, and receive instruction for and on behalf of any and all partners of the joint-venture or consortium, and the entire execution of the contract shall be done with the leader,

iii) All partners of the joint venture or consortium shall be liable jointly and severally for the execution of the project or contract,

iv) A copy of the contract/agreement entered into by the joint venture or consortium partners shall be submitted with the bid,

v) The responsibility of all members of the J/V or Consortium should be clearly indicated and these shall not be varied or modified without the prior approval of the employer, and the joint venture agreement /consortium should be registered.

vi) In order for a joint venture or consortium to qualify, each of its partners or combination of partners must meet the minimum criteria set for the individual bidder. Failure to comply with this requirement will result in rejection of the joint venture or consortium's bid. The figures for each of the partners of a joint venture comprising of two or more persons shall be added together in proportion to their participation in the J/V or consortium, to determine the bidder's compliance with the minimum criteria say,( work to be executed per year not less than Rs 3 crore if such criteria is set in RFP) . The lead partner should hold at least 51% of those minimum criteria failure to comply with which the bid shall stand rejected.

vii) The percentage of partnership of the lead partner shall be highest among all the joint ventures partners. The lead partner shall be such a company only, who has purchased the bid document,

vii) Bid security/EMD can be submitted either by the lead partner or proportionately by the joint venture /Consortium partners. However performance security BG shall have to be submitted by all the partners of joint venture/consortium on a basis proportionate to their participation,

viii) The contract agreement shall be signed jointly by each joint venture/consortium partners.

11. **YOUR OFFER SHOULD COME DULY SEALED IN TWO SEPARATE ENVELOPES:-**

- (a) Technical commercial offer in triplicate and
- (b) Price Offer only in original.

Both the sealed envelopes should be put in the third envelope and the third envelope should be sealed. Enquiry No./ Date, Due Date and Title should be superscribed on all the envelopes and to be submitted in Tender Box kept in Contract Cell, at GRSE Main, 43/46, Garden Reach Road, Kolkata 700024, within the due date as per the requirement. Your offer will not be considered if the requirement is not complied with.

12. **E-Mail Address for communication:** Vendor should have a computer with suitable internet Connection & e-mail address to enable better communication with various offices of GRSE.

13. GRSE reserves the right to accept / reject any Tender in full or in part without assigning any reason. GRSE also reserves the right to enter into the contract with one or more contractors for their requirement of whole or part job.

14. No Conditional offer will be accepted.

15. **SUB-CONTRACTING OF SUB-CONTRACTED JOB:-**

When an order is issued to a Vendor/ Contractor for execution of a particular job, the Contractor shall not sub-contract the job / a part of the job without approval from the employer and without intimation of the name and credentials of the said sub-contractor.

16. **EXCESS/WASTE/REJECTED MATERIALS:-**

Removal of excess/waste/rejected materials etc. generated during execution of work should be arranged at your cost immediately after completion of work each day and for non-removal of same by you, the expenditure incurred by GRSE in removing these materials will be to your account.

17. **EARNEST MONEY DEPOSIT (INTEREST FREE)**

(i) Tender must be accompanied with an interest free EMD of Rs. 15,000/- (Rupees Fifteen thousand only) in the form of Pay Order / Demand Draft/Bank Guarantee (as per GRSE format) on any Nationalised/scheduled bank other than Co-operative bank payable at Kolkata, duly crossed favouring GRSE Ltd., and valid till four months from the due date (in case of BG), without which the tender will be liable for rejection. EMD is to be submitted (except B.G) along with Techno-Commercial part of offer and same to be indicated on the envelope.

(ii) If EMD is submitted in the form of B.G., then the same is to be forwarded directly to GM (Finance), GRSE in Banker's sealed envelope failing which same will not be accepted. Details of B.G. are to be confirmed in Techno-Commercial part of offer and also on the envelope containing the offer.

(iii) SSI units 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 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.

(iv) EMD of unsuccessful bidders will be refunded/ returned within 30 days of finalisation of order on surrendering the original copy of money receipt with an application by bidder upon the intimation from the purchaser. EMD of disqualified 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.

18. **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 as indicated in Clause 29 hereinafter.
- c) The successful bidder fails within the specifies time limit to:
  - i) Acknowledge the LOA/Order
  - ii) Furnish the required Security Deposit
  - iii) Non-performance of the contract by the Contractor

19. **SECURITY DEPOSIT (INTEREST FREE):**

(a) Successful bidder will deposit an amount equivalent to 5% of the total contract value as interest free S.D. in the form of Pay Order/D.D/Bank Guarantee (as per GRSE format) on any schedule bank other than Co-operative bank payable at Kolkata, duly crossed favouring GRSE Ltd., within mobilisation time stipulated in the order/within 15 days from the date of issue of Letter of Award/firm order and valid for sixty days beyond the tenure of the contract (in case of BG).

(b) If S.D is submitted in the form of B.G then same is to be forwarded directly to our Gen. Mgr. (Finance) in Banker's sealed envelope failing which same will not be accepted. Details of B. G. should also be confirmed to Sub – Contract Cell.

(c) Before commencement of work, S.D. must be submitted. The same would be returned after successful execution of job duly certified by competent authority of GRSE. In the event of failure to execute the order satisfactorily or default by the contractor/ sub-contractor, the security deposit will be forfeited.

(d) SSI units registered under single point NSIC may be exempted from the security deposit. However, this will be as per guidelines circulated by D.P.E. from time to time.

20. Work on board should be carried out under guidance of PL/SPM/PM/PCO or his deputed engineer on board.

21. **SITE-INCHARGE/ LOG BOOK/ HINDRANCE & OTHER RECORDS:**

- a) One fully responsible and Qualified Site-in-charge has to be posted at the site during progress of work.
- b) Attendance Register, Wage Register etc are to be maintained daily for the particular job on board and to be shown as and when required.
- c) Details of technical personnel deployed for the job.
- d) Monthly progress report.
- e) Log book for re-work/ modification.
- f) Details of materials brought by vendor along with copies of challan.
- g) Proper record of hindrances is to be maintained by the sub-contractor for the purpose of timely removal of the hindrance and is to be put up for approval by Project Leader/Site Engineer on weekly basis. A copy of the same would have to be enclosed while submitting any request for waiver of liquidity damages.

22. **WORKING HOURS:**

The Contractor's normal working hours shall be in between 8AM-5PM. Work may also be required to be carried out in day or night shift as per GRSE's requirement. Also, work may be required to be carried out on Sunday/Holiday or beyond schedule working hours as per requirement of GRSE and the Contractor will have to arrange for same at no extra cost.

23. **INDIVIDUALITY OF THE 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.

24. Quotation received after due date and time will not be considered.
25. Sufficient Supervisory Staff should be provided by you during execution of work and in case of any accident/ damage to GRSE properties, full responsibility will be attributed to you.
26. **SECRECY OF INFORMATION:-**  
All documents and drawings of this project are of confidential in nature and should be used explicitly for the purpose for which they are provided. Drawings should not be copied and should be returned to GRSE on completion of work.  
No information in respect of contracts/orders shall be released to the national or international media or any one not directly involved its execution without the express written approval of the integrated Headquarters, MOD (NAVY). In the event of any breach of above provisions, the vendor would have to make good of any loss/ cost/ damage/ any other claim whatsoever preferred by anybody to GRSE in this respect.
27. **REGISTRATION OF APPROVED VENDOR:**  
The contractor is to confirm whether they are registered with GRSE as approved Vendor and Indicate Supplier's Code (5 digits) and product Code group. If not an approved vendor, provisional vendor registration code is to be taken from GRSE Vendor Registration Cell prior to placement of order.
28. **QUALITY ASSURANCE AUTHORITY:**  
GRSE (QA) & WOT (KOL).
29. **CORRECTION OF ERRORS:**  
Bids determined to be responsive will be checked by the Employer for any arithmetic error. Errors will be corrected by Employer as follows:  
a) Where there is a discrepancy between the rates in figures and in words, the rates in words will govern.  
b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.
30. **FORCE MAJEURE:**  
In the event of contractor being unable to fulfil the obligation under the agreement owing to force majeure, such as War, Fire, Earthquake, Flood, Strike/ Lockout at GRSE premises where the contractor is working, the party affected shall not be held responsible for any failure or non-performance of the duties and obligations under the agreement, provided that all responsible efforts have been made to overcome the consequences of such failure, or non-performance. The time for performances of the contractual obligation shall then be extended by period not more than the duration of such events.

In the event of Force Majeure condition existing at contractor's site in GRSE Premises or CPT areas for GRSE work, GRSE is to be intimated with details of such happenings and cessations thereof, within 3 days. Force Majeure is to be limited to contractor's site in GRSE/CPT premises for GRSE's work only. Lock out/ Closure of contractor's factory premises or office or any other place outside GRSE/CPT/GRSE nominated place as indicated above can not be considered as a Force Majeure condition under this contract.

31. **TERMINATION OF CONTRACT:** In the event of non-performance or non-engagement of manpower for the execution of the job within the notice period, GRSE reserves the right to cancel the order in part or in full, and no compensation whatsoever will be entertained.
32. **DAMAGE OF MATERIALS / EQUIPMENTS :** 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 contractors man. The cost of damage will be suitably recovered from vendor's bills.
33. **OFFICE & STORAGE SPACE:** The contractor will have to arrange their office & storage required for execution of job, for cumulative order value of Rs.75 lakhs and above, of their own. However space for placing up to one container will be provided free of cost by GRSE. Container will have to be removed by the contractor within 03 months from the date of final settlement with GRSE. In case of non removal of container within specified period penalty as deemed fit will be imposed for the occupied area of GRSE.
34. **ARBITRATION:** In case of dispute, if any, between GRSE and the contractor, the matter shall be referred to the sole discretion / arbitration of CMD of GRSE or his nominated representative and his decision will be final and binding.
  - i) If at any time, before doing 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 adjudication of the said disputes or differences, as Sole Arbitrator, in accordance with the provisions of the Arbitration and Conciliation Act, 1996.
  - ii) The CMD, GRSE Ltd. If he so desires, may nominate / appoint another officer of GRSE Ltd. or person, whom he thinks fit and competent, for adjudication of the disputes or differences, referred to him 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 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.

vi) Also in the event on 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 himself act as Sole Arbitrator or nominate / appoint another officer or GRSE Ltd. or 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, 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.

35. **JURISDICTION:** Litigation, if any, pertaining to this contract will come under the jurisdiction of High Court at Kolkata.

i) All contracts shall be deemed to have been wholly made in Kolkata and all claims there under 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.

ii) The Firm is warranted that all service rendered by them shall conform to applicable city, states & central laws, ordinances and regulations and the said Firm shall indemnify / defend / relieve GRSE harmless , from / of against loss, cost of damage, by reason or any actual or alleged violation thereof.

iii) GSRE shall not be liable under the workmen's compensation Act of 1923; in case any employee or workmen receives injury while actually serving his employer in connection with the latter's work inside the compound of GRSE Ltd.

iv) All existing applicable Laws such as ESI, PF, SERVICE, CONTRACT LABOUR, CHILD LABOUR etc. as applicable, shall be binding for the contract.

v) The Firm engaged in work are required to have registration under the Service Tax.

36. Declaration form as per Appendix 'A' regarding Licence/PF/ESI is to be filled up and submitted along with the techno-commercial bid.

37. **CONTRACT LABOUR ACT REQUIREMENTS -as per Appendix 'B' & 'C' enclosed.**

38. **GENERAL REQUIREMENTS – as per Appendix-‘D’ enclosed.**
39. **FIRE &SAFETY PRECAUTIONS –as per Appendix ‘E enclosed’.**
40. **CHECK LIST FOR BILL SUBMISSION – as per Appendix ‘F’.**

**Note-**All tender document should be signed as token of acceptance and submitted along with Techno-commercial bid.

1. For any discrepancy between NIT(Notice Inviting Tender) and STAC, NIT statement may be taken as final.
2. Clarification required, if any, regarding Tender Document, should be got resolved by contacting competent authority of GRSE prior to submission of bid.

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**DECLARATION FORM**

1. I/ We hereby declare that our Firm M/s....., (Address) ..... is having/ not having own PF and ESI Codes.

a) Firms having PF & ESI Codes Numbers :

(i) PF Code No. :

(ii) ESI Code No. :

b) Firms not having their own PF & ESI Codes :

(i) "I/ We hereby declare that I/ We will deduct PF & ESI contributions of our labourers from wages who are deployed on contractual engagement every month and deposit the PF contribution (Employer's & Employees') under Code No. WB/ 301 (Un - exempted) of GRSE and ESI contributions (Employer's & Employees') under ESI Code No. 41 - 3771 of GRSE in each month and produce duly acknowledged copies of challans by the authorities concerned to the Retainer of GRSE for verification of compliance.

(ii) "We also authorize GRSE Ltd. To retain the bills payable to us till we furnish the challan, depositing PF & ESI dues. GRSE is also authorised to deduct all such statutory dues from our bills in case of our continued default in depositing PF & ESI dues and deposit the same with the respective statutory authorities."

2. Our Labour Licence number/ Date is..... Labour Licence is valid upto (Date).....

3. I/ We shall follow the Company's regulations on deployment of Contract Labour and shall comply with the statutory provisions as envisaged under the CL(R &A) Act. 1970 read with Central Rules/ Jharkhand (Bihar) Rules. The Factories Act, 1948, West Bengal Factories Rules 1958, Bihar Factory Rules, 1950, EPF (MP) Act. 1952, ESI Act 1948 and Minimum Wages Act and the Rules there under as applicable including payment of contributions (Employer & Employees) in respect of each of our workmen.

Place: ..... Signature of the Proprietor \_\_\_\_\_

Date: ..... Name of the Proprietor \_\_\_\_\_

Stamp/ Seal of the Firm \_\_\_\_\_

**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,1970or 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 wit all the provisions of the Act including the following important requirements under the Act.

a) To obtain a labour Licence issued by the Competent Authority (i.e. Licencing 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 Licence 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 Licence 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.

Contd..P/2

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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 authorised 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 7<sup>th</sup> 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 exclusively earmarked for above purpose.

f) A copy the notice as per Rule 81 (2) of the at 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 /finalising 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 submitted to the Principal Employer by the 20<sup>th</sup> of every month. Besides, all other statutory returns pertaining to P.F. are to be submitted by the Contractor in time.

Contd..P/3

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 challan 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/ finalising 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 challan 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'.

10. The Contractor engaged in Shipbuilding works is require t 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.

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**CONTRACTORS RESPONSIBILITIES**

1. Obtain Labour Licence from 'Licensing Authority', and to submit a copy of 'Licence' to the Retainer and concerned Unit HR Department.
2. 'Licence' 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 authorised 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 30<sup>th</sup> June and 31<sup>st</sup> 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 20<sup>th</sup> days happens to be Sunday/Holiday, the same is to be submitted on 21<sup>st</sup> /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 30<sup>th</sup> April each year.

Contd..P/2

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 10<sup>th</sup> 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 20<sup>th</sup> 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(Repair) 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.

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**GENERAL REQUIREMENTS:**

- (a) All your personnel will be subject to routine physical search 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/Sub-contractors 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.

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**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 be 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 inflammables waste like cotton waste, plastic, broken wooden parts, battens, jutes, cloths, papers/electrodes packets etc. should be removed by the contractors from the ship everyday.
- e) Portable Hand Lamp (maximum of 110volts) 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.
- r) Chain Pulley Blocks/ Lifting Tackles/Rigging screws/Lugs etc. used in the production shall be duly tested.
- s) 440/220 supply lines should be provided with distinguishing mark & identified with red stickers at every meter distance. 440 volt should be covered by M.S. Angle.
- t) Contractors' workmen should wear badges for their personal identification.
- u) Full proof welding holders must be used in construction stages, considering successive fatal accidents caused from our hand made electrodes holders.
- v) All pneumatic grinding/electrical grinders should be provided with cover guards.
- w) 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.
- x) 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.
- y) 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.
- z) Wooden planks are to be provided on all the scaffolding with lashing arrangement.

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**CHECK LIST FOR BILL SUBMISSION – CONTRACTORS**

<b>CONTRACTOR BILL NO ORDER NO</b>	<b>PARTY CODE DATE DATE</b>	
1.		BILL IN ORIGINAL PLUS THREE COPIES DULY CERTIFIED WITH JOB NO. BY THE DESIGNATED PERSON OF THE PRODUCTION / ORDERING DEPARTMENT – SUBMITTED. <input type="checkbox"/>
2.		JOB COMPLETION CERTIFICATE OF DESIGNATED AUTHORITY – ENCLOSED. <input type="checkbox"/>
3.		BANK GUARANTEE, AS REQUIRED BY THE TERMS OF THE ORDER HAS BEEN SENT TO FINANCE IN BANK'S SEALED ENVELOPE. <input type="checkbox"/>
4.		SECURITY DEPOSIT AS PER ORDER SUBMITTED. <input type="checkbox"/>
5.		FORM 83/84 FOR WORKS CONTRACT SUBMITTED. <input type="checkbox"/>
6.		MATERIAL RECONCILIATION STATEMENT AS PER THE TERMS OF THE ORDER – ENCLOSED. <input type="checkbox"/>
7.		INSURANCE POLICY AS PER TERMS OF THE ORDER – ENCLOSED <input type="checkbox"/>
8.		SERVICE TAX REGISTRATION NO. WHEREVER APPLICABLE, IS MENTIONED IN THE INVOICE. <input type="checkbox"/>
9.		ANY OTHER SPECIFIC DOCUMENTS AS PER ORDER. <input type="checkbox"/>
I		<input type="checkbox"/>
II		<input type="checkbox"/>
III		<input type="checkbox"/>
10.		DEDUCTION/ RECOVERY TO BE MADE [FOR USE OF BILL CERTIFICATION DEPARTMENT] <input type="checkbox"/>
I		<input type="checkbox"/>
II		<input type="checkbox"/>
III		<input type="checkbox"/>
<b>NOTE</b>		<b>TRANSACTION FEE OF RS 500.00 FOR FIRST RETURN &amp; RS 1000.00 FOR SUBSEQUENT RETURN OF BILL WITH INAPPROPRIATE DOCUMENTS WILL BE CHARGED.</b> <input type="checkbox"/>

**FORMAT NO.**  
**OS/03/0085**

**GARDEN REACH SHIPBUILDERS & ENGINEERS LIMITED**  
**43/46, Garden Reach Road,**  
**Kolkata 700 024**

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**(GUIDELINES OF BANK GUARANTEE)**

1. Non- Judicial Stamp Paper – N. J. S. Paper of Rs. 50/- (Rupees Fifty Only) is to obtained in the name of the banker for execution of the Bank Guarantee. If a single Stamp Paper of Rs. 50/- is not available, Stamp Papers of multiple denominations may be used but the serial nos. or purpose of each Stamp Paper be of consecutive nos. and purchased on the same day. Such Stamp Paper should not be older than one year or the date of purchase Order / Contract whichever is applicable. Stamp Papers obtained in the name of the supplier will not be accepted.
2. Address of the Supplier / Contractor and the executing Bank should be incorporated in full in the Bank Guarantee.
3. Bank Guarantee should be executed by scheduled Banks preferably by Nationalised Banks and should be sent in Banker's sealed envelope directly to General Manager (Finance), Corporate Finance. M/S Garden Reach Shipbuilders & Engineers Limited .43/ 46, Garden Reach Road. Kolkata – 700 024. **superscribing** the word "BANK GUARANTEE".
4. No. confirmation of B. G. is required to be obtained from issuing Bank if the B. G. executed by Scheduled / Nationalised Banks is received in Banker's sealed envelop.
5. Banker's confirmation is required in case of Bank Guarantee executed by Non- Scheduled Banks / Co-operative Bank/ Regional Private Bank etc. and for those Guarantee which were not received in the terms of (3) above.
6. The Bank Guarantee should conform strictly in conformity with the terms and Conditions of the order and in GRSE's standard format prescribed against each of the above cases.
7. Expiry date should be in accordance with the requirement of contractual terms and the claim period for preferring the claim should not be less than six months from the date of expiry of any case.
8. Bank Guarantee shall be free from all infirmities and typographical errors / deletions / inclusions / riders etc., requires to be authenticated by Bank's signatory with official seal.
9. Issuing Bank should furnish confirmation towards execution of Guarantee immediately on receipt of GRSE's formal letter for same. Confirmation letter should contain GRSE's letter reference requested for and must be in Bank's sealed cover addressed to GRSE.

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**FORMAT OF BANK GUARANTEE TOWARDS EARNEST MONEY**

**GUARANTEE BOND**

(To be used by all scheduled Banks)

In consideration of M/s. Garden Reach Shipbuilders & Engineers Limited, 43/46 , Garden Reach Road , Kolkata -700024 ( hereinafter called "the Buyer" ) having agreed to exempt M/s..... having its registered office at ..... ( hereinafter called "the party") from the demand ,under the terms and conditions contained in the Tender No..... dated ..... ( hereinafter called "the Said Tender") 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..... (Rupees.....only) 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 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 and conditions contained in the said Tender or by reason of 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 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 & 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 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 extensions being granted to the said Party or 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 herein 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 aforesaid date of expiry , all the rights of 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