

<u>LIST OF ITEMS GENERALLY BEING USED IN SHIP CONSTRUCTION</u>		<u>Annexure - IV</u>	
(NOTE: LISTS ARE ILLUSTRATIVE NOT EXHAUSTIVE)			
SL.NO	ITEM / EQUIPMENT DETAILS	SL.NO	ITEM / EQUIPMENT DETAILS
A	<u>MACHINERY EQPTS. & PIPING MATERIALS:</u>		
1	A.C for ECR	26	Epocast /Chock fast
2	Air Compressors	27	ER Vent Fans
3	Air Whistles	28	Hydrophore Pumps
4	Anti fouling system for sea chest grids	29	Hydrophore Tanks
5	Asbestos free gaskets	30	M.S.Galv Stud bolts & Nuts
6	Automatic Sprinkler System	31	Main Engines
7	Automatic Tank Air Vent Valves	32	Neoprene Packing Rings
8	Bilge Water Ejector	33	Neoprene Rubber sheets
9	Boiler Plant	34	Oil Purifiers
10	Bow Thruster	35	Oily Bilge Water Separator
11	Bronze Valves	36	Oxygen cylinder with V/vs,Pressure regulators with Pressure gauge
12	C.I. Butterfly Valves	37	Pipe Fittings like bends,reducers etc
13	C.I.Gate&Globe Valves	38	Piston Pumps
14	Cargo Provision Refrigeration Plant	39	PRO& HRO Valves
15	Cat-III "C" Pipes	40	Screw Pumps
16	Cat-IV & Cat -V Seamless Pipes	41	Sea Chest Gratings
17	Centrifugal Pumps	42	Sea Inlet & OBD Valves
18	CO2 Plant	43	Sea Water and oil Filters
19	CS Bronze Quick Closing Valves	44	Sea Water and oil Filters
20	CS Storm Valves	45	Sewage Plant and Incinerator
21	Cu Ni Pipes & Cu Ni Pipe Fittings	46	SMLS Annealed Copper Tubes
22	D.G.Sets & Emergency D.G.sets	47	Sounding Cocks and Sound Tube for Deck Plates
23	Deck Stand, Gear box,Support Bearing& Universal Joints etc	48	Special valves
24	Electric heated Calorifiers	49	Steam Heated Calorifiers
25	Emergency Air Compressor	50	Temperature. Control and Special Valves
		51	Steam Traps

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B	<u>ELECTRICAL EQUIPMENTS/ MATERIALLS.:</u>		
1	Automation Eqpt./ ER Alarm Monitoring and Clock system	30	Electric Tank Content Sensors & Gauges
2	UPS Systems(10KVA)	31	Flourescent Light Fittings
3	Navigational Lights	22	G.I.Reinforcede PVC Flexible hose
4	400 m/m Sweep cabin Fans	23	Gyro Compass with repeater
5	Auto & sound Powered Telephone system	24	Halogen Flood Light Fittings
6	Battery Charger cum Distribution Board	25	Incandescent Flood lights
7	Brass Cable glands	26	Incandescent light Fittings
8	Brass W.T. Switches and Sockets	27	Junction Boxes
9	Bridge console	28	Main Switch Board & Emergency Switch Board
10	Bulk Head Light Fittings(Deck head & ceiling Light Fittings)	29	Marine Electric Cables
11	Various sizes of Cable glands	30	Metal Fitting Matl.
12	Copper crimping Lugs	31	NWT Switches
13	Distribution Boards, Starter and Local Control Panels	32	Shore Connection Boxes
14	Doppler Sonar Docking System	33	SS Cable Binding Straps
15	Echo Sounder	34	Table Light fittings
16	Hospital Call System	35	KVM Sealing Compound Powder
17	GMDSS,SATCOM-F77,Automatic Identification Sys,Ship security alert Sys,SATCOM-B,Sound reception eqpt,Dual Radar Sys,DGPS navigator,Weather fax,Communal speed &direction indicator	36	Measuring Instruments
18	Natural Air cooled Transformers	37	Public Address and Fire Detection System
19	Search Lights		

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C	OUTFIT ITEMS / MATERIALS: (2 pages)		
1	Fire class side scuttles	30	S.S.Hydraulic pipes for W.T.Sliding doors
2	2 T-Monorail type Hoist	31	Ship Model
3	A&B Class Doors	32	SS scupper Gratings
4	A.C and Ventillation Eqpt.	33	Grease Lubricator Units for carrier bearing
5	Alu. Swimming Pool ladders	34	Hatch Covers
6	Aluminium and Zinc Anodes	35	Heaters,Washing Machines,Iron box etc.
7	Anchors and Chain Cables	36	Jib Deck Cranes
8	Auto Telephone Directory Plates	37	Life Boats and Davits
9	B- Class Panels	38	Life Jackets for Children
10	Brass Chr.plated hand rail support	39	Life Raft Launching Davits
11	Bronze Bell	40	Marine Paints and Thinners
12	Carpets & Carpet Runners	41	Marine Qty.Alluminium accomn.Ladders
13	Cash Registers	42	Marine Qty.Gangway Ladders
14	Ceiling Panels	43	Mirrors
15	Cellophen Tape Rolls & Adhessive tape rolls	44	Mooring Chokes
16	Chr. Pltd Bolts & Nuts and Brass washers	45	Neoprene Rubber
17	CI Rollers	46	Paints
18	Code Flags	47	Polypropelene Ropes
19	Communal Aerial System	48	Polyurethane Foam(PUF)insulation
20	Davit Launched type Inflatable Life rafts	49	PP Eurythene Rope
21	Elec.Floor Polishers	50	Reflector Compass
22	Electric Motor Driven Winches	51	Refrigerators & Coolers
23	Electrically operated baggage lift/ Dumb Waiter	52	Rockwool Insulation
24	Electro Hydraulic Steering Gear	53	Rubber hose with fittings
25	Fibre glass Polyster corrugated Sheets	54	Rubber Mats
26	Filing Cabinets & Steel Lockers	55	Rust Preventive Oil/Coating for application in Oil Tanks
27	Fire Class Insulation	56	S S Furniture for Galley,Pantry& Laundry
28	Fire Class Windows	57	Simplified Voyage Data Recorder

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29	Fire resistant drop roller shutters	58	Sports items like Excise Cycle, Tennis Table
59	Fire retardant Curtain Material	76	SS Gratings for sprinkler scupper boxes & Galley scupper boxes
60	Firemen Outfit& Breathing apparatus	77	SS Indian Water Closets
61	Flexible Steel wire Ropes	78	SS Rods
62	Flooring Composition	79	SS Sheets
63	FRP Containers	80	Stud Link Chain Cables
64	FRP Emblem for Funnel	81	Thimbles, Ferrules, Shackles ,G.I.Chain etc
65	Furniture Items	82	Toilet Modules.
66	Galley, Pantry and Laundry Equipment	83	Various Fasteners
67	Galvanized Fasteners	84	Vinyl coated Fabric
68	Gangway Doors /Shell doors	85	Wall mounted decorative Lamps
69	Vinyl sheets with adhesive	86	Water Tight Sliding Doors And Sliding Hatch
70	Bite type tube Fittings for W.T.Sliding doors	87	Weather tight Steel Doors &Emergency Escape Hatch.
71	Brass Builders Name Plate	88	Windlass, Capstan
72	Foam- MATRESSES; PILLOWS; CUSHIONS, BEDSHEETS,	89	Windows and side scuttles
73	Nautical Equipment	90	Workshop Machinery(Drilling,Grinding , Hack saw machine and Lathe Machines etc)
74	Rudder Stock Assembly	91	Illuminated Name Boards
75	Stern Bossing		

Annexure - IV**CAPITAL ITEMS****(NOTE: LISTS ARE ILLUSTRATIVE NOT EXHAUSTIVE)**

1	WELDING RECTIFIERS / SUBMERGED ARC WELDING MACHINES - ACCESSORIES / CONSUMMABLE
2	WELDING MACHINES FOR SPECIALISED WELDING FUNCTIONS - C02 - AIR COOLED / WATER COOLED / TIG / MIG
3	WATER JETTING EQUIPMENT OF VARIOUS CAPACITIES / PRESSURE
4	COMPRESSORS - AIR / SCREW / RECIPROCATING
5	PUMPS - SUBMERSIBLE / HYDRAULIC / CENTRIFUGAL
6	CRANES - EOT / LEVEL LUFFING/ MOBILE
7	AERIAL PLATFORMS,
8	WORKSHOP MACHINES - CUTTING / BORING / DRILLING / MILLING
9	SPRAY PAINTING MACHINES
10	MEASURING INSTRUMENTS, CALIBRATION INSTRUMENTS / WEIGHING MACHINES / TAPES
12	PORTABLE ELECTRODE OVENS
13	COMPUTERS - SOFTWARE, HARDWARE, PERIPHERALS
14	AIR CONDITIONING UNITS
15	FURNITURE - STEEL / WOODEN
16	PNEUMATIC ANGLE GRINDING MACHINES & CHIPPING / CUTTING MACHINES
17	SMALL TOOLS LIKE WRENCHES / PLIERS / SCREW DRIVERS / SPANNERS / RUBBER CUTTING
18	VACUUM CLEANERS /
19	DG SETS
20	TRANSFORMERS

WORKS / SERVICES

(NOTE: LISTS ARE ILLUSTRATIVE NOT EXHAUSTIVE)

1 SHIP CONSTRUCTION / REPAIRS

- 1.1 STEEL RENEWALS / REPAIRS
- 1.2 SAND / GRIT BLASTING & SURFACE PREPARATON
- 1.3 CHIPPING / GRINDING
- 1.4 PAINTING
- 1.4 ENGINE ROOM MACHINERY - OVERHAUL / REPAIR
- 1.5 DECK MACHINERY - OVERHAUL / REPAIR
- 1.6 ELECTRICAL WORKS / REPAIRS
- 1.7 ELECTRONICS REPAIRS
- 1.8 PIPING WORKS / REPAIRS
- 1.9 RIGGING / SHEET METAL WORKS
- 1.10 AIRCONDITIONING / REFRIGERATION WORKS & REPAIRS
- 1.11 INSULATION & FLOORING WORKS
- 1.12 CARPENTARY & FURNISHINGS
- 1.13 CEILING & WALLS PANELLING WITH A & B CLASS PANELS
- 1.14 FUMIGATION & DERATIFICATION OF VESSELS

2. MAINTENANCE WORKS / AMCs

- 2.1 REPAIRS TO CRANES - LEVEL LUFFING / EOT /MOBILE CRANES of various Makes
- 2.2 REPAIRS TO WELDING EQUIPMENTS
- 2.3 REPAIRS TO DG SETS / TRANSFORMERS / COMPRESSORS / BLOWERS etc.,
- 2.4 AMCs FOR COMPUTERS / XEROX / REPROGRAPHIC / FAX MACHINES / AIR CONDITIONERS
- 2.5 ELECTRICAL REPAIRS / REWINDINGS OF MOTORS
- 2.6 MECHANICAL REPAIRS TO PUMPS / WORKSHOP MACHINERY
- 2.7 AMC OF WEIGH BRIDGES / SCALES and PRESSURE TEST OF PRESSURE VESSELS / CALIBRATION OF MEASURING INSTRUMENTS
- 2.8

3 SERVICES

- 3.1 **TRANSPORTATION** OF MEN / MATERIALS / EQUIPMENT
- 3.2 **C & F AGENTS** - SEA PORTS / AIR PORTS
- 3.3 **MANPOWER SUPPLY** - AUTOCAD & DATA ENTRY PERSONNEL / SECURITY GUARDS / UNSKILLED LABOUR
- 3.4 AMMONIA PRINTING & XEROXING

4 CIVIL ENGINEERING

- 4.1 CONSTRUCTION & REPAIRS OF BUILDINGS / ROADS
- 4.2 ELECTRICAL REPAIRS
- 4.3 CARPENTARY WORKS
- 4.4 WATER SUPPLY WORKS / MAINTENANCE
- 4.5 GARDENING / LANDSCAPING

5. I.T. AGENCIES

- 5.1 LAN NETWORKS DESIGN /LAYING / AMC
- 5.2 SERVICE PROVIDERS FOR e-procurement
- 5.3 SOFTWARE TRAINING