TENDER DOCUMENT FOR

SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6" (ONE AC AND ONE NON AC)

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NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
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TENDER NO. NCAOR/HSS-049/PT-13
TENDER FOR SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6"
(ONE AC AND ONE NON AC).

1.	Supply of Steel Dry Cargo Container 40'x8'x8.6" (One AC and One Non AC) **Specifications** **Quantity**	 As per Annexure I ONE AC AND ONE NON AC
2.	General Terms and Conditions	As per Annexure V
3.	Cost of Tender Documents (In Person)	` 1000.00
4.	Cost of Tender Documents (By Post)	` 1050.00
5.	Tender Documents	Tender documents can be downloaded by tenderers from NCAOR website. In case a tenderer is using the documents and forms downloaded from the website, the cost of tender documents shall be sent in the form of Bank Draft in a separate envelope along with the tender.
	EMD	**Bidders** shall submit **EMD** along with their tender, **either By DD** drawn in favour of NCAOR, for a sum of ` 35,000/- (Rupees Thirty Five Thousand only) **or** **in the form of a bank guarantee** for a sum of ` 35,000/- (Rupees Thirty Five Thousand only)
6.	Last Date and time for issue of tender documents	**MONDAY** **03.08.2015** 1600 Hrs (IST)
7.	Last Date and time for submission of sealed quotations	**TUESDAY** **04.08.2015** 1700Hrs (IST)
8.	Date and time of tender opening	**WEDNESDAY** **05.08.2015** 1000Hrs (IST)

Annexure - I

TECHNICAL SPECIFICATION FOR STEEL DRY CARGO CONTAINER
40'x 8'x8'6" ISO TYPE

1. General

1.1 **Scope:** This specification will cover the design, construction, materials, testing and inspection performances of 40'x8'x8'6" ISO. type steel dry cargo containers. These containers specified herein will be manufactured under strict quality control and be approved by the classification society or agency.

1.2 **Operational environment***:* The container will be designed and constructed for carriage of general cargo by marine (on or below deck), road and rail throughout the world. All materials used in the construction will be to withstand extremes of temperature range from -40°(-40°) to +70°(+158°) without effect on the strength of the basic structure and water tightness.

1.3 **Standards and Regulations*:*** The container will satisfy the following requirements and regulations, unless otherwise mentioned in this specification.

1.3.1. ISO Container Standards (1CC type)

1.3.2. Classification society: All the containers will be certified for design type and individually inspected by classification society, BV, ABS, LR, GL or CCS.

Handling*:* The container will be constructed to be capable of being handled without any permanent deformation under the following conditions:

1.3.3. Lifting, full or empty, at top corner fittings vertically by means of spreaders fitted with hooks, shackles or twist locks.

1.3.4. Lifting, full or empty, at bottom corner fittings using slings with terminal fittings at any angles between vertical and 45 degrees to the horizontal.

1.4 **Transportation:** The container will be constructed to be suitable for transportation in the following modes:

1.4.1. Road: On flat bed or skeletal chassis, secured by twist locks or equivalent at the bottom corner fittings.

1.4.2. Rail: On flat cars or special container cars secured by twist locks or equivalent at the bottom corner fittings.

2-Dimensions and Ratings

1.5 External Dimensions

Length 12,100 + 0mm - 6mm
Width 2,438 + 0mm - 5mm
Height 2,591 + 0mm - 5mm

1) No part of the container will protrude beyond the external dimensions mentioned above.
2) Maximum allowable differences between two diagonals on anyone of the following surfaces will be as follows:
Roof, bottom and side diagonals: 13 mm
Front and rear diagonals: 10 mm

1.6 Internal Dimensions (nominal)

Length 11,796 mm
Width 2,350 mm
Height 2,390 mm

1.7 Door opening Dimensions (nominal)

Width 2,343 mm

2. Materials

2.1 General: The following materials will be used in the construction of containers:

2.2 Part specification:

Parts Materials by JIS

2.2.1. All steel except screws, rivets, Anti-corrosive steel. SPA-H bolts/nuts, door hardwares or equivalent and other shown on drawings Y.P. : 35 kg/mm2 and specification T.S. :49 kg/mm2

2.2.2. Rear corner posts (inner) Rolled high tensile steel. SM50A
Y.P. : 33 kg/mm2
T.S. : 50 kg/mm2

2.2.3. Door hinges S25C
Y.P. : 27 kg/mm2
T.S. : 45 kg/mm2

2.2.4. Door locking bars Structural steel round pipe. STK41
Y.P. : 24 kg/mm2
T.S. : 41 kg/mm2

2.2.5. Corner fittings Casted weldable steel. SCW49
Y.P. : 28 kg/mm2
T.S. : 49 kg/mm2

2.2.6. Locking gear cams and keepers S20C
Y.P. : 25 kg/mm2
T.S. : 41 kg/mm2

2.2.7. Door hinge pins Stainless steel. SUS304 Gasket retainers

2.2.8. Door gasket EPDM

2.2.9. Floor board 19-ply Hardwood plywood.

2.2.10. Ventilator ABS resin labyrinth type

* Note: Y.P. - Yielding Point

T.S. - Tensile Strength

3. Construction

3.1 General

3.1.1. The container will be constructed with steel frames, fully vertical-corrugated steel sides and front wall, horizontal-corrugated steel double doors at rear end, die-stamped steel roof , wooden flooring, corrugated double hinged doors and ISO corner fittings at eight corners.

3.1.2. All exterior welding including the base frames will be continuous welding using CO2 gas to give perfect watertight properties.

3.1.3. Interior welds - when needed - will be stitched with a minimum bead length of 25 mm.

3.1.4. Gaps between adjacent components to be welded will not exceed 3 mm or the thickness of the parts being welded.

3.1.5. Chloroprene sealant is to be applied at periphery of floor surface and inside unwelded seams, butyl sealant is used to caulk at invisible seam of floor joint area and between door gasket and frame.

3.1.6. The internal bend radii of pressed sections of steel will be not less than 1.5 time the thickness of the materials being pressed

3.1.7. The wooden floor will be fixed to the base frames by zinc plated self-tapping screws.

3.2 Protrusion

3.2.1. The plane formed by the lower faces of all transverse members shall be positioned by 12.5 mm +5/-1.5 mm above the plane formed by the lower faces of the bottom corner fittings.

3.2.2. The top corner fittings are to protrude a minimum of 6 mm above the highest point of the roof.

3.2.3. The outside faces of the corner fittings will protrude from the outside faces of the corner posts by nominal 4 mm for the front and nominal 3 mm for the rear.

3.2.4. The outside faces of the corner fittings will protrude from the outside faces of the sides and front wall by nominal 8 mm.

3.2.5. Under maximum payload, no part of the container will protrude below the plane formed by the lower faces of the bottom corner fittings at the time of maximum deflection.

3.2.6. Under 1.8 x maximum gross weight, no part of the container will protrude more than 6.0 mm below the plane formed by the lower faces of the bottom corner fittings at the time of maximum deflection.

3.3 Corner fittings: The corner fittings will be designed in accordance with ISO 1161 and manufactured at the works approved by classification society.

3.4 Base frame structure: Base frame will be composed of two bottom side rails, eighteen cross members, and a forklift pockets

3.4.1. Bottom side rail: Each bottom side rail is built of a 50x158x30x4.5 mm thick cold formed channel section steel made in one piece. The floor guide rails of 3.0 mm thick pressed angle section steel are provided to the bottom side rails by staggered stitch welding. The lower flange of the bottom side rail is outward so as to facilitate easy removal of the cross members during repair and of less susceptible corrosion. Reinforcement plates to be made of 4.5 mm thick "L" type steel is welded to the bottom surface of both side rails around the bottom corner fitting.

3.4.2. Cross member: The cross members are made of pressed channel section steel with a dimension of 45x122x45x4.0 mm for the normal areas and 75x122x45x4.0 mm for the floor butt joints. The large one is reinforced by three 4.0 mm thick gussets. The cross members are placed fully to withstand floor strength and welded to each bottom side rail.

3.5 Flooring: The floor will consist of six pieces plywood boards, floor center rail, and self- tapping screws.

3.5.1. Floor: The wooden floor to be constructed with 28 mm thick 19-ply hardwood plywood boards are laid longitudinally on the transverse members between the 4.0 mm thick flat bar floor center rail and the 3.0 mm thick pressed angle section steel floor guide rails stitched welded to the bottom side rails. The floor boards are tightly secured to each transverse member by self-tapping screws, and all butt joint areas and peripheries of the floor boards are caulked with sealant.

1) Wood species: Apitong or Keruing.
2) Glue: Phenol-formaldehyde resin.
3) Treatment:
    a) Preservative: Meganium or Equivalent. In accordance with Australian Health Department Regulations.
    b) Average moisture content will be 14% before installation.

3.5.2. Self-tapping screw: Each floor board is fixed to the transverse members by zinc plated self-tapping screws that are 8.0 mm dia. shank x 16 mm dia. head x 45 mm length, and fastened by five screws per cross member but six screws at joint areas. Screw heads are to be countersunk with about 2 mm below the floor top surface

3.6 Rear frame structure: The rear frame will be composed of one door sill, two corner posts, one door header and four corner fittings, which will be welded together to make the door- way.

3.6.1. Door sill: The door sill to be made of a 4.5 mm thick pressed open section steel is reinforced by four internal gussets at the back of each locking cam keeper location. The upper face of the door sill has a 10 mm slope for better drainage. There is cut out at each end of the door sill and reinforced by a 200 x 75 mm channel steel as a protection against handling equipment damages.

3.6.2. Rear corner post: Each rear corner post of hollow section is fabricated with 4.5 mm thick pressed steel outer part and 40x113x12 mm thick hot rolled channel section steel inner part, which are welded continuously together to ensure a maximum width of the door opening and to give a sufficient strength against stacking and racking forces. Four (4) sets of hinge pin lugs are welded to each rear corner post.

3.6.3. Door header: The door header is constructed with a 4.0 mm thick pressed "U" section steel lower part having four internal gussets at the back of each locking cam keeper location and a 3.0 mm thick pressed steel upper part, which are formed into box section by continuous continuous welding

3.7 Door

3.7.1. Each container will have double wing doors as per the drawing, and each door will be capable of swinging approximately 270 degrees.

3.7.2. Each door is constructed with two 3.0 mm thick pressed channel section steel horizontal frames for the top and bottom, 100x50x2.3 mm and 100x50x3.2 mm thick rectangular hollow section vertical frames for the post side and center side of door respectively, 2.0 mm thick horizontally corrugated steel door panel, which are continuously welded within frames. The main door to be provided with chajja.

3.7.3. Two sets of galvanized "BE2566MN" bolt on model locking assemblies with forged steel handles are fitted to each door using zinc plated steel bolts and Huck bolts according to TIR requirements. Locking bar retainers are fitted with nylon bushings at the top, bottom and intermediate bracket. Locking gears should be assembled after painting of container. The shims are to be provided between locking brackets and door panel.

3.7.4. The left hand door can not be opened without opening the right hand door when the container is sealed in accordance with TIR requirements

3.7.5. Each door is suspended by four hinges being provided with stainless steel pins, self- lubricating nylon bushings and the brass washers, which are placed at the hinge lugs of the rear corner posts.

3.7.6. The door gasket to be made of an extruded J&C-type EPDM rubber is installed to the door peripheral frames with stainless steel gasket retainers which must be caulked with butyl sealant before installation of gasket, and fastened by stainless steel rivets at a pitch of 150 mm.

3.8 Roof structure: The roof will be constructed with five-corrugated (die-stamped) steel panels and corner protection plates.

3.8.1. Roof panel: The roof panel is constructed with 1.2 mm thick die-stamped steel sheets having about 5.0 mm upward smooth camber, which are welded together to form one panel and continuously welded to the top side rails and top end rails. All overlapped joints of inside unwelded seams are caulked with chloroprene Sealant.

3.8.2. Protection plate: Each corner of the roof in the vicinity of top corner fitting is reinforced by 2.0 mm thick rectangular steel plate to prevent the damage caused by the mishandling of lifting equipment.

3.9 Top side rail: Each top side rail is made of a 60x60x3.0 mm thick square hollow section steel.

3.10 Side wall: The trapezium section side wall is constructed with 1.2 mm thick fully vertically continuous-corrugated steel outer panels near the each post and 1.2 mm thick intermediate inner panels, which are butt welded together to form one panel and continuously welded to the side rails and corner posts. All overlapped joints of inside are caulked with chloroprene sealant.

3.11 Front structure: Front end structure will be composed of one bottom end rail, two corner posts, one top end rail, four corner fittings and an end wall, which are welded together.

3.11.1. Bottom end rail: The bottom end rail to be made of a 2.0 mm thick pressed open section steel is reinforced by four internal gussets. There is cut out at each end of the bottom end rail and reinforced by a 200x75 mm channel steel as a protection against handling equipment damages.

3.11.2. Front corner post: Each corner post is made of 4.0 mm thick pressed open section steel in a single piece, and designed to give a sufficient strength against stacking and racking forces.

3.11.3. Top end rail: The top end rail is constructed with 60x60x3.0 mm thick square hollow section steel at lower part and 3.0 mm thick flat steel plate at upper part.

3.11.4. Front wall: The trapezium section front wall is constructed with 2.0 mm thick vertically corrugated steel panels, butt welded together to form one panel, and continuously welded to front end rails and corner posts. All overlapped joints of inside are caulked with chloroprene sealant.

3.12 Special feature

3.12.1. Ventilator: Each container will have two labyrinth type small plastic ventilators. Each ventilator is fixed to the right hand upper part of each side wall by three 5.0 mm dia. stainless steel rivets in accordance with TIR requirements after drying of top coating, and caulked with silicone sealant around the entire periphery except underside to prevent the leakage of water.

4. Surface preservation

4.1 Surface preparation

4.1.1. All steel surfaces - prior to forming or after - will be fully abrasive shot blasted conforming to Swedish Standard SA 2 1/2 to remove all rust, dirt, mill scale and all other foreign materials. The shot blasted surface profile shall be have a maximum peak to valley height not exceeding 50 microns and average peak to valley height of about 25 microns.

4.1.2. All door hardwires will be hot-dipping zinc galvanized with approximately 75 microns thickness.

4.1.3. All fasteners such as self-tapping screws and bolts, nuts, hinges, cam keepers and lashing fittings will be electro-galvanized with approximately 13 microns thickness.

4.2 Coating

4.2.1. Prior to assembly: All steel surfaces will be coated with 10 microns thick two-pack polyamide cured zinc rich epoxy primer immediately after shot blasting, and then dried up in drying room.

4.2.2. After assembly: All weldments will be shot blasted to remove all welding fluxes, splatters, burnt primer coatings caused by welding heat, and other foreign materials. Then all blasted weldments will be coated with zinc rich epoxy primer.

4.2.3. The total dry film will be (microns):
All surface of the assembled container will be have coating system as follows:

Where	Paint name	DFT (u)
Exterior surface	Epoxy zinc rich primer	30
Epoxy primer	Chlorinated rubber or Acrylic topcoat	40
Color:		40

	Total:	**110**
Interior surface	Epoxy zinc rich primer	20
Epoxy high build coating		**40**
	Total:	**60**
Under structure	Epoxy zinc rich primer	**20**
Bitumen		**190**
	Total:	**210**

4.3 Container to be externally coated with 2 mm thick FRP (Fiber Re-inforced Plastic) lined with Bi-sphenol A fumerate resin for corrosion free environment.

5. Guarantee

5.1 Structure : All the containers shall be guaranteed by manufacturer to be free from defects in materials, workmanship and structure for a period of one (1) year from the date of acceptance of the container by the buyer.

Annexure - II

TECHNICAL SPECIFICATIONS FOR INTERIOR WORKS

Counter cum storage unit :

The storage unit counters to have counter top made of 25mm thick prelaminated MDF of approved brand and shade. The top to be finished with 18mm thick jet black granite with edge moulding. All the exposed edges of the top shall be provided with machine pressed 2mm thick PVC lipping glued with hot melt EVA glue. Storage to have adjustable shelves finished with laminate. Storage to have openable shutters and necessary hardwares like SS handles, hinges, tower bolts etc complete as per the drawing and as directed by the Engineer incharge. The storage counter individual unit will be of size 1000x750x800 mm each equally divided throughout the full length (L shape) as shown in the drawing.

Overhead storage unit :

Storage unit to have counter top made of 18mm thick prelaminated MDF of approved brand and shade. All the exposed edges of the top shall be provided with machine pressed 2mm thick PVC lipping glued with hot melt EVA glue. Storage to have adjustable shelves finished with laminate. Storage to have openable shutters and necessary hardwares like SS handles, hinges, tower bolts etc complete as per the drawing and as directed by the Engineer incharge. The overhead storage individual unit will be of size 1000x450x700 mm each equally divided throughout the full length (L shape) as shown in the drawing.

Aluminium Sliding windows:

Providing and fixing of powder coated aluminium windows of size 3'x3', 4 nos each with 5mm float glass of approved make for container as shown in the drawing. The powder coating shade to be approved before execution. The windows to be compulsorily provided with chajjas etc complete as per the drawing and as directed by the Engineer incharge.

Vinyl flooring:

Providing and fixing of 3 mm vinyl flooring of approved shade and make. The flooring to be acid resistant, washable.

Wash basin:

Wash basin (ceramic) of size 600x400x200 mm shall be of approved make conforming to IS:771 fixed over granite counter. 32mm dia waste coupling, rubber plug etc. complete shall be provided. 32mm dia CP brass bottle trap with CP pipe to wall along with wall flange etc of approved make shall be provided for sink..

Providing and fixing of ½" water supply pipeline of approved make over the counter as shown in the drawing. All control valves, stop cocks, ball valves, bib-cocks shall be of the best approved quality**.**

Annexure - III

TECHNICAL SPECIFICATIONS FOR ELECTRICAL WORKS

For AC container.

1. Providing & fixing concealed 8way (8+24) ETPN DB with metal door with 63A FP MCB(01no,incomer),32A TP MCB (04 nos),10/20A(12nos) SP MCB, positioned on the wall exactly opposite to the door, as indicated in the layout plan. Providing 70 mm dia opening to the container wall below the TPN DB at 300mm above floor level and making proper provisions for connecting the main electrical incoming cable (of size varying from 35 to 50sqmm) into the DB.
2. Providing & fixing a total 16 numbers of concealed 5/15A power points using 4sqmm wire (PNE) such that three power points in a single circuit from main DB. 12 nos equally positioned at 100mm above the granite counter on both sides and 02 nos on 'each side'(Left as well as right) of the door as indicated in the layout plan at the height of 300mm from the floor level.
3. Providing & fixing 04 numbers of concealed three phase power points with socket and 3pole 32Amps MCB, such that one power point per circuit from main DB, using 6sqmm wire (RYBNE), positioned at 100mm above the granite counter and equally spaced as indicated in the layout plan.
4. Providing & installing a total 05 numbers of "400mm sweep-wall mounted fans" with power points for each fan.02 nos positioned on 'door side' wall such that one at 4mtrs from 'short span wall' on both sides of the door,01 each at the center of 'short span wall' on both the sides and 01 at the center position of the wall exactly opposite to the door, as indicated in the layout plan.
5. Providing and installing 2 numbers of 2Ton AC units (100% copper tubing) positioned on both the sides of the door as indicated in the layout plan with 20A metra plug & socket DBs for each AC using 6sqmm wire (PNE) from main DB as per the positioning of AC units.
6. Providing & fixing 2x28W surface mounted luminaries (06nos) positioned equidistantly on the ceiling and one Bulkhead Luminaire fitting CFL 8W PVC body on the outer side wall above the door and its concealed wiring using 2.5sqmm wire (PNE) with the concealed lighting switch board to be provided near the door, including switches.
7. Providing & fixing one telephone point at 100mm above the granite counter as indicated in the layout plan and drawing 02pair telephone cable up to the 70mm dia opening done near main electrical DB.
8. Providing & fixing 04 numbers of lan points, such that two on each side at 100mm above the granite counter as indicated in the layout plan, drawing its UTP CAT-6 cable up to the 70mm dia opening done near main electrical DB.

For Non-AC container.

1. Providing & fixing concealed 8way (8+24) ETPN DB with metal door with 63A FP MCB(01no,incomer) ,32A TP MCB (04 nos),10/20A(12nos) SP MCB, positioned on the wall just opposite to the door as indicated in the layout plan. Providing 70 mm dia opening to the container wall just below the main DB at 300mm above floor level and making proper provisions for connecting the main electrical incoming cable (of size varying from 35 to 50sqmm) into the DB.

2. Providing & fixing a total 16 numbers of concealed 5/15A power points using 4sqmm wire (PNE), such that three power points in a single circuit from main DB, positioned at 300mm above the floor level equally spaced as indicated in the layout plan.
3. Providing & fixing a total 04 numbers of concealed three phase power points with socket and 3pole 32Amps MCB such that one power point per circuit from main DB, using 6sqmm wire (RYBNE), positioned at 300mm above the floor level and equally spaced as indicated in the layout plan.
4. Providing & installing a total 05 numbers of "400mm sweep-wall mounted fans" with power points for each fan, positioned such that 02 each on either side of door at 2mtrs and 4mtrs respectively from short span wall and 01 at the center position of the wall exactly opposite to the door , as indicated in the layout plan.
5. Providing & installing 02 numbers of 250mm sweep-exhaust fans (Plastic body & blade) with power points for each fan, positioned as indicated in the layout plan.
6. Providing & fixing 2x28W surface mounted luminaries (06nos) positioned equidistantly on the ceiling and one Bulkhead Luminaire fitting CFL 8W PVC body on the outer side wall above the door and its concealed wiring using 2.5sqmm wire (PNE) with the concealed lighting switch board to be provided near the door, including switches.
7. Providing one telephone point at 300mm above the floor level as indicated in the layout plan and drawing 02 pair telephone cable up to the 70mm dia opening done near main electrical DB.
8. Providing 04 numbers of lan points, such that two on each side at 300mm above the floor level as indicated in the layout plan, drawing its UTP CAT-6 cable up to the 70mm dia opening done near main electrical DB.

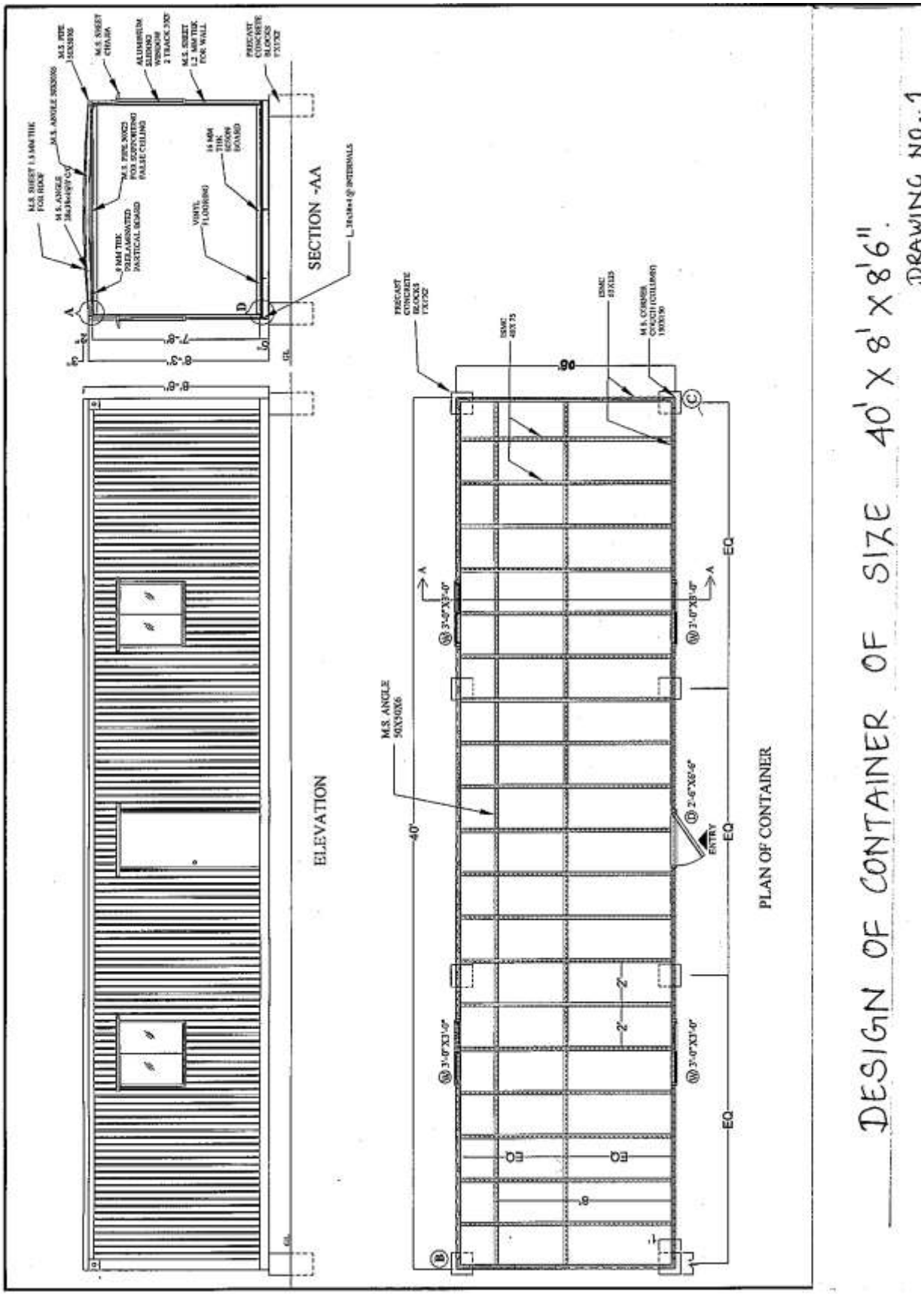
Note: The recommended position of the lighting control switches, distribution boards, electrical equipments as shown in the layout drawing should be adhered to as far as practical.

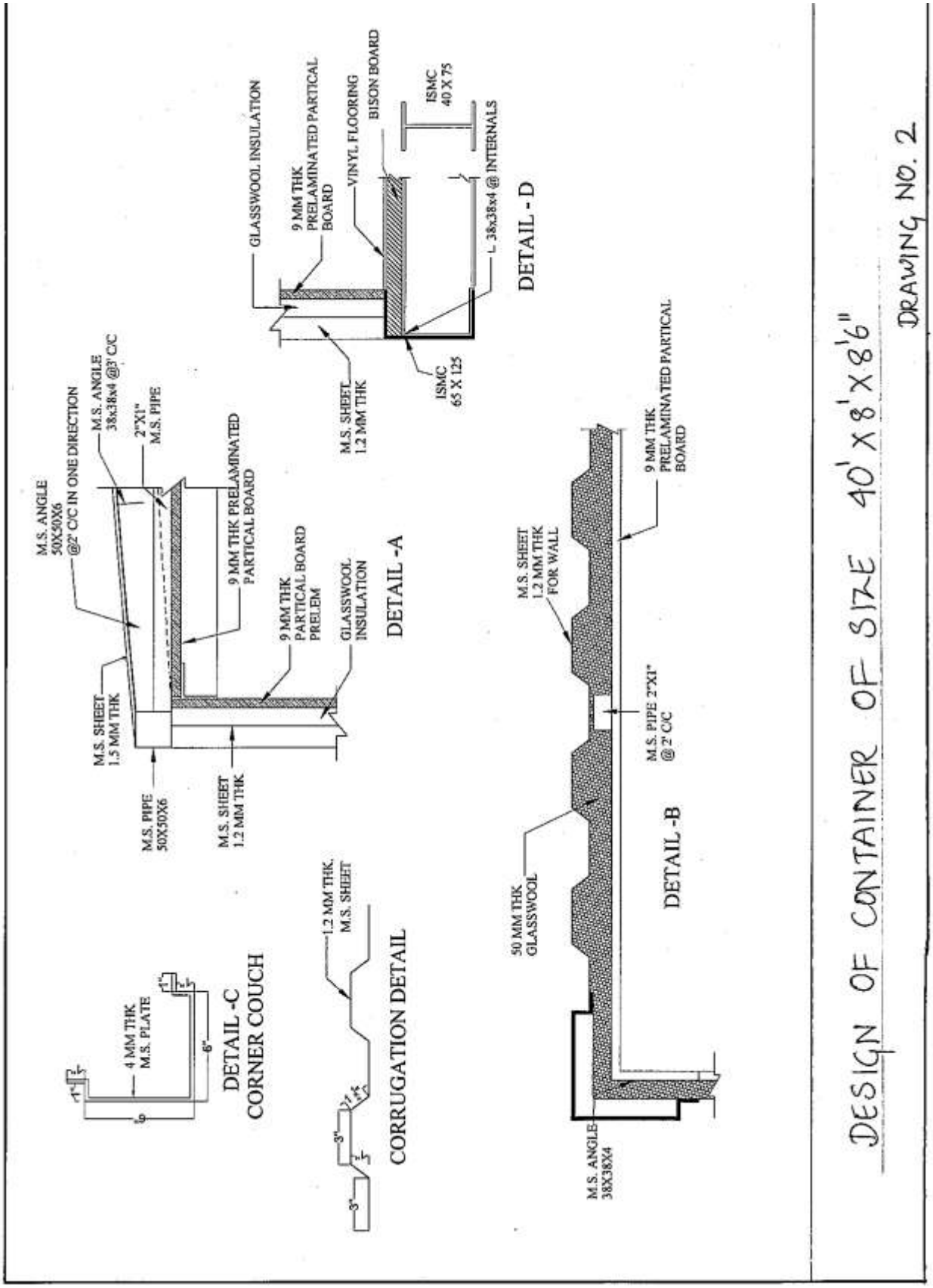
Annexure - IV

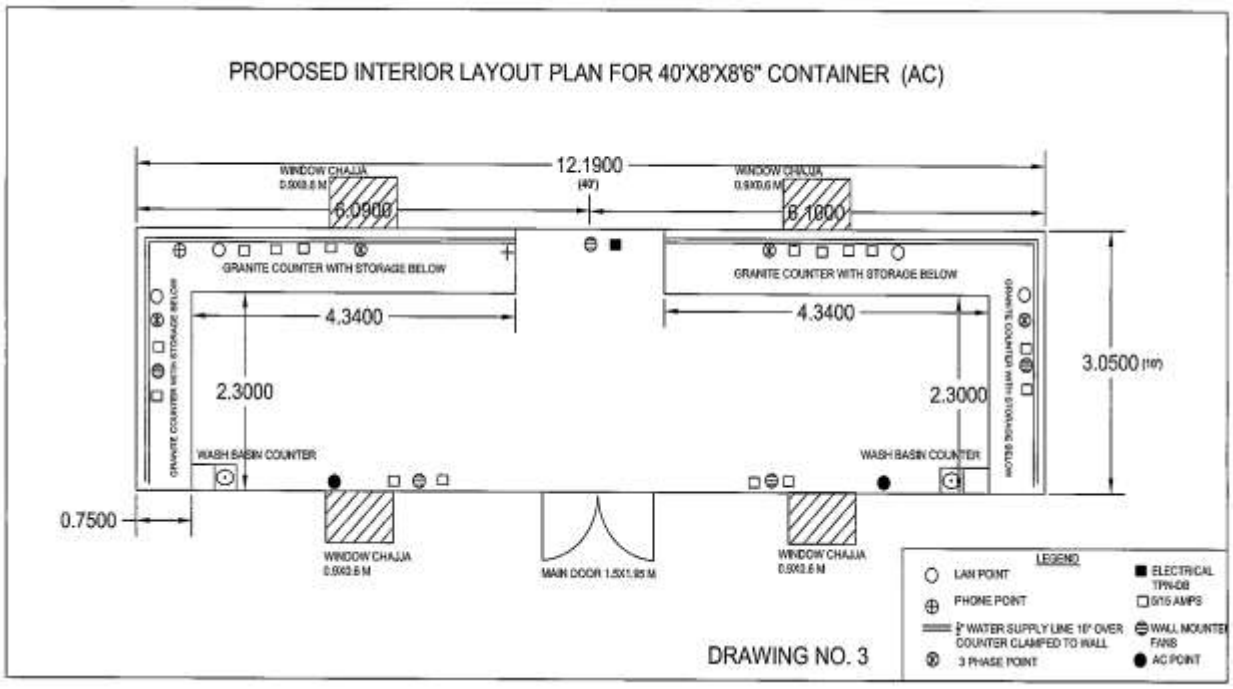
LIST OF APPROVED MAKES

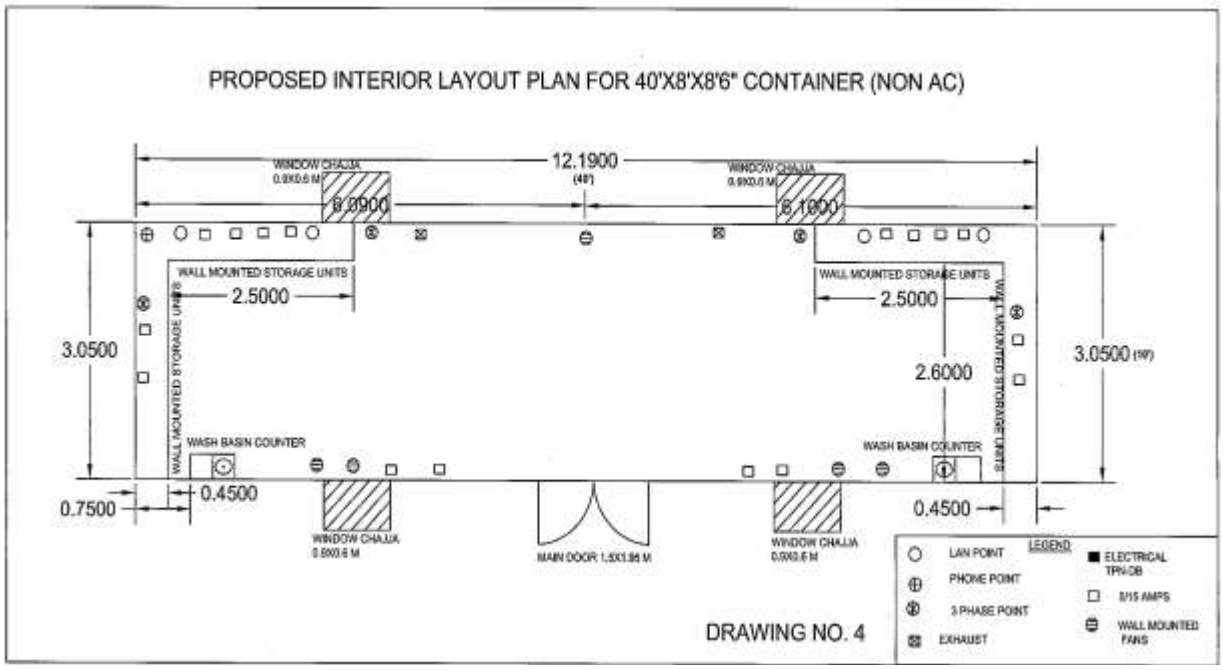
- Aluminum : Hindalco, Nalco, Jindal.
- Laminate : Merino, Green lam, Century
- MDF Board : Nuwud, Duratuff, Ecoboard
- Edge bands : Rehau, Dolken
- Eccentric Locking : Haffle, Hettich
- Metabox : Hettich.
- Hinges : Hettich, Haffle
- Hot melt Glue : Ici , Jowat, Rehau
- Adhesive: Fevicol, Vamicol, Araldite
- Miscellaneous Hardware : Hettich, Haffle, Ebco
- Float Glass : Modiguard, Saint–Gobain, Asahi
- Locks : Aries, Eg, Efficient Gadget
- Tambour slates and hardware : "REHAU " only.
- Aluminium – Jindal, Indal, Hindalco, Dorma Entramatic, Bhoruka
- UPVC – Fenesta, Sintex, City
- Glass – Modiguard, Asahi, Saint Gobain,Continental
- Hydraulic Door Closer – Everite, Hindustan, Godrej, Sevax, Dorma, Everest Universal 68, Omega
- Cylindrical Lock, Rim Lock – Godrej, Europa
- Laminates – Formica, Greenlam, Merino, Century, Decolam,
- Stainless Steel Handles /Hinges – Confirming to ASTM 203grade
- Valves – Zoloto, Firtop, Airfield
- Fixtures – ARK, Jaguar, Mark, Crabtree
- PVC pipes – Finolex, Prince, Supreme
- SS Sink – Nirali, Jyna
- Switches & Sockets: Roma, Legrand.
- Distribution boards, MCBs: Legrand.
- Wire:Finolex,Polycab.
- Fan:Bajaj,CG,Almonard.
- Light fittings: Phillips,havells.
- Lan and Telephone socket, CAT-6 cable: Legrand,Mosaic,D-link.
- Bulkhead Luminarie fitting:Pressteak,Ganpati.

NOTE: In the event of non- availability / stoppage of manufacture of the materials of the above approved make, suitable substitution shall be made by the Engineer with the prior approval at the request of the contractor


SECTION -AA
ELEVATION
PLAN OF CONTAINER
DESIGN OF CONTAINER OF SIZE 40' X 8' X 8'6".
DRAWING NO.-1


DESIGN OF CONTAINER OF SIZE 40'X8'X8'6"
DRAWING NO. 2
DETAIL -A
M.S. ANGLE 50X50X6 @2' C/C IN ONE DIRECTION
M.S. ANGLE 38x38x4 @3' C/C
2"X1" M.S. PIPE
9 MM THK PRELAMINATED PARTICAL BOARD
9 MM THK PARTICAL BOARD PRELEM
GLASSWOOL INSULATION
M.S. SHEET 1.5 MM THK
M.S. PIPE 50X50X6
M.S. SHEET 1.2 MM THK
DETAIL -D
GLASSWOOL INSULATION
9 MM THK PRELAMINATED PARTICAL BOARD
VINYL FLOORING
BISON BOARD
ISMC 40 X 75
L 38x38x4 @ INTERNALS
M.S. SHEET 1.2 MM THK
ISMC 65 X 125
DETAIL -B
M.S. SHEET 1.2 MM THK FOR WALL
9 MM THK PRELAMINATED PARTICAL BOARD
M.S. PIPE 2"X1" @2' C/C
50 MM THK GLASSWOOL
M.S. ANGLE 38X38X4
DETAIL -C
CORNER COUCH
4 MM THK M.S. PLATE
CORRUGATION DETAIL
1.2 MM THK. M.S. SHEET


PROPOSED INTERIOR LAYOUT PLAN FOR 40'X8'X8'6" CONTAINER (AC)
12.1900
(40')
WINDOW CHAJJA
0.5063.6 M
6.0900
WINDOW CHAJJA
0.5063.6 M
6.1000
GRANITE COUNTER WITH STORAGE BELOW
GRANITE COUNTER WITH STORAGE BELOW
4.3400
4.3400
2.3000
2.3000
3.0500 (10')
WASH BASIN COUNTER
WASH BASIN COUNTER
0.7500
WINDOW CHAJJA
0.5063.6 M
MAIN DOOR 1.5X1.95 M
WINDOW CHAJJA
0.5063.6 M
LEGEND
LAN POINT
ELECTRICAL TPN-DB
PHONE POINT
5/15 AMPS
1" WATER SUPPLY LINE 18" OVER COUNTER CLAMPED TO WALL
WALL MOUNTED FANS
3 PHASE POINT
AC POINT
DRAWING NO. 3


PROPOSED INTERIOR LAYOUT PLAN FOR 40'X8'X8'6" CONTAINER (NON AC)
12.1900
(40')
WINDOW CHAJJA
0.9900
6.1900
WALL MOUNTED STORAGE UNITS
2.5000
2.5000
3.0500
2.6000
3.0500 (10')
WASH BASIN COUNTER
0.7500
0.4500
0.4500
WINDOW CHAJJA
MAIN DOOR 1.5X1.95 M
WINDOW CHAJJA
LEGEND
LAN POINT
PHONE POINT
3 PHASE POINT
EXHAUST
ELECTRICAL TPN+DB
5/15 AMPS
WALL MOUNTED FANS
DRAWING NO. 4

TECHNICAL COMPLIANCE STATEMENT FOR SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6" (ONE AC AND ONE NON AC)

SR. NO.	SPECIFICATIONS FOR SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6" (ONE AC AND ONE NON AC)	COMPLIED/ NOT COMPLIED	EXTRA FEATURES
1	**General** **Scope:** This specification will cover the design, construction, materials, testing and inspection performances of 40'x8'x8'6" ISO. type steel dry cargo containers. These containers specified herein will be manufactured under strict quality control and be approved by the classification society or agency		
2	**Operational environment***:* The container will be designed and constructed for carriage of general cargo by marine (on or below deck), road and rail throughout the world. All materials used in the construction will be to withstand extremes of temperature range from -40°(-40°) to +70°(+158°) without effect on the strength of the basic structure and water tightness		
3	**Standards and Regulations*:*** The container will satisfy the following requirements and regulations, unless otherwise mentioned in this specification		
4	ISO Container Standards (1CC type)		
5	Classification society: All the containers will be certified for design type and individually inspected by classification society, BV, ABS, LR, GL or CCS		
6	**Handling*:*** The container will be constructed to be capable of being handled without any permanent deformation under the following conditions		
7	Lifting, full or empty, at top corner fittings vertically by means of spreaders fitted with hooks, shackles or twist locks		
8	Lifting, full or empty, at bottom corner fittings using slings with terminal fittings at any angles between vertical and 45 degrees to the horizontal		
9	**Transportation:** The container will be constructed to be suitable for transportation in the following modes		
10	Road: On flat bed or skeletal chassis, secured by twist locks or equivalent at the bottom corner fittings		
11	Rail: On flat cars or special container cars secured by twist locks or equivalent at the bottom corner fittings		
12	**Dimensions and Ratings**		
13	**External Dimensions** Length 2,100 + 0mm - 6mm Width 2,438 + 0mm - 5mm Height 2,591 + 0mm - 5mm		

14	1) No part of the container will protrude beyond the external dimensions mentioned above		
15	2) Maximum allowable differences between two diagonals on anyone of the following surfaces will be as follows: Roof, bottom and side diagonals: 13 mm Front and rear diagonals: 10 mm		
16	**Internal Dimensions (nominal)** Length 11,796 mm Width 2,350 mm Height 2,390 mm		
17	**Door opening Dimensions (nominal)** Width 2,343 mm		
18	**Materials** **General:** The following materials will be used in the construction of containers:		
19	**Part specification:** Parts Materials by JIS		
20	All steel except screws, rivets, Anti-corrosive steel. SPA-H bolts/nuts, door hardwares or equivalent and other shown on drawings Y.P. : 35 kg/mm2 and specification T.S. :49 kg/mm2		
21	Rear corner posts (inner) Rolled high tensile steel. SM50A Y.P. : 33 kg/mm2 T.S. : 50 kg/mm2		
22	Door hinges S25C Y.P. : 27 kg/mm2 T.S. : 45 kg/mm2		
23	Door locking bars Structural steel round pipe. STK41 Y.P. : 24 kg/mm2 T.S. : 41 kg/mm2		
24	Corner fittings Casted weldable steel. SCW49 Y.P. : 28 kg/mm2 T.S. : 49 kg/mm2		
25	Locking gear cams and keepers S20C Y.P. : 25 kg/mm2 T.S. : 41 kg/mm2		
26	Door hinge pins Stainless steel. SUS304 Gasket retainers		
27	Door gasket EPDM		
28	Floor board 19-ply Hardwood plywood		
29	Ventilator ABS resin labyrinth type * Note: Y.P. - Yielding Point		
30	T.S. - Tensile Strength		
31	**Construction** **General** The container will be constructed with steel frames, fully vertical-corrugated steel sides and front wall, horizontal-corrugated steel double doors at rear end, die-stamped steel roof , wooden flooring, corrugated double hinged doors and ISO corner fittings at eight corners.		

32	All exterior welding including the base frames will be continuous welding using CO2 gas to give perfect watertight properties		
33	Interior welds - when needed - will be stitched with a minimum bead length of 25 mm.		
34	Gaps between adjacent components to be welded will not exceed 3 mm or the thickness of the parts being welded		
35	Chloroprene sealant is to be applied at periphery of floor surface and inside unwelded seams, butyl sealant is used to caulk at invisible seam of floor joint area and between door gasket and frame		
36	The internal bend radii of pressed sections of steel will be not less than 1.5 time the thickness of the materials being pressed		
37	The wooden floor will be fixed to the base frames by zinc plated self-tapping screws.		
38	**Protrusion** The plane formed by the lower faces of all transverse members shall be positioned by 12.5 mm +5/-1.5 mm above the plane formed by the lower faces of the bottom corner fittings		
39	The top corner fittings are to protrude a minimum of 6 mm above the highest point of the roof		
40	The outside faces of the corner fittings will protrude from the outside faces of the corner posts by nominal 4 mm for the front and nominal 3 mm for the rear		
41	The outside faces of the corner fittings will protrude from the outside faces of the sides and front wall by nominal 8 mm		
42	Under maximum payload, no part of the container will protrude below the plane formed by the lower faces of the bottom corner fittings at the time of maximum deflection		
43	Under 1.8 x maximum gross weight, no part of the container will protrude more than 6.0 mm below the plane formed by the lower faces of the bottom corner fittings at the time of maximum deflection		
44	**Corner fittings:** The corner fittings will be designed in accordance with ISO 1161 and manufactured at the works approved by classification society		
45	**Base frame structure:** Base frame will be composed of two bottom side rails, eighteen cross members, and a forklift pockets		

46	Bottom side rail: Each bottom side rail is built of a 50x158x30x4.5 mm thick cold formed channel section steel made in one piece. The floor guide rails of 3.0 mm thick pressed angle section steel are provided to the bottom side rails by staggered stitch welding. The lower flange of the bottom side rail is outward so as to facilitate easy removal of the cross members during repair and of less susceptible corrosion. Reinforcement plates to be made of 4.5 mm thick "L" type steel is welded to the bottom surface of both side rails around the bottom corner fitting.		
47	Cross member: The cross members are made of pressed channel section steel with a dimension of 45x122x45x4.0 mm for the normal areas and 75x122x45x4.0 mm for the floor butt joints. The large one is reinforced by three 4.0 mm thick gussets. The cross members are placed fully to withstand floor strength and welded to each bottom side rail.		
48	**Flooring**: The floor will consist of six pieces plywood boards, floor center rail, and self- tapping screws		
49	Floor: The wooden floor to be constructed with 28 mm thick 19-ply hardwood plywood boards are laid longitudinally on the transverse members between the 4.0 mm thick flat bar floor center rail and the 3.0 mm thick pressed angle section steel floor guide rails stitched welded to the bottom side rails. The floor boards are tightly secured to each transverse member by self-tapping screws, and all butt joint areas and peripheries of the floor boards are caulked with sealant. 1) Wood species: Apitong or Keruing. 2) Glue: Phenol-formaldehyde resin. 3) Treatment: a) Preservative: Meganium or Equivalent. In accordance with Australian Health Department Regulations. b) Average moisture content will be 14% before installation		
50	Self-tapping screw: Each floor board is fixed to the transverse members by zinc plated self-tapping screws that are 8.0 mm dia. shank x 16 mm dia. head x 45 mm length, and fastened by five screws per cross member but six screws at joint areas. Screw heads are to be countersunk with about 2 mm below the floor top surface		
51	**Rear frame structure:** The rear frame will be composed of one door sill, two corner posts, one door header and four corner fittings, which will be welded together to make the door- way		

52	Door sill: The door sill to be made of a 4.5 mm thick pressed open section steel is reinforced by four internal gussets at the back of each locking cam keeper location. The upper face of the door sill has a 10 mm slope for better drainage. There is cut out at each end of the door sill and reinforced by a 200 x 75 mm channel steel as a protection against handling equipment damages		
53	Rear corner post: Each rear corner post of hollow section is fabricated with 4.5 mm thick pressed steel outer part and 40x113x12 mm thick hot rolled channel section steel inner part, which are welded continuously together to ensure a maximum width of the door opening and to give a sufficient strength against stacking and racking forces. Four (4) sets of hinge pin lugs are welded to each rear corner post		
54	Door header: The door header is constructed with a 4.0 mm thick pressed "U" section steel lower part having four internal gussets at the back of each locking cam keeper location and a 3.0 mm thick pressed steel upper part, which are formed into box section by continuous continuous welding		
55	**Door** Each container will have double wing doors as per the drawing, and each door will be capable of swinging approximately 270 degrees		
56	Each door is constructed with two 3.0 mm thick pressed channel section steel horizontal frames for the top and bottom, 100x50x2.3 mm and 100x50x3.2 mm thick rectangular hollow section vertical frames for the post side and center side of door respectively, 2.0 mm thick horizontally corrugated steel door panel, which are continuously welded within frames. The main door to be provided with chajja		
57	Two sets of galvanized "BE2566MN" bolt on model locking assemblies with forged steel handles are fitted to each door using zinc plated steel bolts and Huck bolts according to TIR requirements. Locking bar retainers are fitted with nylon bushings at the top, bottom and intermediate bracket. Locking gears should be assembled after painting of container. The shims are to be provided between locking brackets and door panel		
58	The left hand door can not be opened without opening the right hand door when the container is sealed in accordance with TIR requirements		
59	Each door is suspended by four hinges being provided with stainless steel pins, self- lubricating nylon bushings and the brass washers, which are placed at the hinge lugs of the rear corner posts		

60	The door gasket to be made of an extruded J&C-type EPDM rubber is installed to the door peripheral frames with stainless steel gasket retainers which must be caulked with butyl sealant before installation of gasket, and fastened by stainless steel rivets at a pitch of 150 mm		
61	**Roof structure:** The roof will be constructed with five-corrugated (die-stamped) steel panels and corner protection plates		
62	Roof panel: The roof panel is constructed with 1.2 mm thick die-stamped steel sheets having about 5.0 mm upward smooth camber, which are welded together to form one panel and continuously welded to the top side rails and top end rails. All overlapped joints of inside unwelded seams are caulked with chloroprene Sealant		
63	Protection plate: Each corner of the roof in the vicinity of top corner fitting is reinforced by 2.0 mm thick rectangular steel plate to prevent the damage caused by the mishandling of lifting equipment		
64	**Top side rail:** Each top side rail is made of a 60x60x3.0 mm thick square hollow section steel		
65	**Side wall:** The trapezium section side wall is constructed with 1.2 mm thick fully vertically continuous-corrugated steel outer panels near the each post and 1.2 mm thick intermediate inner panels, which are butt welded together to form one panel and continuously welded to the side rails and corner posts. All overlapped joints of inside are caulked with chloroprene sealant		
66	**Front structure:** Front end structure will be composed of one bottom end rail, two corner posts, one top end rail, four corner fittings and an end wall, which are welded together		
67	Bottom end rail: The bottom end rail to be made of a 2.0 mm thick pressed open section steel is reinforced by four internal gussets. There is cut out at each end of the bottom end rail and reinforced by a 200x75 mm channel steel as a protection against handling equipment damages		
68	Front corner post: Each corner post is made of 4.0 mm thick pressed open section steel in a single piece, and designed to give a sufficient strength against stacking and racking forces		
69	Top end rail: The top end rail is constructed with 60x60x3.0 mm thick square hollow section steel at lower part and 3.0 mm thick flat steel plate at upper part.		

70	Front wall: The trapezium section front wall is constructed with 2.0 mm thick vertically corrugated steel panels, butt welded together to form one panel, and continuously welded to front end rails and corner posts. All overlapped joints of inside are caulked with chloroprene sealant.				
71	**Special feature** Ventilator: Each container will have two labyrinth type small plastic ventilators. Each ventilator is fixed to the right hand upper part of each side wall by three 5.0 mm dia. stainless steel rivets in accordance with TIR requirements after drying of top coating, and caulked with silicone sealant around the entire periphery except underside to prevent the leakage of water				
72	**Surface preservation** **Surface preparation** All steel surfaces - prior to forming or after - will be fully abrasive shot blasted conforming to Swedish Standard SA 2 1/2 to remove all rust, dirt, mill scale and all other foreign materials. The shot blasted surface profile shall be have a maximum peak to valley height not exceeding 50 microns and average peak to valley height of about 25 microns.				
73	All door hardwires will be hot-dipping zinc galvanized with approximately 75 microns thickness				
74	All fasteners such as self-tapping screws and bolts, nuts, hinges, cam keepers and lashing fittings will be electro-galvanized with approximately 13 microns thickness				
75	**Coating** Prior to assembly: All steel surfaces will be coated with 10 microns thick two-pack polyamide cured zinc rich epoxy primer immediately after shot blasting, and then dried up in drying room				
76	After assembly: All weldments will be shot blasted to remove all welding fluxes, splatters, burnt primer coatings caused by welding heat, and other foreign materials. Then all blasted weldments will be coated with zinc rich epoxy primer				
77	The total dry film will be (microns): All surface of the assembled container will be have coating system as follows:				
78	Where	Paint name	DFT (u)		
79	Exterior surface	Epoxy zinc rich primer	30		
80	Epoxy primer	Chlorinated rubber or Acrylic topcoat	40		
81	Color:		40		
82		**Total:**	**110**		

83	Interior surface	Epoxy zinc rich primer	20		
84	Epoxy high build coating		**40**		
85		**Total:**	**60**		
86	Under structure	Epoxy zinc rich primer	**20**		
87	Bitumen		**190**		
88		**Total:**	**210**		
89	Container to be externally coated with 2 mm thick FRP (Fiber Re-inforced Plastic) lined with Bi-sphenol A fumerate resin for corrosion free environment.				
90	**Guarantee**				
91	**Structure :** All the containers shall be guaranteed by manufacturer to be free from defects in materials, workmanship and structure for a period of one (1) year from the date of acceptance of the container by the buyer				

TECHNICAL COMPLIANCE STATEMENT FOR SUPPLY OF INTERIOR WORKS

SR. NO.	SPECIFICATIONS FOR SUPPLY OF INTERIOR WORKS	COMPLIED/ NOT COMPLIED	EXTRA FEATURES
1	**Counter cum storage unit :** The storage unit counters to have counter top made of 25mm thick prelaminated MDF of approved brand and shade. The top to be finished with 18mm thick jet black granite with edge moulding. All the exposed edges of the top shall be provided with machine pressed 2mm thick PVC lipping glued with hot melt EVA glue. Storage to have adjustable shelves finished with laminate. Storage to have openable shutters and necessary hardwares like SS handles, hinges, tower bolts etc complete as per the drawing and as directed by the Engineer incharge. The storage counter individual unit will be of size 1000x750x800 mm each equally divided throughout the full length (L shape) as shown in the drawing		
2	**Overhead storage unit :** Storage unit to have counter top made of 18mm thick prelaminated MDF of approved brand and shade. All the exposed edges of the top shall be provided with machine pressed 2mm thick PVC lipping glued with hot melt EVA glue. Storage to have adjustable shelves finished with laminate. Storage to have openable shutters and necessary hardwares like SS handles, hinges, tower bolts etc complete as per the drawing and as directed by the Engineer incharge. The overhead storage individual unit will be of size 1000x450x700 mm each equally divided throughout the full length (L shape) as shown in the drawing		
3	**Aluminium Sliding windows:** Providing and fixing of powder coated aluminium windows of size 3'x3', 4 nos each with 5mm float glass of approved make for container as shown in the drawing. The powder coating shade to be approved before execution. The windows to be compulsorily provided with chajjas etc complete as per the drawing and as directed by the Engineer incharge		

5	**Wash basin:** Wash basin (ceramic) of size 600x400x200 mm shall be of approved make conforming to IS:771 fixed over granite counter. 32mm dia waste coupling, rubber plug etc. complete shall be provided. 32mm dia CP brass bottle trap with CP pipe to wall along with wall flange etc of approved make shall be provided for sink.		
6	Providing and fixing of ½" water supply pipeline of approved make over the counter as shown in the drawing. All control valves, stop cocks, ball valves, bib-cocks shall be of the best approved quality.		

TECHNICAL COMPLIANCE STATEMENT FOR ELECTRICAL WORKS

SR. NO.	SPECIFICATIONS FOR SUPPLY OF ELECTRICAL WORKS	COMPLIED/ NOT COMPLIED	EXTRA FEATURES
1	For AC container Providing & fixing concealed 8way (8+24) ETPN DB with metal door with 63A FP MCB(01no,incomer),32A TP MCB (04 nos),10/20A(12nos) SP MCB, positioned on the wall exactly opposite to the door, as indicated in the layout plan. Providing 70 mm dia opening to the container wall below the TPN DB at 300mm above floor level and making proper provisions for connecting the main electrical incoming cable (of size varying from 35 to 50sqmm) into the DB		
2	Providing & fixing a total 16 numbers of concealed 5/15A power points using 4sqmm wire (PNE) such that three power points in a single circuit from main DB. 12 nos equally positioned at 100mm above the granite counter on both sides and 02 nos on 'each side'(Left as well as right) of the door as indicated in the layout plan at the height of 300mm from the floor level.		
3	Providing & fixing 04 numbers of concealed three phase power points with socket and 3pole 32Amps MCB, such that one power point per circuit from main DB, using 6sqmm wire (RYBNE), positioned at 100mm above the granite counter and equally spaced as indicated in the layout plan		
4	Providing & installing a total 05 numbers of "400mm sweep-wall mounted fans" with power points for each fan.02 nos positioned on 'door side' wall such that one at 4mtrs from 'short span wall' on both sides of the door,01 each at the center of 'short span wall' on both the sides and 01 at the center position of the wall exactly opposite to the door, as indicated in the layout plan.		
5	Providing and installing 2 numbers of 2Ton AC units (100% copper tubing) positioned on both the sides of the door as indicated in the layout plan with 20A metra plug & socket DBs for each AC using 6sqmm wire (PNE) from main DB as per the positioning of AC units		
6	Providing & fixing 2x28W surface mounted luminaries (06nos) positioned equidistantly on the ceiling and one Bulkhead Luminaire fitting CFL 8W PVC body on the outer side wall above the door and its concealed wiring using 2.5sqmm wire (PNE) with the concealed lighting switch board to be provided near the door, including switches		
7	Providing & fixing one telephone point at 100mm above the granite counter as indicated in the layout plan and drawing 02pair telephone cable up to the 70mm dia opening done near main electrical DB		

8	Providing & fixing 04 numbers of lan points, such that two on each side at 100mm above the granite counter as indicated in the layout plan, drawing its UTP CAT-6 cable up to the 70mm dia opening done near main electrical DB		
9	**For Non-AC container**. Providing & fixing concealed 8way (8+24) ETPN DB with metal door with 63A FP MCB(01no,incomer) ,32A TP MCB (04 nos),10/20A(12nos) SP MCB, positioned on the wall just opposite to the door as indicated in the layout plan. Providing 70 mm dia opening to the container wall just below the main DB at 300mm above floor level and making proper provisions for connecting the main electrical incoming cable (of size varying from 35 to 50sqmm) into the DB.		
10	Providing & fixing a total 16 numbers of concealed 5/15A power points using 4sqmm wire (PNE), such that three power points in a single circuit from main DB, positioned at 300mm above the floor level equally spaced as indicated in the layout plan		
11	Providing & fixing a total 04 numbers of concealed three phase power points with socket and 3pole 32Amps MCB such that one power point per circuit from main DB, using 6sqmm wire (RYBNE), positioned at 300mm above the floor level and equally spaced as indicated in the layout plan.		
12	Providing & installing a total 05 numbers of "400mm sweep-wall mounted fans" with power points for each fan, positioned such that 02 each on either side of door at 2mtrs and 4mtrs respectively from short span wall and 01 at the center position of the wall exactly opposite to the door , as indicated in the layout plan		
13	Providing & installing 02 numbers of 250mm sweep-exhaust fans (Plastic body & blade) with power points for each fan, positioned as indicated in the layout plan.		
14	Providing & fixing 2x28W surface mounted luminaries (06nos) positioned equidistantly on the ceiling and one Bulkhead Luminaire fitting CFL 8W PVC body on the outer side wall above the door and its concealed wiring using 2.5sqmm wire (PNE) with the concealed lighting switch board to be provided near the door, including switches.		
15	Providing one telephone point at 300mm above the floor level as indicated in the layout plan and drawing 02 pair telephone cable up to the 70mm dia opening done near main electrical DB.		
16	Providing 04 numbers of lan points, such that two on each side at 300mm above the floor level as indicated in the layout plan, drawing its UTP CAT-6 cable up to the 70mm dia opening done near main electrical DB		
17	**Note: The recommended position of the lighting control switches, distribution boards, electrical equipments as shown in the layout drawing should be adhered to as far as practical.**		

TECHNICAL COMPLIANCE STATEMENT FOR LIST OF APPROVED MAKES

SR. NO.	SPECIFICATIONS FOR LIST OF APPROVED MAKES	COMPLIED/ NOT COMPLIED	EXTRA FEATURES
1	• Aluminum : Hindalco, Nalco, Jindal.		
2	• Laminate : Merino, Green lam, Century		
3	• MDF Board : Nuwud, Duratuff, Ecoboard		
4	• Edge bands : Rehau, Dolken		
5	• Eccentric Locking : Haffle, Hettich		
6	• Metabox : Hettich.		
7	• Hinges : Hettich, Haffle		
8	• Hot melt Glue : Ici , Jowat, Rehau		
9	• Adhesive: Fevicol, Vamicol, Araldite		
10	• Miscellaneous Hardware : Hettich, Haffle, Ebco		
11	• Float Glass : Modiguard, Saint–Gobain, Asahi		
12	• Locks : Aries, Eg, Efficient Gadget		
13	• Tambour slates and hardware : "REHAU " only.		
14	• Aluminium – Jindal, Indal, Hindalco, Dorma Entramatic, Bhoruka		
15	• UPVC – Fenesta, Sintex, City		
16	• Glass – Modiguard, Asahi, Saint Gobain,Continental		
17	• Hydraulic Door Closer – Everite, Hindustan, Godrej, Sevax, Dorma, Everest Universal 68, Omega		
18	• Cylindrical Lock, Rim Lock – Godrej, Europa		
19	• Laminates – Formica, Greenlam, Merino, Century, Decolam,		
20	• Stainless Steel Handles /Hinges – Confirming to ASTM 203grade		
21	• Valves – Zoloto, Firtop, Airfield		
22	• Fixtures – ARK, Jaguar, Mark, Crabtree		
23	• PVC pipes – Finolex, Prince, Supreme		
24	• SS Sink – Nirali, Jyna		
25	• Switches & Sockets: Roma, Legrand.		
26	• Distribution boards, MCBs: Legrand.		
27	• Wire:Finolex,Polycab.		
28	• Fan:Bajaj,CG,Almonard.		
29	• Light fittings: Phillips,havells.		
30	• Lan and Telephone socket, CAT-6 cable: Legrand,Mosaic,D-link.		

31	• Bulkhead Luminarie fitting:Pressteak,Ganpati.		
32	**NOTE: In the event of non- availability / stoppage of manufacture of the materials of the above approved make, suitable substitution shall be made by the Engineer with the prior approval at the request of the contractor**		

Annexure - V

TERMS AND CONDITIONS FOR SUBMISSION OF QUOTATION

1) The National Centre for Antarctic and Ocean Research (NCAOR) **invites sealed quotations in two-parts** from the reputed firms for the **"SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6" at** NCAOR, GOA as per the specifications given in Annexure I.

2) The technical and financial Bids should be submitted in two separate sealed covers, super scribing "**Part-I Technical Bid for "SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6" Tender No., due date and "Part-II Financial Bid for "SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6" Tender No., due date. Both the bids should be kept in a single cover by super scribing tender for "SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6"** sealed and addressed to the Director, National Centre for Antarctic and Ocean Research, Headland-Sada, Vasco-da-Gama, Goa-403 804. **Offer sent through fax will not be accepted**.

3) Overwriting and corrections should be attested properly. The bid should be complete in all respects and should be duly signed. Incomplete and unsigned bids will not be considered at all.

4) All relevant technical literature pertain to items quoted **with full specifications** (Drawing, if any), information about the products quoted, including brochures if any should accompany the quotation.

5) A list of **reputed clients** to whom the firm has supplied similar items to be furnished along-with the quotation.

In the TECHNICAL BID, the Bidder should furnish the Name and address of the Purchasers placed orders on similar equipment with order No, date, Description and quantity, Date of Supply alongwith Contact person Telephone No, Fax No, and e mail address of Purchaser.

The Bidder should enclose copies of Purchase Orders only in the FINANCIAL BID.

6) Quotation should be **valid for a period of 90 days** from the date of tender opening and the period of delivery required should also be clearly indicated. The containers are required at NCAOR latest by 20.7.2011. If the supplier fails to deliver the goods within the time to be agreed upon, for delayed deliveries and for delays in installation (wherever applicable) NCAOR

reserves the right to **levy liquidated damages** at the rate of 0.5% per week or part their of upto maximum of 5%.

7) Warranty shall commence from the date of acceptance of the containers supplied under the Purchase Order / Contract. The **warranty period** should be indicated.

8) Technical Bid should contain EMD.

Bidders shall submit **EMD** along with their tender, **either By DD** drawn in favour of NCAOR, for a sum of ` 35,000/- (Rupees Thirty Five Thousand only) **or in the form of a bank guarantee** for a sum of ` 35,000/- (Rupees Thirty Five Thousand only) from any reputed bank (scheduled bank) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only.

Tender without EMD in the envelope containing technical bid shall be summarily rejected. The EMD of unsuccessful bidders shall be returned within 15 days of the award of contract.

The earnest money will be liable to be forfeited, if the tenderer withdraws or amends impairs or derogates from the tender if any respect within the period of validity of his tender.

9) Please **specify the Make/Brand** and Name of the Manufacturer with address, country of origin and currency in which rates are quoted.

10) The Purchaser requires that the bidders suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:

“Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution:

“fradulent practice” means a misrepresentation or omission of facts in order to influence a procurement process or the execution of contract;

“collusive practice” means a scheme or arrangement between two or more bidders, with or without the knowledge of purchaser, designed to establish bid prices at artificial, noncompetitive levels; and

"coercive practice: means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of contract;

The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the contract in question; The Decision of Director, NCAOR shall be final and binding.

11) Bidders that doesn't manufacture the goods it offers to supply shall submit Manufacturer's Authorization form on the letterhead of the Manufacturer duly signed and stamped by a person with the proper authority to sign documents that are binding on the Manufacturer as per the following format should be submitted failing which the quotation will not be considered.

To
The Director
NCAOR
GOA

Sub: Manufacturers' Authorization form against Tender No:_____

We_____(Name of the Manufacturer) who are official manufacturers of _____(Type of goods manufactured) having factories at _____(full address of Manufacturer's factories) do hereby authorize _____(Name of the Bidder) to submit a bid against your Tender No._____for the _____Goods manufactured by us and to subsequently negotiate and sign the contract.

We hereby extend our full guarantee and warranty with respect to the Goods offered by the above firm

Manufacturer's Name:
Signature of Authorized
representative of the Manufacturer:

Duly authorized to sign this Authorization on behalf of : _____(Name of the Bidder)
Date:

In case the bidder not doing business within India, shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc., during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc., during the warranty and post- warranty period.

12) Compliance Statement: Container point-by-point comparison / compliance statement with **technical specification** indicated in the tender, should be enclosed along with your tender as well as any other extra features of the equipment be shown separately therein and also **compliance statement for all commercial terms** of the tender document.

13) NCAOR is not entitled to issue form **"C/D**". No sales Tax or any other Tax shall be payable by us unless payment of the same is specifically mentioned by the suppliers in their bids and same is legally leviable.

14) NCAOR is **exempted from the payment of Excise Duty / Custom Duty** as per Govt. notification. Hence, the rates should be split into basic cost and Excise Duty if any.

15) Technical Bid should contain all details and specifications of the container offered, delivery schedule, warranty , payment term, installation, post-warranty, user-list, service support **WITHOUT PRICE** and **Financial bid should contain** details of the price(s) of the item(s) quoted in the technical bid. The technical bid should not contain any references to the pricing.

In case the technical bid contains any direct or indirect reference to quoted price the bid is liable to be rejected.

16) Please submit your quote on F.O.R. destination basis. However tender should contain item-wise prices including total ex-works price approx. cost of Transportation charges for delivery up to Goa, India.

17) A Committee constituted by the Director, NCAOR for the purpose reserves the right to open the bids. Only technical bids will be opened on the date and time mentioned in the tender document. The financial bids of those tenderers whose technical bids are found to be meeting our specifications only will be opened in their presence at date and time to be notified later.

18) A technical Committee constituted by the Director will assess the product supplied/installed for their quality and their conformity to the specifications provided by the firm in their quotations. Any item(s) identified by the Committee to be not as per the specifications or are found to be of inferior quality will be rejected, and the bills towards the supply will not be processed for payment till proper replacements are provided.

19) **No advance payment** will be made. Payment shall be made within 30 days from the date of receipt, acceptance of the containers. The payment will be authorized after submission of a Bank Guarantee for 10% value of the order towards warranty guarantee. The **performance Bank Guarantee** should be furnished within 15 days from the date of placement of order from a reputed bank (scheduled bank in India **or** foreign bank operating in India) valid till 60 days after the warranty period.

20) The submission of tender shall be deemed to be an admission on the part of the tenderer, had fully acquainted with the specifications, drawings etc. and no claim other than what stated in the tender shall be paid in the event of award of Purchase Order.

21) Acceptance of this tender form and submission of the quote within the stipulated time would be treated as:

a) The tenderer has understood all requirements as described in our Tender document.

b) Acceptance to provide/establish all the facilities mentioned in our tender without any price escalation, if the tenderer finds it necessary to add any hardware or software or any other materials during implementation.

c) Agreeing to execute order to the satisfaction of NCAOR or its authorized representatives within the stipulated time.

22) NCAOR will not be liable for any obligation until such time NCAOR has communicated to the successful bidder of its decision to release the Purchase Order.

23) NCAOR will not be responsible for any postal delays.

24) Bidders shall note that NCAOR will not entertain any correspondence or queries on the status of the offers received against this Tender Invitation.

25) Tenders from Manufacturers/Suppliers/Tenderers whose performance was not satisfactory in respect of quality of supplies and delivery schedules in any organizations, are liable for rejection. The tenders that do not comply with the above criteria and other terms & conditions are liable for rejection.

26) The Director, NCAOR does not bind to accept the lowest quotation and reserves the right to himself, to reject or partly accept any or all the quotations received without assigning any reason.

27) All disputes arising in connection with executing the purchase order will be subject to the Jurisdiction of the Courts in Goa only.

COMMERCIAL COMPLIANCE STATEMENT FOR "SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6" (ONE AC AND ONE NON AC).

Sr. No.	COMMERCIAL SPECIFICATION FOR "SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6" (ONE AC AND ONE NON AC)	COMPLIED/ NOT COMPLIED	EXTRA FEATURES
1	A list of **reputed clients** to whom the firm has supplied similar items to be furnished along-with the quotation.		
2	In the TECHNICAL BID, the Bidder should furnish the Name and address of the Purchasers placed orders on similar equipment with order No, date, Description and quantity, Date of Supply alongwith Contact person Telephone No, Fax No, and e mail address of Purchaser.		
3	The Bidder should enclose copies of Purchase Orders only in the FINANCIAL BID.		
4	SSI, NSIC Registration Certificate		
5	Quotation should be **valid for a period of 90 days** from the date of tender opening and the period of delivery required should also be clearly indicated.		
6	The **warranty period** and the kind of **post-warranty support** should be indicated. Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the Purchase Order / Contract.		
7	**Bidders** shall submit **EMD** for ` 35,000/- (Rupees Thirty Five Thousand only) payable at Vasco-da-Gama only **or in the form of a bank guarantee** for a sum of ` 35,000/- (Rupees Thirty Five Thousand only) from any reputed bank (scheduled bank)		
8	**Tender without EMD in the envelope containing technical bid shall be summarily rejected**. The EMD of unsuccessful bidders shall be returned within 30 days of the award of contract.		
9	Please **specify the Make/Brand** and Name of the Manufacturer with address, country of origin and currency in which rates are quoted.		
10	**Compliance Statement:** Equipments point-by-point comparison/compliance statement with **technical specification** indicated in the tender, should be enclosed along with your tender as well as any other extra features of the equipment be shown separately therein and also **compliance statement for all commercial terms** of the tender document.		
11	NCAOR is not entitled to issue form **"C/D"**. No Sales Tax or any other Tax shall be payable by us unless payment of the same is specifically mentioned by the suppliers in their bids and same is legally leviable.		
12	To avail duty concessions i.e. **Excise Duty** as per Govt. notification 10/97 & **Custom Duty** as per Govt. notification 51/96, NCAOR will provide exemption certificates. Hence, the rates should be split into basic cost and Excise Duty if any.		
13	**Technical Bid should contain** all details and specifications of the equipment offered, delivery schedule, warranty, payment term, installation, training, post-warranty, user-list, service support **WITHOUT PRICE** and **Financial bid should contain** details of the price(s) of the item(s) quoted in the technical bid. The Technical bid should not contain any references to the pricing.		
14	**In case the technical bid contains any direct or indirect reference to quoted price the bid is liable to be rejected.**		

15	F.O.R GOA price should be indicated. However tender should contain item-wise prices including total ex-works price, Excise Duty, VAT/Taxes, Charges for Inland Transportation, Insurance and other local services required for the delivering the goods on F.O.R GOA.		
16	A Committee constituted by the Director, NCAOR for the purpose reserves the right to open the bids. Only technical bids will be opened on the date and time mentioned in the tender document. The financial bids of those tenderers whose technical bids are found to be meeting our specifications only will be opened in their presence at date and time to be notified later.		
17	A technical Committee constituted by the Director will assess the product supplied/installed for their quality and their conformity to the specifications provided by the firm in their quotations. Any item(s) identified by the Committee to be not as per the specifications or are found to be of inferior quality will be rejected, and the bills towards the supply will not be processed for payment till proper replacements are provided.		
18	**No advance payment** will be made. Payment for indigenous stores shall be made within 30 days from the date of receipt, acceptance and satisfactory installation of equipment.		
19	The **performance Bank Guarantee** should be furnished within 15 days from the date of placement of order from a reputed bank (scheduled bank in India **or** foreign bank operating in India) valid till 60 days after the warranty period.		
20	**The submission of tender** shall be deemed to be an admission on the part of the tenderer, had fully acquainted with the specifications, drawings etc. and no claim other than what stated in the tender shall be paid in the event of award of Purchase Order.		
21	**Acceptance of this tender** form and submission of the quote within the stipulated time would be treated as: • The tenderer has understood all requirements as described in our Tender document. • Acceptance to provide/establish all the facilities mentioned in our tender without any price escalation, if the tenderer finds it necessary to add any hardware or software or any other materials during implementation. Agreeing to execute order to the satisfaction of NCAOR or its authorized representatives within the stipulated time.		

QUESTIONNAIRE

a. **Name of the Manufacturer / Tenderer**

b. **Full postal address with Telephone, Telefax, Email**

c. **Please specify whether Public Limited, Company, Private Organization or Partnership Firm**

d. **Nature of the Business**

e. **Date of Establishment**

f. **Present Turnover**

g. **Permanent Income Tax Ref. No.**

h. **C.S.T. / S.T. NO.**

i. **Address & Telephone Nos. Of your branch office in GOA (please specify whether Distributing/Servicing/Marketing the products)**

j. **Technical Compliance statement.**

k. **Commercial Compliance statement.**

l. **Reference of reputed Customers**

m. **Details of the highest order executed and value thereof**

n. **Authorization from Manufacturer/Supplier attached**

o. **Tender fee submitted/enclosed.**

p. **E.M.D. attached with BID.**

q. **Infrastructure facilities required for installation & commissioning attached**

r. **Technical Specifications/Literature/Brochure attached**

s. **Tender Acceptance**

TENDER ACCEPTANCE UNDERTAKING

To

The Director,
NCAOR, Headland Sada
Vasco - Goa

Having examined the tender document for "**SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6"**we the undersigned, hereby offer to supply the equipment in conformity with all specifications and conditions set out in the tender document.

We enclosed all the relevant documents as per the tender.

We understand that you are not bound to accept the lowest or any tender received.

Date :

(Signature of Bidder)

Name :

Designation :

Seal

BANK GUARANTEE FORMAT FOR FURNISHING EMD

To

NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
Headland Sada, Vasco-da-Gama, GOA 403 804, INDIA

Whereas _____
(Hereinafter called the "tenderer"
has submitted their offer dated _____
for the supply of _____
(Herein after called the "tender"
WE_____ of having our registered office
At _____ are bound unto the NATIONAL
(Hereinafter called the Bank)
CENTRE FOR ANTARCTIC & OCEAN RESEARCH, Ministry of Earth Sciences, Govt. Of India having its office at Headland Sada, Vasco Goa 403 804, India (herein after called NCAOR which expression shall unless repugnant to the context or meaning thereof include all its successors, administrators, executors and assigns) in the sum of _____ for which payment will and truly to be made to. NCAOR, the Bank binds itself, its successors and assigns by these presents. Sealed with the common seal of the said Bank this _____day of _____2015.

THE CONDITIONS OF THIS OBLIGATION ARE:

1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.

2) If the tenderer having been notified of the acceptance of his tender by NCAOR during the period of its validity.

2.a) If the tenderer fails to furnish the Performance security for the due performance of the contract.

2.b) Fails or refuses to execute the contract

We undertake to pay NCAOR up to the above amount upon receipt of its first written demand, without NCAOR having to substantiate its demand, provided that in its demand the NCAOR will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee is valid until the _____ day of _____2015.

Signature of the bank

NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
(*Ministry of Earth Sciences, Govt. Of India*)
Headland Sada, Vasco-da-Gama GOA 403 804, INDIA
Tel: 91- (0) 832 2525571 Telefax: 91- (0) 832 2525573
Email: warlu62@ncaor.gov.in Website: www.ncaor.gov.in

PUBLIC TENDER

Director, National Centre for Antarctic & Ocean Research (NCAOR) invites sealed tenders in two-parts (part I – Technical bid & part II Financial bid) super scribing Tender No. Item and due date from well established/ reputed manufacturers / authorized and bonafide vendors for supply of the following:-

Sl. No.	Tender No.	Item Description	Qty.	Cost of Tender Doc.	EMD
				RS.	RS.
1	NCAOR/SOE-50411/PT-12	SUPPLY OF A VERTICAL, SEMI AUTOMATED, PROGRAMMABLE AUTOCLAVE	01	500/-	15,000/-
2	NCAOR/HSS-049/PT-13	SUPPLY OF STEEL DRY CARGO CONTAINER 40'X8'X8.6"	ONE AC AND ONE NON AC	1000/-	35,000/-
3	NCAOR/LAB-2288/PT-14	SUPPLY OF ULTRAPURE WATER PURIFICATION SYSTEM	01	1000/-	35,000/-
4	NCAOR/SOE-50417/PT-15	SUPPLY OF MUFFLE FURNACE	01	500/-	-

Last date for issue of tender documents : **03.08.2015**
Last date for submission of quotation : **04.08.2015**
The details of tender documents are also available in our website http://www.ncaor.gov.in and Central Public Procurement Portal http://eprocure.gov.in. Interested suppliers may download the details and submit the quotation on or before the due date along with tender fee.
The quotation without tender fee will not be considered.
Tender forms can be obtained from the Procurement section of NCAOR on all working days either by post or in person between 1000 – 1600 hours on payment of tender fees in the form of crossed Demand Draft payable at Vasco-da-gama only, from a Nationalized bank drawn in favor of NCAOR along with separate requisition indicating tender number and item. Tender forms can be obtained by speed post by remitting **RS.** 50/- by Indian bidders in addition to the cost of tender documents.
The Director, NCAOR is not responsible for any transitional/postal delays.
The quotations will be **opened on 05.08.2015** in the presence of tenderers or their authorized representatives.
The Director, NCAOR reserves the right to accept or reject any quotation in full or part thereof without assigning any reason.

Sd/-
For & on behalf of NCAOR