



INDIRA GANDHI NATIONAL TRIBAL UNIVERSITY

इन्दिरा गाँधी राष्ट्रीय जनजातीय विश्वविद्यालय

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(A National University established by an Act of Parliament)

(संसद के अधिनियम के आधीन स्थापित राष्ट्रीय विश्वविद्यालय)

GENERAL SPECIFICATION

Please read carefully the Specification & Tender Document

NOTE : All Stainless Steel Shall Confirm to Grade 304

- 1 all equipment top, sinks & shelves s.s. **304 grade** s.s. sheet (thickness as per eqpt. Pecs.)
- 2 table/counter/sink unit, top shall be constructed of no. 16/14 ga. S.s. (grade 304) w/ front/ free sides turned down 2" & in 1/2" degree and rear/ sides (against wall) shall be turned up 6" returned 1" & in 1/2" * under sides of all top shall be suitable sound deadened *under sides of top shall be reinforced w/ 1"x4"x1" no. 18 ga. S.s. inverted channel
- 3 all work top/counter shall be secured to 1-1/2"x1-1/2"x1/8"thk. S.s. fully angles elded frame works.
- 4 * under shelves shall be constructed of no. 18 ga. S.s. (304 grade) w/ all sides urred down 1-1/2" & in 1/2". *under sides of shelves shall be reinforced w/no. 18 ga. S.s. inverted/hat type channel
- 5 *all wall shelves shall be constructed of no. 18 ga. S.s. (304 grade) & shall be front turned down 1-1/2" & in 1/2". Rear & both sides turned up 1-1/2" & hemmed out side
- 6 all table /counter legs 1-1/2" dia x 16 ga. S.s. (304 grade) w/ s.s. adjustable bullet feet (approx 2" adjustment) all dish/pot wash sinks no. 16/14 s.s. (304 grade) w/ all ornors 7 coved 3/4" radius , waste out let , drain valve- s.s. elbow & 3/4" dia g.i. pipe rear connected overflow & faucet
- 7 1" dia x 16 ga. S.s. (304 grade) pipe cross bracing welded to legs continuously
- 8 all electrical equipment is to be fitted proper earthing points
- 9 counter cladding no. 20 ga. S.s. (304 grade)
- 10 gaps between two sink to be closed w/ 20 ga. S.s. sheet ends channel shall be losed
- 11 all castor shall have brakes
- 12 all equipment shall be checked at site for correct dimensions
- 13 all table/ counter splash back and turned up edges shall ave all horizontal & vertical corners duly coved
- 14 all equipment supplied shall have acces panel for easy servicing without removing the equipment from location
- 15 all frame work shall be of welded construction w/ welds ground smooth

DETAILED SCOPE OF WORK TECHNICAL SPECIFICATIONS
SCOPE OF WORK AND GENERAL SPECIFICATIONS

- a) The Kitchen Equipment manufacturer shall provide all the necessary holes and/or openings in the Kitchen Equipment's, which may be, required for the proper installation of plumbing, electrical, ventilation and refrigeration connections.
- b) It is the intention of these specifications to identify the requirements to ensure that the items covered are manufactured in the best workman like manner to perform its Designed functions efficiently.\
- c) All items shall suit space conditions as available on Site. The actual conditions of the building is to control the absolute sizes and dimensions of equipments per respective locations. The suppliers should satisfy themselves as to dimensions Verification.
- d) Kitchen Equipment manufacturer shall jointly check up all measurements available at the job site for his own equipment for this purpose, the manufacturer shall furnish detailed working drawings to the Owner indicating the dimensions required for his own equipment vis-à-vis the overall layout of the kitchen. Before going ahead with the manufacture, this will be Okayed by all concerned. If there is any overlapping with other services, viz. Panel boards, vents, ducts or supply lines, the modifications shall be done without any extra cost to the Owner.
- e) The manufacturer shall furnish without any additional cost, all appurtenances and/or accessories, which may not be specifically mentioned in the specifications or shown on the drawing but which are required for the proper functioning of the equipment. Discretion of the Owner/Consultant shall be final and binding on the manufacturer.
- f) The Kitchen Equipment manufacturer is presumed to have studied all drawings before making a bid and would have informed the Owner of any changes, deviation or improvement required in these drawings/specifications.

SHOP DRAWINGS

The manufacture shall furnish shop drawing with details showing all dimension, construction and installation details. The drawings shall clearly show where the equipment requires cutting or close fitting and shall show all reinforcements, anchorage and other details required for complete installation Shop drawings of fabricated equipment shall be drawn in a scale of not less than 1.25 mm The detailed drawings shall be the Owner for comments and approval with the clear understanding that fabrication shall proceed only after all details have been officially approved by the Owner/Consultant.

STAINLESS STEEL: -

- a) Where Stainless is specified, it shall conform to the trade name austenitic 18-8 type 304, be finished with chrome content ranging from 17% to 19%, nickel 8% to 9% maximum carbon content of 0.11% b) Stainless Steel shall be free from scale and all surfaces shall be polished to No.4 Commercial finish 6

IRON PIPE: - Where iron pipe is specified, it shall be genuine wrought iron fully galvanized pipe. All Threads shall be cleaned and coated with rust – resistant coating.

GALVANISED IRON : -

- a) Where galvanized iron is specified, it shall be galvanized on 8% copper bearing alloy sheet, with an approved hot pure zinc galvanizing. Where galvanized iron has been welded, all seams shall be cleaned scale removed and finished with two coats of aluminum paint over a coat of primer.
- b) Galvanized structural steel welded into sections of framing, racks shelves etc. shall be not dipped after fabrication.

STAINLESS STEEL PIPE AND TUBING.:-

Wherever stainless steel pipe of tubing is specified it shall be seamless or welded of respective gauge and size specified therein and shall have true roundness. Seamless tubing shall be properly annealed, neckled, ground smooth and finished to match adjacent work. Welded tubing shall be heat treated, quenched to eliminated carbide participation's, drawn true to size and roundless and ground as required all tubing exposed to view shall be given a final grind of not less than 180 grit emery.

STRUCTURAL STEEL SHAPES.:-

All angles, bends channels or other structural used for framing shall be of indigenous manufacture, uniform and sectile in quality, free from hard spots, runs, checks, cracks, or other surface defects. Where such sections are specified as galvanized or tinned, they shall be galvanized or tinned by hot dip process with all flux removed, sections, shall be free from excess spliter and shall be smooth and free from cold runs, blisters, uncoated or scaly patches.

HANDLES, BRACKETS, LOCKING DEVICES AND HARDWARE.:-

- a) Wherever equipment is provided with handles, knobs, hinges, brackets or other miscellaneous hardware, all shall be of either heavy satin finish chrome plated brass or stainless steel ott of metallurgical composition Specified. These and such other items that may be required to be provided by the kitchen equipment manufacturer they shall be of uniform type, quality, shape and shall be approved by the Owner/Consultant.
- b) All drawers enclosed cabinets, refrigerators; storage bins shall be furnished with extra heavy duty, security type of cylindrical locking devices, which shall be chrome, plated. All devices shall be approved prior to installation.

FASTENINGS.:-

Welds, bolts, screws nuts and washers shall be of steel except where brass of stainless steel is fastened, in which case they shall of brass and stainless steel respectively, where dissimilar metals are fastened, bolts, screws and washers shall be such as to ensure suitable fastening and prevent bulging of metals fastened.

WELDING.:-

- a) **All welding shall be done by electric fusion, metal arc method.** Carbon arc or gas welding will not be permitted. All welding shall be in a through manner with welding rod of same composition as that ort sheets ort parts welded. Welds shall be complete welds strong and ductile with excess metal ground off and joints finished smooth to match enjoining

surface welds shall be free of imperfections such as gas holes, pits, runs, cracks etc. and shall have the same color as that of adjoining sheets surfaces. All joints in tops of fixtures, tables, drain boards; exposed shelving, sink etc. shall be welded. **All equipment specified herein, which is constructed of more than one piece of sheet metal, shall be continuously but welded together with weld ground smooth and polished. But welds made by spot welding straps under beams and filling in welds with solder and finished by grinding shall not be acceptable.**

- b) Tops of fixtures shall be fabricated in the factory with welded joints to reduce field joints to minimum. Tops of fixture shall be of maximum length and with welded factory joints to permit the bringing of fixtures to their position in order to reduce field joints to absolute minimum. Wherever welds occur or surface hot finished by grinding and polishing, such welds and accompanying discoloration shall be suitably coated in factory by means of metallic base paint, to prevent possibility of progressive corrosion.

GRINDING, POLISHING, FINISHING.:-

- a) All welded exposed joints shall be suitably grind flush with adjoining material and neatly finished to harmonies therewith. Where any material has been sunk or depressed by a welding operation, such depression shall be suitably hammered or flush to adjoining surfaces and if necessary again ground to eliminate low spots. All ground surfaces shall then be polished or buffed to match adjoining surfaces, consistent with good workmanship. Care shall be exercised in all grinding operations to avoid excessive heating or metal discoloration. In all cases where grain or rough grinding is removed, polished operation shall be uniform and smooth, consistent with good workmanship. General finish of the equipment shall be of high grade.
- b) But joints and contact joints, wherever they occur, shall be close fitting and shall not require solder as filler. Wherever break bends occur, they shall be free of undue extrusion and shall not be flaky. Scaly or cracked in appearance. Where such break work does mar the uniform surface appearance of material, all such marks shall be removed by suitable grinding, polishing and finishing. Wherever sheared edges occur, they shall be free of burns, fins or irregular projections and be finished over such sheared edges.

SOUND DEADENING.:-

Underside of all stainless steel tops for tables, counters, sinks; dish and pot table with angle framework shall be treated with a coating of "Carbonize" aluminum finish or approved equivalent paint.

MATERIAL AND WORKMANSHIP.:-

All materials, equipment's etc. shall be new and of the type specified and shall be in undamaged conditions. All workmanship shall be of best quality by craftsmen skilled in their respective trades.

Appliance shall be of rigid construction, free from objectionable vibrations and quit in operations. Manufacturer's name plates must appear on the fabricated equipment.

GUSSETS AND LEGS.:-

Gussets shall be fomed our from 30mm dia square angle steel tubes and shall be approximately 100mm long. These shall be continuously welded to the framework or channel reinforcement of table tope. Legs shall be of 40mm dia Round tubes which shall tightly secured to the gussets with two Allen set screws having cone points.

LEGS CROSS BRACING.:-

All legs cross bracing, where required, to be of not less than 40mm dia until and unless otherwise specified. All cross bracing to run horizontal between legs, approximately 150mm above finished floor, unless otherwise specified. All joints to be completely welded around entire perimeter, forming a compel seal with all welds ground and painted.

UNDER BRACING.:-

All stainless steel counters, tables, drain bards and dish table tops to the braces below with inverted channels made of No.14 gauge galvanized iron measuring (1" x 4" x 1") spaces not more than (30") off center.

FEET.:-

All legs to be provided with stainless steel pipe nylon bullet, feet, having an integrally formed shaft, with minimum adjustment of approx (50 mm) without use of threading or adjusting bolts. Feet shall be completely scaled at bottom and shall be lose fitting between tabulate leg support and foot.

UNDER SHELVING.:-

Wherever under shelving is specified, it shall be of No.18 gauge polished stainless steel. All shelves shall be turned down (1 1/2") and in (1/2"). Resulting ends shall be cut to fit the contour of the leg. Under shelves shall be reinforced with (1"x 1") No.16 gauge G.I. Where slotted shelving is pacified, it shall consist of a series of S.S.panels or sections, slots to be of (1 1/2") wide and slides of slots to be turned down to form cross channel.