

M/s HLL Infra Tech Services Ltd. (HITES)
(Subsidiary of HLL Lifecare Ltd, A Government of India Enterprise)
As Executing Agency of

All India Institute of Medical Sciences, Patna
(An Autonomous body under MoHFW, Govt. of India)

HITES/AIIMS-PATNA/2022-23

03.12.2022

Amendment -03

Name of the work: Design, Engineering, Procurement and Construction (EPC) of Academic Block & Residential Quarters at AIIMS, Patna

Ref: Tender No.- HITES/AIIMS-PATNA/2022

The Amendment-03 shall be treated as part of e-tender to be uploaded online duly signed and stamped along with e-tender:

A. Amendment to existing e-Tender Clause

Sl. No.	Ref. to tender	Existing Clause	Amended Clause
1.	Clause 6.2 b., of Chapter Specific Conditions, of Contract, General, Vol.-3, SCC	The Firm / Consultant should have provided the consultancy services for the planning & design of at least one completed Super-Specialty/ Multi-Specialty Allopathic Hospital Project of minimum 250 beds/Medical College comprising construction of RCC framed structure including finishing works, water supply and sanitary installations, electrical works, firefighting, LV works and HVAC works during the last 7 years ending the previous day to the last date of submission of tender.	The Firm / Consultant should have provided the consultancy services for the planning & design of at least one completed Multi Storied Project of 20,000 sqm or more area comprising construction of RCC framed structure including finishing works, water supply and sanitary installations, electrical works, firefighting, LV works and HVAC works during the last 7 years ending the previous day to the last date of submission of tender

Sl. No.	Ref. to tender	Existing Clause			Amended Clause		
2.	DBR, Vol-4, Chapter K, Design Basis Report - HVAC System	Clause 5. Nitrile Rubber thermal insulation:			Design Basis Report - HVAC System Scope of works under Clause 5 for Nitrile Rubber thermal insulation are attached as Annexure-I		
3.	Vol-5, Technical Specifications	S.No	Details of equipment/ material	Make/ Manufacturer	S.No	Details of equipment/ material	Make/ Manufacturer
		33	False Ceiling - Calcium Silicate Boards & Tiles	Armstrong / Hilux / Saint Gobain (Gyproc)/Aerolite	33	False Ceiling - Calcium Silicate Boards & Tiles with all Frame work	Armstrong / Hilux / Saint Gobain (Gyproc)/Aerolite
		34	False Ceiling - Metal	Armstrong / Hunter-Douglas / USG-Knauf/ Saint Gobain/ Unimet/ DEXUNE	34	False Ceiling - Metal with all Frame work	Armstrong / Hunter-Douglas / USG-Knauf/ Saint Gobain/ Unimet/ DEXUNE
		35	False Ceiling - Mineral fibre	Armstrong / Decosonic / USG-Knauf/ AMF / Saint Gobain / DEXUNE	35	False Ceiling - Mineral fibre with all Frame work	Armstrong / Decosonic / USG-Knauf/ AMF / Saint Gobain / DEXUNE
		49	Gypsum Board / Gypsum False Ceiling/ Gypsum Partitions	USG Knauf / Lafarge / Saint Gobain (Gyproc)/ Armstrong	49	Gypsum Board / Gypsum False Ceiling/ Gypsum Partitions with all Frame work	USG Knauf / Lafarge / Saint Gobain (Gyproc)/ Armstrong

B. Clarifications to Bidders' Queries:

Sl. No.	Tender Clause	Pre-Bid Queries	HITES Reply
1.	Tender Drawings, Vol-6	Furniture has not been mentioned in the DBR, but it has been shown in the architectural drawings. Please clarify if furniture is in the scope of the EPC contractor, if yes, kindly provide the specifications and the approved make list for furniture.	Loose Furniture shown in the Architectural drawings is indicative and not in the scope of the EPC contractor. Terms and conditions of e-tender prevail.

Important Note:

1. The above Amendment shall form part of the Tender Document and is to be submitted duly signed by the applicants along with their Application.
2. All other terms & condition of Tender document remains unchanged.
3. For Corrigendum/amendments etc. please refer websites www.hllhites.com, e-Procurement System at NIC's (CPP Portal) <https://etenders.gov.in/e procure/app>. regularly , separate advertisement will not be made for the same.

The Vice President (ID)
M/s HLL Infra Tech Services Ltd. (HITES),
As Executing Agency
All India Institute of Medical Sciences, Patna
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END OF AMENDMENT -03

DBR, Vol-4, Chapter K, Design Basis Report - HVAC System, Clause 5. Nitrile Rubber thermal insulation

Thermal insulation material for refrigerant pipe & duct insulation shall be Closed Cell Nitrile Rubber insulation. Thermal conductivity as per DIN EN 12667 (For Sheets) / EN ISO 8497 (For Tubes) of the insulation material shall not exceed 0.038 W/m²K or 0.0219 BTU/hr-ft-²°F at an average temperature of 30°C. Density of the nitrile rubber shall be between 40-60 Kg/ m³. The product shall have service temperature range of -50°C to +105°C as per EN 14706, EN 14707 and EN 14304. The insulation material shall be fire rated for Class 0 as per BS 476 Part 6 : 1989 for fire propagation test and for Class 1 as per BS 476 Part 7, 1987 for surface spread of flame test. The material also be V-0 rated for Vertical Burning and HB rated for Horizontal Burning as per UL 94 Test. Water vapour permeability shall be not less than 0.024 per inch (2.48 x 10⁻¹³ Kg/m.s .Pa i.e. $\mu \geq 7000$: Water vapour diffusion resistance) as per EN 12086 (For Sheets) & EN 13469 (For Tubes).

For Refrigerant Piping, Ducts and Condensate Drain Piping, the Nitrile Rubber insulation shall be factory laminated with chemically treated Glass Cloth of 7 mill /0.18 mm thickness in blue/ green / grey color as approved by Engineer-In-Charge and tested for UV Resistance as per EN ISO 4892-2 Method A.

The Material shall comply to ISO 5659 for smoke toxicity values and Smoke Density values. The material shall comply to CFC / HCFC free material as per US EPA 5021A-2003. The material shall be Lead, mercury and asbestos free and should have zero Global Warming Potential and Ozone depleting Potential

Thickness of the insulation for indoor ducts shall be 25 mm and thickness of the insulation for outdoor ducts shall be 50 mm. Thickness of the insulation for refrigerant pipes shall be 19 mm (for pipe dia 20 mm & above) and 13 mm (for pipe dia below 20 mm) on entire length. Insulation shall be in tube form for pipe dia upto 80 mm and above 80 mm sheets shall be used for piping. Each lot of insulation material delivered at site shall be accompanied with manufacturer's test certificate for density and thickness. Samples of insulation material from each lot delivered at site may be selected by Owner's site representative and gotten tested for thermal conductivity and density at Contractor's cost. Adhesive used for sealing the insulation shall be rubber based contact adhesive in a blend of solvents free from benzene, non-flammable and with low VOC content (maximum 850 gm/l as per IGBC guide lines) strictly as per manufacturer's recommendations.

Condensate Drain Piping Insulation thickness shall be as follows:

Pipe nominal bore	Insulation Thickness
Condensate Drain Piping Upto 50 mm nb Dia	13 mm
Condensate Drain Piping above 50 mm nb Dia	19 mm