

मिश्र धातु निगम लिमिटेड

(भारत सरकार का उपक्रम)

(एक मिनी रत्ना कम्पनी)

सुपर आलॉय प्लांट

डाकघर : कंचनबाग, हैदराबाद - 500058, भारत

दूरभाष : 24340001 (लाईन 10)

फैक्स : 040-24340764,

ई-मेल : mohanty.midhani@nic.in



AN ISO 9001:2000 COMPANY



MISHRA DHATU NIGAM LIMITED

(A. Govt. of India Enterprise)

(A MINI RATNA COMPANY)

SUPERALLOYS PLANT

P.O. Kanchanbagh, Hyderabad - 500 058, India

Phone : 24340001 (10 Lines)

Fax : 040-24340764,

E-mail : mohanty.midhani@nic.in

## ADDENDUM

Date: 25.06.2022

**Tender Title:** EPC for Design, Supply, Fabrication and Erection of Industrial Shed of Extension of Inspection Shop Shed and NDT and Machine Shop Office

**Tender Ref No:** MDNL/AP20221006/EADV/068/22-23 Dt. 08.06.2022

**Tender ID:** 2022\_MDN\_90241\_1

**Addendum Title:** PEB Office Building Specification

This has reference to subject tender. The Addendum to the subject is hereby issued. All participating bidders are requested to note the changes in respect of the above subject tender.

Sl.No	Tender Document Reference
1	Specification of PEB Office Building

It is advised that the above may please be taken into consideration while submitting your offer. You are advised to submit your offer.

For Mishra Dhatu Nigam Limited

  
Sr. Manager (Purchase)

एम बी इन्दु / M B Indu  
वरिष्ठ प्रबंधक(क्रय)/Sr.Manager(Purchase)

# **Specifications and detailed BOQ for industrial shed extension of Inspection shop and PEB office buildings for NDT & Machine shop offices**

## **1. SCOPE OF SUPPLY:-**

The Scope of services is given as below:

### **1.1 DETAILED ENGINEERING SERVICE**

Detailed Pre-Engineering will consist of the following:

- Preparation of structural Design for the Proposed Building.
- Preparation of General Arrangement Drawings
- Preparation of Shop Drawings for Fabrication
- Preparation of Erection Drawings
- Proof check by OU/JNTU/IIT/IIIT/NIT.
- Execution of work as per the approved drawings.

## **2. BUILDING DESCRIPTION AND SPECIFICATION**

### **2.1 APPLICABLE CODES & ACTIONS AND COMBINATIONS, DESIGN : PLEASE REFER PG NO 17 &18 OF PRICE BID**

The following to be incorporated during the design of structural members:

#### **For Columns:**

1. All the main members like Flange thickness should be minimum 10 mm & web thickness should be minimum 8 mm.
2. Walk way platforms are to be provided with bracings in which case Gantry girder may be designed as latterly restrained beam.
3. Provision of longitudinal ties and the same must be L/R should be less than 180 for compressive members
4. Wind load to be considered as per IS: 875
5. Basic wind speed is 44 meters per second
6. Bottom of column must be fully restrained
7. Web of the column must have stiffness as per IS: 800
8. For Vertical Column bracing L/R should not exceed 250
9. Gable columns must be tied with longitudinal ties whose L/R ratio should not exceed 180
10. Side sway should be within the limits as per IS code 1893 H/500 (H:height of structure)

#### **Rafters:**

1. Longitudinal ties at bottom and top of the rafters must be provided whose L/R ratio should not exceed 180
2. Rafter bracing is to be provided with members having L/R ratio less than 250

It is requested to incorporate the following changes and update the design accordingly. Any further doubts you can contact given Communication E-Mail IDs.

## 2.2: BUILDING DESCRIPTION

### Building #1 (Extension Inspection Shed)

Building Type	:	PEB shed for Extension of inspection shop
Length (O/O)	:	59.0 M.
Width (O/O)	:	21.9 M.
Number of Bays	:	8 Nos.
Bay Spacing	:	7.40 m (Apporx).
Clear Height	:	11.5 M.
Building Area	:	1292.0 Sq. MT = 13908.0 Sq. FT.
Total Area	:	1292.0 Sq. MT =1390.0 Sq. FT.

### Roofing System

Roof Sheeting	:	0.47 Thick Bare Galvalume Sheet.
Roof Light	:	4%
Turbo Vent	:	N.A.
Ridge Monitor	:	56.0 M

### Wall System

Wall Cladding	:	0.5 MM Thick Color Coated Sheet
Wall Light	:	Industrial Louver (118 Rmt)

### Masonry System

Brick Wall System: Not in PEB Contractor Scope

## 2.3: LOADING CRETRIA:

### Main Building:- Extension Inspection Shed

Dead Load	:	0.125 KN/m <sup>2</sup> .
Live load	:	0.75 KN/m <sup>2</sup> . (Inaccessible Roof)
Wind Load	:	44 m/s. As per IS 875-III.
Seismic Load	:	Zone-II
Additional Load	:	NA

## **Building #2 (NDT Office Building)**

Building Type	:	PEB Building for NDT office
Length (O/O)	:	16.00 to 17.00 M.
Width (O/O)	:	7.0 M.
Number of Bays	:	5 Nos.
Bay Spacing	:	4@4.0m, <a href="#">1@2.5m</a> .
Clear Height	:	7.265 M. (First Floor Ht.-3.75M+3.515M)
Building Area	:	2X120 Sq. MT= 240 Sq. MT.
Total Area	:	2X120 Sq. MT= 240 Sq. MT.

### **Roofing System**

Roof Sheeting	:	50 mm thick Puff Panel.
Roof Light	:	N.A.
Turbo Vent	:	N.A.
Ridge Monitor	:	N.A.

### **Wall System**

Wall Cladding	:	50 mm thick Puff Panel
Wall Light	:	N.A.

### **Masonry System**

Wall System	:	External Walls with Sandwich Panels and Internal with GI frame with boards on both side and Rock wool insulation.
-------------	---	---

### **Flooring**

Floor Board	:	30 MM Thick
Flooring	:	30mm Floor Board + 12 MM Thick Tiles

## **2.3: LOADING CRITERIA:**

**Main Building:-** PEB Building for NDT office

<b>Roof Dead Load</b>	:	0.15 KN/m <sup>2</sup> .
<b>Roof Live load</b>	:	0.57 KN/m <sup>2</sup> .
<b>Wind Load</b>	:	44 m/s. As per IS 875-III.
<b>Seismic Load</b>	:	Zone- II – 0.1

**Floor Dead Load** : 2 KN/M<sup>2</sup>

**Floor Live Load** : 3 KN/M<sup>2</sup>

**Floor Dead Load for Water Tank** : 2 KN/M<sup>2</sup>

**Floor Live Load for Water Tank** : 8 KN/M<sup>2</sup>

### **Building #3 (Machine Shop Building)**

Building Type : PEB Building for Machine Shop office  
Length (O/O) : 16.00 to 17.00 M.  
Width (O/O) : 7.0 M.  
Number of Bays : 5 Nos.  
Bay Spacing : 4@4.0m, [1@2.5m](#).  
Clear Height : 7.265 M. (First Floor Ht. -3.75M+3.515M)  
Building Area : 2X120 Sq. MT= 240 Sq. MT.  
Total Area : 2X120 Sq. MT= 240 Sq. MT.

#### **Roofing System**

Roof Sheeting : 50 mm thick Puff Panel.  
Roof Light : N.A.  
Turbo Vent : N.A.  
Ridge Monitor : N.A.

#### **Wall System**

Wall Cladding : 50 mm thick  
Puff Panel Wall Light : N.A.

#### **Masonry System**

Wall System : External Walls with Sandwich Panels and Internal with GI frame  
with boards on both side and Rock wool insulation

#### **Flooring**

Floor Board : 30 MM Thick  
Flooring : 30mm Floor Board + 12 MM Thick Tiles

#### **2.3: LOADING CRITERIA:**

Main Building:- PEB Building for Machine Shop office

**Roof Dead Load** : 0.15 KN/m<sup>2</sup>.

<b>Roof Live load</b>	:	0.57 KN/m <sup>2</sup> .
<b>Wind Load</b>	:	44 m/s. As per IS 875-III.
<b>Seismic Load</b>	:	Zone-II – 0.1
<b>Floor Dead Load</b>	:	2 KN/M <sup>2</sup>
<b>Floor Live Load</b>	:	3 KN/M <sup>2</sup>
<b>Floor Dead Load for Water Tank</b>	:	2 KN/M <sup>2</sup>
<b>Floor Live Load for Water Tank</b>	:	8 KN/M <sup>2</sup>

**BILL OF QUANTITIES for PEB office buildings 1&2**

S. No	Description	Unit	Machine Shop(1)	NDT office (2)
			Quantity	Quantity
1	Complete Structure	Kg	As per design	As per design
2	Roof Area ( Puff Panel)	Sqmtr	175	175
3	Floor Board	Sqmtr	240	240
4	Flooring	Sqmtr	240	240
5	Wall Area ( Puff Panel)	Sqmtr	420	420
6	Shaft Area	Sqmtr	30	30
7	Partition Area	Sqmtr	230	230
8	Doors/ Windows	Sqmtr	60	60
9	False Ceiling	Sqmtr	240	240
10	Air Conditioners	Nos	15	15
11	Ceiling Light ( 2' x2') 36W	Nos	45	45
12	10 W LED Light	Nos	21	21
13	Ceiling Fans	Nos	18	18
14	DB , CU Wiring, Modular switch Boards	L.S.	Lump Sum	Lump Sum
15	Plumbing	L.S	Lump Sum	Lump Sum
16	Painting and Finishing	L.S	Lump Sum	Lump Sum

**Technical Specifications with Makes For Module#1**

<b>S. No</b>	<b>Description</b>	<b>Unit</b>	<b>Make</b>
<b>1</b>	Built Up Members (Plates)	IS 2062 E-350	SAIL/ TATA/JINDAL/Equivalent/As per Engineer in charge instructions
<b>2</b>	Cold Form Members	IS 2062 E 350 , Ys 345 N/mm <sup>2</sup>	Jindal/ TATA Bhushan/ Equivalent/As per Engineer in charge instructions
<b>3</b>	Roof Sheeting	0.47mm Bare Galvalume with Ys 345Mpa with Zinc Al Alloy AZ-150.	JSW/ TATA Bhushan/ Equivalent/As per Engineer in charge instructions
<b>4</b>	Wall Sheeting	0.50mmColor Coated Galvalume Sheet (Parent Metal Thickness 0.47mm) Ys 55Mpa with Zinc Al Alloy AZ-150.	JSW/ TATA/ Bhushan/ Equivalent/As per Engineer in charge instructions
<b>5</b>	Fasteners	Self Drilling Galvanized Screws with metal and neoprene washers	Coroshield/ Hilti/ Pata or equivalent /As per Engineer in charge instructions
<b>6</b>	Hardware for Primary Members	HS Bolts ASTM 325	TVS/ UNBRAKO/MORNING STAR/Equivalent /As per Engineer in charge instructions
<b>7</b>	Hardware for Primary Members	Zinc Plated Hot dip Galvanized	Morning Star/ Equivalent /As per Engineer in charge instructions
<b>8</b>	Foundation Anchor Bolts	IS 2062 E-250	As per IS code.
<b>9</b>	Primer	Rust O Cap	Asian Paints / Equivalent/As per Engineer in charge instructions
<b>10</b>	Paint	Synthetic Enamel Paint	Paint Asian/Berger/ICI/As per Engineer in charge instructions



**Technical Specifications with Makes For Module#2**

<b>S. No</b>	<b>Description</b>	<b>Unit</b>	<b>Make</b>
<b>1</b>	Built Up Members (Plates) Tubes	IS 2062 E-350/310	SAIL/ TATA/JINDAL/Equivalent /As per Engineer in charge instructions
<b>2</b>	Cold Form Members	IS 2062 E 350 , Ys 345 N/mm <sup>2</sup>	Jindal/ TATA Bhushan/ Equivalent/As per Engineer in charge instructions
<b>3</b>	Roof Sheeting	Standard Sandwich insulated panels 50mm with PU foam as filler material between Galvalume Pre coated Steel Sheets. Density of Foam 40±2 Kg/m <sup>3</sup> . Bare Galvalume Sheeting 150 GSM Aluminum Zinc coating .	Jindal Mettec/ Equivalent /As per Engineer in charge instructions
<b>4</b>	Wall Sheeting	Standard Sandwich insulated panels 50mm with PU foam as filler material between Galvalume Pre coated Steel Sheets. Density of Foam 40±2 Kg/m <sup>3</sup> . Bare Galvalume Sheeting 150 GSM Aluminum Zinc coating	Jindal Mettec/ Equivalent /As per Engineer in charge instructions
<b>5</b>	Floor Board	30 mm Thick Floor Board, Cement Bonded Particle Board conforming to IS 14276-1995 over steel grid 600 x 300 mm. Board Density- 1250±10% Kg/m <sup>3</sup> , Moisture Content 9%±3%, Modulus of Elasticity 3000N/mm <sup>2</sup> , Compressive Strength 15 N/mm <sup>2</sup> , Surface Alkalinity 11-13	BISON Panel or equivalent /As per Engineer in charge instructions
<b>6</b>	Hardware for Structural Members	HS Bolts ASTM 325	TVS/ UNBRAKO/MORNING STAR/Equivalent /As per Engineer in charge instructions
<b>7</b>	Partition Area	GI Framing along with 12mm Fiber Cement Board with Rock wool insulation 80 mm Thick with 40 Kg/m <sup>3</sup> density.	Bison Panel / Jindal or Equivalent /As per Engineer in charge instructions
<b>8</b>	Doors and windows	Doors and windows with extruded and Integral powder coating of approved shade, Al sections to be as per relevant IS codes and using 1.6mm thick sections with heavy duty stainless steel butt hinges,pivots,approved doors and windows handles ,EPDM Gasket Lining , Float glass of 5.5mm thickness in windows doors ventilators and partitions, Heavy duty locks for doors, stainless steel screws, mastic	

		filling, weather strips, tower bolts nuts washers etc.	
9	False Ceiling	Supply & Fixing of TRAC Lay-in Tile Steel Coated False Ceiling System (600mm X 600mm) manufactured out of 0.50mm thick Regular Modified Polyester Coated Galvanized Steel (Z-120gms Zinc coating mass total of both sides, 240Mpa yield stress) on the exposed side and a primer coating on the back coil coated on both the sides in manufacturer's standard color shades	
10	Ceiling Lights 36 W and 10 W	36 W & 10 W LED Luminaries The Luminaries shall be suitable for operating at normal supply voltage of 240 V + /-10% single phase, frequency 50 Hz + / - 5% or at voltages as specified.	Paint Asian Bajaj / Equivalent /Berger/ICI/As per Engineer in charge instructions
11	Air Conditioners	Inverter type split AC (1.5Ton), 5 star rated DC Inerter type controlled supply voltage 230V 1 Phase 50 HZ Heat Exchanger- All aluminum with refrigerant R410 A . Make DAIKIN/ Hitachi/VOLTAS/LG/MITSUBISHI/Equivalent	DAIKIN/LG/Equivalent/As per Engineer in charge instructions
12	Ceiling Fans	Ceiling Fan conforming to IS 374 and with capacitor starting Class 1 type suitable for voltage range of not less than 220 V to 240 V AC Single Phase supply.	Bajaj/ Crompton/Havells/ Equivalent/As per Engineer in charge instructions
13	DP Box and Wiring	MCB Distribution Boards, Earth Station with GI earth Strips, Polycarbonate sockets, Electrical Switch gears etc	Siemens / Schneider/ Havells/ Equivalent/As per Engineer in charge instructions
14	Plumbing	Providing and fixing CPVC pipes having Thermal Stability for Hot and Cold water supply including all CPVC plain and Brass threaded fittings. White Glazed vitreous China Wash basin, water closet of superior quality, CP Brass health Faucet, Stop cock.bib cock. And all other fittings of standard quality/make.	Supreme/ Parryware/ Hindware/Jaguar/ Equivalent/As per Engineer in charge instructions