KOLHAPUR FOUNDRY AND ENGINEERING CLUSTER

Name of Work: "Sealed tenders are invited for Manufacture, Supplying, Erection & commissioning from reputed experienced Manufacturers / Distributors / Resellers for Electronic Type Weigh Bridge for Kolhapur Foundry and Engineering Cluster at various locations of following capacity."

Location I) Plot P-82 MIDC Gokul Shirgaon, Kolhapur : 50 T Capacity.

Location II) Plot No P-62 MIDC Shiroli , Kolhapur for

a) 20 T Capacity.
b) 40 T Capacity.

Technical Specifications

1.0 General

The structure and platform shall be of robust design and adequate strength to sustain the repetitive static and dynamic loads for 20 T, 40 MT & 50 MT capacity respectively. Electronic Weigh Bridge (ELWB), Platform size will be as under:

Capacity of ELWB	Size of Platform
50 MT	9m x 3m
40 MT	9m x 3m
20 MT	9m x 3m & 7.5m x 3m

2.0 Scope of supply:

2.1 (a) Electronic load cell type, pit less lorry-weighbridge of capacity 50 MT and platform of 9m x 3m with other accessories.

(b) Electronic load cell type, pit less lorry-weighbridge of capacity 40 MT and platform 9m x 3m size with other accessories.

(c) Electronic load cell type, pit less lorry-weighbridge of capacity 20 MT and platform 9m x 3m & 7.5 m x 3m size with other accessories.

2.2 Platform complete with main girders, support sections, horizontal constraining arrangements and grouting parts as required; generally conforming to IS: 2062 as amended on date of make of SAIL/TISCO/ESSAR OR equivalent.

2.3 Load cells with integral cables and mountings for load cells

2.4 Electrical and electronic parts comprising of:
- Junction boxes
- Cable between junction box and weigh cabin.
- Digital Weight Indicator
- Personal Computer
-Dot Matrix 80 col. Ticket Printer.
- Constant voltage stabilizer.
- U.P.S.
- Jumbo display unit

2.5 Power supply:
The equipment should be suitable for operation on 220V, single phase 50 cycle A.C. supply. The equipment shall be suitable for successful operation under different climatic conditions such as temperature ranging from-10 degree centigrade to 60 degree centigrade and humidity up to 95%.

3.0 Technical requirements:

3.1 The weighbridge shall have overload capacity, at least 50% of rated capacity. The requirement shall be tested for dimensional parameters. Functional testing will be done at site.

3.2 Material specifications for major platform components shall be as per IS: 2062.

3.3 Minimum graduation for weighbridges shall be (±) 10 kg.

3.4 Load cells shall be hermetically sealed compression type/Double ended Shear beam precision analog and have IP68/IP69 (with inbuilt type) protection class, matched output from all load cells to eliminate corner errors, safe load of 150% and destructive load of 300%. Test certificate in conformation of the above class by a reputed Test House to be provided along with tenders.

3.5 The main girders and other cross members shall be rigidly secured to the foundation restricting any movement of weighbridge. Proper constraining arrangement shall be provided for protecting weighbridge against fast moving trucks on it when it is not in use, by providing speed breakers on both sides.

3.6 The weighbridge shall be pit less type above ground, with concrete ramp/fabricated ramp having suitable slope on either side to facilitate vehicle approach on the weighbridge.

3.7 Weighbridge readings shall not differ by more than one resolution value, when the vehicle is placed on different locations on the weighbridge.

3.8 Digital Weight Indicator and Personal Computer with alphanumeric key board with minimum memory of 10,000 weighment, 18.5" TFT and above Colour Monitor and Optical Mouse suitable to operate under temperature –5 degree centigrade to 50 degree centigrade. Battery backed memory should also be provided.

3.9 The weighbridge calibration should stay for a minimum period of one year from the date of installation without the need for any readjustments.

4.0 Weighbridge Specifications:

Overload capacity:	50% of rated capacity
Type of constraining:	Appropriate constraining arrangements without hampering weighment accuracy Frequency of loading: 30 trucks per hour minimum
Frequency of loading:	30 trucks per hour minimum

5.0 Platform structural's:

Material of construction of components:

Main beams, Cross beams and transverse beams:	Mild steel as per IS: 2062 as amended on date of make of SAIL/TISCO/ESSAR or equivalent.
Deck Plate:	Chequered/ anti-skid Mild Steel plate as per IS: 2062 as amended on date of make of SAIL/TISCO/ESSAR or equivalent in convenient lengths of thickness
Material Test Certificate:	To be provided by tenderer.

6.0 Electronic weighing system and load cells:

It should be of reputed indigenous/ imported make. Manufacturer's test Certificates in respect of all requirements specified in IS: 9281 (Part-III) as amended on date (Tables 1 & 2) to be furnished by the contractor for each electronic weighbridge.

General Requirements:

1. Hermetically sealed compression type/Double ended Shear beam (IP-68/IP-69 Protection class) maintenance and corner adjustment free, load-cell suitable to operate under (-) 10 degree centigrade to 60 degree centigrade temperature and unto 95% humidity; capable to sustain specified overload, destruction load and side thrusts without further adjustment.

2. Housing of Stainless Steel/Tool Steel

3. Capacity of each load cell will be as under:

Cap.of ELWB	Cap. Of Load Cell
50 MT	6 Nos. 30 MT for 9m x 3m
40 MT	6 Nos. 20 MT for 9m x 3m
20 MT	6 Nos 10 MT or Equivalent capacity of 4 Cells

4. Insulation resistance - 5000 Mega ohms or more.

5. Proper ingress and lightning protection as per Indian standards.

6. Load cell to be supplied with suitable mounting kit with insulation pad.

6.0 Junction box:

Protection class	: IP 66
Surge protection	: Surge arrestors provided within.
Material of Construction	: Cast Aluminum/stainless steel
Connection type	: Terminals on PCB mounted inside Junction box.
Glands for entry	: Double compression type.

7.0 Interconnecting cable:

The load cells to be provided with 4-wire system and shielded type cable approximately 20 meters in length to be laid in class "B" GI Pipe.
i) No. of cores to be specified by the Manufacturer/supplier
ii) Type of connection to be specified by the Manufacturer/supplier
iii) Type of cable shield to be specified by the Manufacturer/supplier

8.0 Digital Weight Indicator

This should be state of the art high performance micro processor based Alpha Numeric Weighing system having high internal resolutions, clear and bright eight digit LED display auto zero tracking and motion detection, tare/gross weight indications, Auto calibration facilities, multi type tare option, user – definable output strings, Delta sigma analog to digital converter @ 120 per sec. It should be protected to IP-65 stainless steel enclosure, it should be capable of interfacing with the computer for further processing of data as per requirement operating temperature is to be -5 decree centigrade to 50 degree centigrade, response time less than 0.5 seconds, electrical safety IEC-348. And it should have facilities for connecting the printer directly in case computer fails.

9.0 Personal Computer

PC Core-2-Duo of reputed make/brand (Having Boxed Intel Mother Board) with Corresponding attendant requirement/ specifications.

i)	Operating temperature range (-)	: 5 degree centigrade to 50 degree
ii)	Speed	: 3.1 GHz / 3mb cache
iii)	DVD RW Drive	: DVD Writer
iv)	02 GB RAM	: 2 GB DDR3 RAM
v)	Mouse	: Optical
vi)	Key board	: 104 keys with Membrane
vii)	HDD-320 GB or above	: 500 GB HDD
viii)	18.5" TFT and above Colour Monitor	: 18.5" TFT and above

10.0 Printer (DOT MATRIX 9 PIN)

i)	Make	: EPSON or equivalent
ii)	No. of character per line (80 Col. Min.)	: 80 Col Min.
iii)	Speed (Min. 200 CPs)	: 337 CPs
iv)	Operating temperature range (-)	: 0 to 50 degree centigrade 5 degree centigrade to 50 degree

11.0 U.P.S.

Online 1.5 KVA UPS of reputed make supported with 2 or more nos. of 130 AH or above each of Exide/ Standard/ AMCO /Amaron or equivalent approved make maintenance free batteries for 6 hr. operation in case of power failure.

12.0 Constant Voltage Stabilizer/ Transformer

2 KVA rating servo transformer with input 140V – 280V and output 220± 5% ofreputed and approved make to protect the equipment from voltage variation.

13.0 Jumbo display unit

An additional display unit at a suitable place outside the cabin of weighbridge for clear viewing of drivers in day light or in darkness of character size of 100 mm, 5 digit bright, LED type to be provided.

14.0 Sealing and Stamping

The sealing and stamping of load cells as well as that of the total weighing system shall conform to the requirements laid down under "The Legal Metrology Act 2009". The chassis of the electronic equipment shall be designed in the manner that it is feasible to lock the whole system electronically to make it completely tamperproof at one place for subsequent verification by the concerned authorities.Also the Bidder shall quote separately for standard Dead weights with stamping for 1 T (20 kg per Piece).

Note:

- **Bidder to quote for Weigh Bridge Location and separately for each size & load.**
- **All accessories such as personal computer, printer, UPS, constant voltage stabilizer/transformer, jumbo display unit, standard dead weights with stamping of 1T (20 Kg per piece) and any other shall be quoted separately and should not be added in the base price of Weigh Bridge.**
- **Relevant software shall be supplied by the manufacturers. The price of Weigh Bridge shall be inclusive of software.**
- **No advance will be paid for the said work by the Kolhapur Foundry & Engineering Cluster.**
- **The work being completed item for Supply, installation, Testing & Commissioning and stamping the Security of Material Supplied on site till installation shall be the sole responsibility of the Tenderer / Bidder/ Supplier. Kolhapur Foundry and Engineering Cluster will not responsible for damages loss or theft of the material supplied till successful installation. The Contractor to make necessary insurance during transport and during Idle Period at his own cost.**
- **Payment Terms:**
  70 % (of Proforma Invoice value) on delivery of Material
  25 % (of Proforma Invoice Value) on Installation and Successful commissioning and Trial and Stamping + installation Charges if any.
  Balance 5%(of Total Value) after Completion of Defect Liability Period.

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