

NOTICE INVITING TENDER – CORRIGENDUM NO.2

TCIL/BPL/NIT/BKS/11-12/CIVIL/09/29

July 15, 2011

Subject: Supply, Installation, Commissioning and Testing of Electronic Weighbridge (Pitless) for 100 MT on Bina – Kurwai – Sironj BOT Road Project in the state of Madhya Pradesh.

In the reference NIT No TCIL/BPL/NIT/BKS/11-12/CIVIL/09/29 dated 30/06/2011, the Specifications provided in the original Tender Document are hereby amended as under:-

TECHNICAL SPECIFICATIONS

SUPPLY, INSTALLATION, COMMISSIONING AND TESTING OF ELECTRONIC WEIGHBRIDGE (PITLESS) FOR 100 MT ON BINA – KURWAI – SIRONJ BOT ROAD PROJECT IN THE STATE OF MADHYA PRADESH.

A. Overall weighbridge Specifications

1	Type of weigh bridge	Compression Load cell based electronic fully welded Weighbridge size 16m X 3.0m, Capacity 100T, pit less type
2	Type of weighbridge terminal	Digital, microprocessor based terminal with internal weighing memory of 1530 transactions
3	Minimum graduation kg	10kg
4	Power supply	230V,50 Hz, Single Phase
5	Area of Classification	Safe
6	Overall Weighing accuracy	<+/- 0.05 percent
7	Overall capacity (Tonnes)	Continuous 20 percent of full-scale and with 20 percent impact protection in addition to the overload capacity
8	Maximum speed of vehicle pass over	10 km per hour
9	Load cell	SS 304, IP 68 protection, Approved make compression type.
10	Load Cell (capacity and no. of load cells)	30MT capacity each- Total 8 load cells
11	Details of interface with PC	RS232C
12	Frequency of loading	40 trucks per hour or more

B. Specifications for Platform Structure – Size 16 mX3m, Capacity 100T

1	Material of construction of components	Mild Steel as per IS 2062
2	Main beams	Mild Steel IS2062
3	Cross Beams and transverse beams	Mild Steel IS2062
4	Deck Plate	Mild Steel IS2062
5	Platform design	Using STAAD 2004 software package, design outputs to be submitted by vendor
6	Platform Weight	10,000 kgs or above.
7	Platform Construction	Fully welded .Main beams welded to Cross beams and transverse beams for strength. Deck plates welded to cross beams and tranverse beams
8	Platform Size and Capacity	16m length, 3 m width , pitless type fully welded fabricated platform structure to weigh 100Ton trucks .Over load capacity of 20% with two coats of red oxide and two coats of synthetic enamel paint.

C Indicator Technical Specifications and Features

ALPHA NUMERIC DIGITIZER CUM INTELLIGENT TERMINAL

The alphanumeric digitizer cum intelligent terminal is to be robust in nature to withstand harsh environmental conditions. It must be able to operate successfully over a wide temperature range and harsh environmental conditions. It must be able to can operate successfully over a wide temperature range also in humid weather.

The microprocessor based state-of-art technology, Sigma Delta type 24 Bit Analog to Digital conversion, Power supply incorporated with EMI-RFI filter & spike suppressor and inbuilt opto isolation of single & I/Os.

Specifications

Processor	8051 core micro controller
Processor clock	18 MHz
Real time clock	On board battery backed RTC
RTC Clock	32.768 KHz
Memory	128k for data storage with battery backup. Capable of storing 1530 weighthment records
Power supply	SMPS power supply
Input Voltage	90V to 270V AC @ 50Hz
Protection	a) 2.5A fuse for infut AC mains

	b) Input line filter for EMI and RFI suppression. Spike suppressor for input transients, Opto-isolation of signals and I/Os for high immunity from electrical noise.
Power Consumption	10 VA (approx.)
A/D converter	Sigma Delta type with 24 bit resolution
A/D Clock	2MHz
Conversion Speed	Internal 200 samples per second
Load cell excitation	7V DC with current capability to drive up to 8 load cells of 350 ohms input resistance
Input Signal	1 microvolt to 3 microvolt per division of weight (unit weight).
Display	16 characters by 2 line LCD display with backlight for displaying numerals and alphabets for data entry and 6 digit 1/2" RED LED numeric display.
Keyboard port	For connecting a standard IBM PC AT 101-key compatible keyboard.
Printer port	Isolated Centronics compatible printer port provided on rear panel for connecting 80 -column dot matrix printer for printing of weight record and reports.
Serial port	Isolated RS-232 serial port is provided for computer interfacing or driving remote displays.
Remote Display Port	Remote display port is provided to connect optional 1/2inch, 1inch, 2.3inch or 4inch bright red LED display to indicate the weight on the platform.
Environment	Operating temperature: 0 to 55 Celsius Humidity: upto 95% RH non-condensing.

D. Load Cell Specification:

1	Type of Load Cell	SS Compression Type Load Cell
2	Standard Capacity	30 MT
3	Excitation Voltage	10 VDC- Maximum 15 VDC
4	Nominal Out Put	2.0 mV/V
5	Non – Linearity	< $\pm 0.025\%$ Full Scale Output
6	Hysteresis	< $\pm 0.02\%$ Full Scale Output
7	Non-repeatability	< $\pm 0.01\%$ Full Scale Output
8	Creep (30 minutes)	< $\pm 0.03\%$ Full Scale Output
9	Input Resistance	770 \pm 5 Ohms
10	Output Resistance	770 \pm 5 Ohms
11	Insulation Resistance (50 VDC)	\geq 5000 Mega Ohms
12	Cable Length (4 Core)	15 Mtr.
13	Safe Overload of Rated	150 %
14	Ultimate Overload of Rated	350 %

15	Temp. Effect on Output	<0.0015 % FSO/ °C
16	Temp. Effect on Zero	<0.0020 % FSO/ °C
17	Lightening Protection	Inbuilt
18	Approvals	OIML R60C3, NTEP Class III

E. Specifications for Mounting kits – 8 Nos

1	Material of Construction	MS
2	Assembly	Hardened spacers to be provided for self alignment and point contact
3	Safety Feature	Earth strap to be supplied

F Specifications for Interconnecting cable – 15 metres length

1	Number of Cores	6
2	Connection	6 wire connection method
3	Shielding	Overall cable shield with individual shield for measuring signal carrying wires.

G Specifications for Junction Box – 1 nos

1	Protection Class	IP65
2	Surge Protection	Surge Arrestors provided within junction box
3	Material of Construction	Cast Aluminium
4	Connection type	Terminals on PCB mounted inside the junction box. No potentiometers will be allowed inside for corner error compensation due to their unreliability.
5	Glands for Cable Entry	Double Compression Type

Scope of work of the Bidder

1. Design, Selection and Engineering
2. Manufacturing
3. Installation Supervision
4. Calibration certificate from weights & measures department or concerned authority to be arranged by bidder
5. Loading, unloading & transportation to be arranged by bidder

Scope of Supply

- M.S. Load structure
- Alfa Numeric Indicator along with UPS
- Junction Box
- DOT Matrix Printer two numbers

- Load cells Stainless Steel Compression type-8No.
- Standard Weighbridge Computer Software
- Test weights of 1 MT to be supplied by the bidder
- Certificate from OEM regarding 4 years supply of spares for various items comprising the Weighbridge.

Scope of TCIL

- Civil foundation shall be done by TCIL but design & drawing to be supplied by bidder
- Construction supervision to be done by the bidder.

Any other item not covered in these specifications and required for successful installation, commissioning & testing of the electronic weigh bridge is to be included for which nothing extra shall be paid.

All other terms and conditions shall remain the same

Contact details:

Project Director, TCIL
142, Rohit Nagar, Phase-I
E-8 (Extn.), Arera Colony,
Bhopal – 462039
Ph/Fax. 0755 – 4009903 / 4295734
Email: ak.katariya@tcil-india.com

PROJECT DIRECTOR
TCIL, BHOPAL