



**GOL GOHAR SIRJAN STEEL & MINING
INDUSTRIES CO. (GISD)**



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INQUIRY FOR STATIC WEIGHING SYSTEMS

Rev. No.:01

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1. General

1.1) Introduction

Scope of the present document defines the type and extent of supplier involvement in each phase of fabrication, control and testing requirements and inspection. The SUPPLIER shall in any case conduct all the tests required by contractual documents, specifications, codes and standards, and keep the relevant documentation.

Site Location

GOL GOHAR SIRJAN STEEL & MINING INDUSTRIES CO. (GISD) is located in the vicinity of Sirjan in Kerman Province, South of IRAN. Km 50 of Sirjan to Shiraz road- Km 5 private road of Golgohar Complex

Site Condition

The site condition is listed below:

- Site Elevation: +1749 m

Temperature

- Max. Ambient air temperature
 - Recorded 40 deg °C
 - Design 45 deg °C
- Min. ambient air temperature
 - Recorded -10 deg °C
 - Design -12 deg °C
- Average. Ambient air temperature
 - Design 15.9 deg °C
- Wet bulb design temperature (summer)
 - Design 25 deg °C

➤ Humidity

- Max. relative humidity 70 %
- Minimum relative humidity 12 %
- Average relative humidity 45 %

Wind Load

For the purposes of project design the following will apply:

Main wind direction SW to NE

Basic wind speed 100 km/h

Heights from the ground level	Wind speed	Pressure basis
Up to 10 m	125km/h-34.7m/s	75kg/ m ²
10 to 20 m	148km/h-41.1m/s	100kg/ m ²
20 to 100 m	168km/h-46.3m/s	135kg/ m ²

Above 100 m for each 30m height addition, 12.5 kg/m² should be added to the pressure basis.

Rainfall

-Yearly rainfall average 166.3 mm

-Max. Monthly rainfall 260 mm

Snow Load

Snow Load 1.5 kN/m

Others

-Ave. Relative 55%

-Max. Relative humidity 70 %

-Atmospheric pressure 820 mbar

Geological (earth) conditions

- Terrain Flat and rough

- Soil bearing capacity Approx. 20 t/m

- Soil classification Soil type III

- Underground water level Approx. 60 m below ground level

Seismicity

For dimensioning the plant equipment, a safety against earthquake shall be calculated taking into

consideration "Iranian Code for Seismic Resistant Design of Buildings Publication No. S 253-2nd edition, Autumn 1999" which is the "Iranian Regulations 2800" and "Minimum Design Loads for Building and Structures", which is the "Iranian Regulations 519".

Using this code, the Iranian Building and Research Center has mapped the seismic zones in Iran.

This map places the site in the transition between "moderate" and "high" risk areas.

For design purposes the "high" risk factor shall be used and the following criteria applied:

Design base criteria

- Design base acceleration 0.3 g
- Classification of building Group 2

Operating Environment

It will operate in compliance with the relevant, valid and applicable environmental protection standards and regulations.

Dust Emission: 50mg/Nm³

Noise Level:

In control room and offices 55db

In factory shop area:

General 85db

Workshop where require telephone conversation 55db

1.2) Code and Standards

All mechanical equipment must be designed , manufactured, inspection and tested , performance and ratings of all equipment shall conform to the latest edition including any amendment of the following standards:

- ISO 376 : Load Cell application & Calibration
- RR - 442 = Weigh station design & operation
- OIML : International Organization for legal Metrology
- VIM : International Vocabulary of Metrology
- NITP
- DIN = German Institute Standardization
- ASME : The American Society of Mechanical Engineers
- BS = British Standard
- ASTM :
- ANSI
- IEC

Other reputable standards e.g. following standards may be used in some definite cases but with prior approval of buyer:

- ISO = International Organization for Standardization
- NEMA = National Electrical Manufacturers Association

The supplier shall approve all other standards that the supplier proposes to use, prior to applying them. In the event of conflict between technical specification, standards, or any other document referenced herein, the following order of precedence shall apply:

- Data Sheet
- Technical specifications
- MOM of technical clarifications
- MR Document
- Drawing
- International Standard
- Supplier or other standards

The design, supply and erection of all equipment shall be according to standard practice in order to obtain equipment complying in every point with the regulations relating to the safety of the erection, maintenance and operating personnel. Project Safety Plan will be handed to the supplier in due time.

1.3) Nameplates and labels

The nameplates must meet the following requirements:

They must have well positioned, clearly visible, and easy to identify.

- Nameplates shall not be easily removable.
- Nameplates for important components are to be positioned on the components. They must indicate the type, serial number, year and place of manufacturing, and reduction ratio.
- Name plate must be positioned on both sides of the component, next to the supplier's plate.
- Name plates shall be Stainless steel and minimum information shall be:
 - Supplier's name and address
 - Serial number
 - Total Weight of equipment
 - MATERIAL/EQUIPMENT Number and Title

1.4) Language

All drawings, design information, documentations, operations, maintenances Instructions and correspondence shall be in English.

2. Scope of Works

2.1) General

The scope of work covers the design, procurement, manufacturing, inspection and testing, packing and delivery, erection (or supervision of erection), commissioning and setting, insurance and tax (to be negotiated with buyer), guarantee and spare parts for two STATIC WEIGHING SYSTEMS (830WS01/02)

Supply Requirements:

- Design of equipment
- Supply of the fully fabricated equipment
- Material supply regarding the following requirements:
 - All the used materials shall be new and without any defect and conform to the respective specifications given on drawings/data sheets.
 - Major materials shall have prior approval of the supplier or its representative. Any deviation is subject to the supplier or its representative approval.
- Construction and manufacturing of equipment
- All necessary accessories as mechanical and electrical joints
- All accessories as per required for complete package and also as listed in attached documents
- Subcontracting of any part of the order shall be subjected to the written approval of the supplier or its representative
- Documentation
- Performing of tests and inspections
- Application of surface protection
- Supply of special tools for erection and installation
- Supplying the spare parts
- Coordinating and resolving all engineering information related to the equipment during erection and commissioning
- Packing and delivery
- Erection and commissioning
- Training
- Guarantee

2.3) Test

2.3.1) General

The test of equipment, will be supplied according to mentioned standards by the supplier at his charge.

Functional and performance test of the whole equipment will be executed at site.

The supplier shall be submitted test procedure for approval before performing test.

The following tests shall be performed by the supplier as well, but not limited to the following tests. The supplier shall consider any other necessary tests and inspections for covering guarantee and warranty.

- Material inspection
- Visual inspection
- Dimensional inspection
- Welding inspection (if any)
 - Visual inspection
 - Magnetic particle test
 - Liquid Penetrant test
 - Ultrasonic test
 - Radiographic test (if any)
- Hydraulic pressure test (if any)
- Pre-assembly inspection & test performed at shop
- Rust prevention and painting inspection
- Functional test performed at shop
- Final inspection prior to packing
- Packing inspection
- Marking inspection for packing
- Erection and commissioning supervision.

Notes:

- Purchaser representative(s) shall have an unrestricted access to the manufacturing, shop of the supplier to witness all manufacturing procedures, tests, and inspections performed on the parts and assemblies.
- The purchaser and criteria of tests and inspections applied to any part shall be proposed in the Q.C.T.M, which Supplier shall take Purchaser approval.

2.4) Packing and Shipping

Packing and Shipping shall comply with Section 5 (Appendix A) "Specification for Packing"

2.5) Spare parts and special tools

All special tools and spare parts required for commissioning, start-up, and two years operation shall be provided, as well as relevant documents such as drawing, maintenance, operating and installation manuals.

The supplier shall provide all special tools that may be necessary to enable equipment to be erected, commissioned and maintained. These tools will become the property of the buyer.

The supplier shall submit in its offer lists of recommended spare parts for the following categories:

Commissioning spare parts: For the commissioning of the equipment, the supplier shall provide a complete set of spare parts, which in his opinion and experience are necessary during this period. These spares shall be in addition to those spare parts as below bought by buyer for the running of the equipment after commissioning.

2.6) Documentation

The supplier shall submit documents for the purpose of proposals and contract data as per the following table but not limited to it.

The documents mentioned in below shall be included in the scope of supply.

The supplier shall forward the original proposal in three copies.

The number of copies for reviewing of supplier's documents and drawings are also three and the six set of final copy of contract data along with two electronic copies is required.

The detail for the status of the contract drawings and documents shall be finalized during contract negotiation.

Documents to be presented before contract

- Time Schedule for all activities including engineering, material procurement, shop fabrication, tests and inspections, painting, packing and delivery.
- Time Schedule for delivery of Documents to be presented after contract.
- Statement of the supplier's related experience.
- Relevant catalogues (Specially Load Cell Catalogues)
- Load Cell Data sheets
- Preliminary arrangement and sectional drawings

- Preliminary equipment list
- Recommended 2-year running spare parts list
- Recommended capital spare parts list
- Specification for consumables
- Expenses for specialized erection and commissioning staff
- Prior approval of source of supply / supplier
- Price list for main equipment.
- Price list for two-year safe operation spare parts
- Price list for capital spare parts
- Price list for the special tools
- Technical specification for equipment
- Applicable code and standard
- Quality Control Plan (Q.C.P)
- Deviation List
- Preliminary document/drawing list
- Recommended commissioning Spare parts list
- Supplier List for sub-suppliers

Documents to be presented after contract

- Material certificate
- Supply list
- Detailed technical specification
- Functional description
- Basic design
- Basic design drawings
- Design criteria
- Basic design calculation books
- Detail design
- Detail design drawings
- Detail design calculation books
- General and sectional arrangements or layouts
- Detailed drawings for all parts
- Major moving assemblies
- Lubrication system and points

- P&ID & instrument list
- Electrical consumables list
- Part list of the equipment and drawing list
- Main equipment list which includes weight and specification for mechanical and electrical equipment
- Relevant catalogues of the whole catalogue items (Specially Load Cell Catalogues)
- Load Cell Data Sheets
- Welder's Qualification/Certificate
- W.P.S(Welding Procedure Specification)
- P.Q.R(Welding Procedure Qualification Record)
- W.P.Q.T. (Welders Performance Qualification Testing)
- Q.C.T.M
- Calculation sheet and engineering information (including strength for critical parts, required power...)
- Preparation and submitting of marking drawings
- Painting specification
- Certificate of origin for sub-supplier components.
- Supplier Status reports:
 - Supplier shall provide within 5 working days of the signing of the contract a detailed schedule of all major tasks and events required to design, purchase materials, manufacture, erection, test and deliver the scope by the required dates.
 - The supplier shall provide weekly, a progress report of the actual status adequate to allow the buyer to monitor the progress against the original schedule and toward the timely completion.

REMARKS:

- All pages of this MR document including all appendixes and attachments shall be stamped and signed by supplier.
- Final Invoices must certify that the final drawings & engineering documents specified above have been dispatched.
- Equipment 3D model (any neutral 3D format such as STEP, IGES, or Solid works) shall be submitted to be used in plant design modeling
- All drawings and documents shall be submitted in native and PDF format.
- Supplier shall furnish electronically data-file of all drawings & documents.

- Each document shall bear the item/tag & order reference number. The following standard sizes are to be used A4, A3, A2 and A1.
- The documents shall be in English. Description of drawings & similar documents may be in other languages, provided English translation is also given.

2.8) Instruction and Training

The supplier shall provide with his proposed training program.

Showing the extent and periods of the training to be provided, the place where training will be carried out and the number and grades of training staff and personnel to be trained.

The supplier shall submit an instruction and training program for engineers and maintenance personnel in schedule form as follows:

- Number of engineers and other grades of personnel to be trained
- Proposed period of instruction and training
- Detail of instruction and training.
- The expected previous experience and educational standard of the personnel to be selected for instruction and training.

It is envisaged that visits to the supplier's design offices and works will be required by employer's engineers appointed to supervised and operated the plant. The supplier shall make provision for employers selected maintenance personnel to be made fully aware of design and construction details to be ensuring effective maintenance of the main and control equipment.

The supplier shall ensure that all trainees are fully conversant with maintenance and operating manuals provided with the equipment.

2.9) Guarantee

All the activities of the contractual obligation of the supplier that mentioned in the Scope of Work in Section 2 shall be guaranteed for the period of 12 months after commissioning or 24 months after delivery whichever comes earlier. They shall conform to the relevant drawings and the technical specifications.

2.10) Deviation

All deviations in services and supply shall be clearly reported in technical and commercial proposal in a table or any other common way.

3. Technical Data

ITEM NO	TERMS	REQUIRED ITEMS	specification/data
1	GENERAL	Type	Outdoor TRUCK SCALE
2		TAG No.	830WS 01 / 02
3		Type of Equipment	Weighbridge
4		Number of Equipment	2 set
5		Hazardous area:	No
6		Operation	WEIGHING
7		Capacity:	NORMAL TRUCK AND TRAILERS(Total capacity: 60 Ton)
8		Plate Dimension:	16×3 m
9	Structure	Platform Type :	Reinforced concrete – Prefabricated Steel Structure
10		Applicable to	Above Ground Level
11		Concrete work	by the Contractor according to the drawings of manufacturer
12		Foundation	by the Contractor according to the drawings of manufacturer

13	Load Cell	Type :	Digital with removable cable
14			Analog (as option)
15		Preferably Manufactured by : PRECIA MOLEN(france)	
16		No Of Load Cell	8
17		Min Capacity of load cells	35 Ton
18		Industrial Protection	IP 68
19		Material	100% Stainless Steel
20		Accuracy Class :	min. C6
21		Standard	OIML
22		Overload Protection	150 %
23	Indicators	Preferably Manufactured by : according to A.V.L	
24		Standard :	PTB/OIML
25		Output :	4-20 mA
26		Serial Port	2 × RS232
27		Division	according to national standard
28		Printer	Yes