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TOWZIN ELECTRIC 10





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In The Name Of GOD

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Towzin Electric celebrates its twentieth year in weighing business

Towzin Electric celebrated its twentieth year of business on Tuesday December 18, 2012.

Members of the board, company managers, supervisors, and employees participated in the celebration held in Towzin Electric's main office.

Towzin Electric employees arranged a reception

of their own to recognize continued contributions made by Mr. Mortesa Pouyan, General Manager of Towzin Electric, and Mr. Mahmood Pouyan, General Manager of Fard Iran Company.

Employees presented recognition plates to both general managers to express their gratitude.



Mr. Ostad Kazemi read the inscription on the plates on behalf of the employees.

In the name of the great merciful

Mr. Mortesa Pouyan,
Mr. Mahmood Pouyan

We are all aware that the great personalities show their qualities during challenging times. We are proud and honored to congratulate you for the twentieth year of Towzin Electric establishment on this day of December 18, 2012.

Current advancement, progress, and dynamism of weighing industry are indebted to thinking, commitments, and contributions made by Towzin Electric Company managers, experts, and employees. These individuals have put forward their true and valuable knowledge, abilities, affection, and beliefs toward pushing Towzin Electric toward eminence forward in the weighing industry. The result of Towzin Electric's enthusiastic, passionate, and vigorous endeavors has been the production of accurate and quality weighing systems and instruments supplied to the domestic and Middle East markets.

Towzin Electric operation has expanded extensively since its inception in 1993 to become the most progressive company in Iran weighing industry. Towzin Electric has been recognized for its innovation and accomplishments in the production of quality weighing instruments and systems as evidenced by many national and international awards Towzin Electric has received.

Towzin Electric employees are proud of nineteen years of innovation, progress, and efforts toward advancement of company capabilities. Now, they take the occasion to celebrate the twentieth year of company establishment as a way to express their gratitude for many achievements they have been blessed in this period. High share in the domestic truck weighbridge market, completion of national projects such as Shahid Rajaei Port, and the implementation of national standard number 10274 are marked as the Towzin Electric's forefront accomplishments in the weighing industry. These noble achievements have turned Towzin Electric into a leader in Iran weighing industry.

Towzin Electric's eminence and extraordinary achievements during this past nineteen years are the outcome of strong faith, belief, determination, effort, and persistence of its management.

Towzin Electric employees took this opportunity to express their recognition by presenting a memorable plate to Towzin Electric management for their nineteen years of valuable and continued efforts for many national achievements. Towzin Electric employees offer their best wishes for health, happiness, gratification, and redemption of company management and their respected families plus their further success in achievement of company objectives, serving of national interest, and weighing industry progress.

We all hope to be able to use our resources and abilities to advance Towzin Electric to the deserving positions in national and international markets.

December 18, 2012

Your Loving Supporters in Towzin Electric Company

In this sincere and warm celebration, recognized general managers attributed Towzin Electric's success and perseverance to faith and commitment of its employees and managers. Company management used the occasion to thank and congratulate employees for their share of Towzin Electric's long and difficult path to success.

Mr. Pouyan asked for continued efforts and persistence on the part of personnel toward the achievement of company objectives and thanked

them for their past contribution in furthering company progress. A recital was performed to honor the occasion and as a tribute to continued contributions of Towzin Electric employees and workers serving in diverse divisions and departments. On the request of company management, Mrs. Azizi as a long company employee cut the celebration cake and the celebration concluded after a pleasant and sincere reception. With our best wishes for centennial celebration of Towzin Electric.



European Manufacturers Praised Towzin Electric Capabilities



Top managers from Sartorius and Sensocar have separately visited Towzin Electric Manufacturing plants. Sartorius is the largest worldwide loadcell producer from Germany. Sensocar is a recognized loadcell producer from Spain. Both companies have evaluated Towzin Electric capabilities and have selected it as their partner in Iran.

Sartorius AG (formerly Philips) is the largest and most reliable producer of loadcells in the world with more than 60 years of experience. Sartorius makes notable contributions to global metrological research besides its production activities. Sartorius top managers are keen on technology and information exchange with Towzin Electric Company as their sole representative in Iran. Sartorius main production plant is located in Hamburg, Germany.

Sensocar managers had a favorable evaluation of Towzin Electric capabilities and underlined the need for further interactions between two partners. Sensocar's main production plant is located in Terrassa, Spain.

Representatives of these two companies visited Towzin Electric main office and became acquainted with Towzin Electric's industrial and commercial weighing systems that are primarily designed and manufactured for Middle East markets. They emphasized and welcomed extended cooperation with Towzin Electric Company.

Both European companies had the opportunities to closely visit various office departments including operations, sales, marketing, and services. They became acquainted with technical and commercial capabilities of Towzin Electric Company for covering domestic and neighboring markets. They welcomed close interaction between partners to achieve stronger market positions in the domestic market and the neighboring countries. Sartorius and Sensocar partnerships with Towzin Electric Company are going strong at the time European companies are discouraged from maintaining close ties with Iranian companies due to European unilaterally administered embargo imposed on Iran. These partnerships are important steps on the part of Towzin Electric Company and its collaborators to bypass European embargo.

Weighbridge Grounding System

Lightning have the highest global incidences in south Asia. Lightning causes million Dollars of damages to buildings, electric systems, telephone networks, and electronic systems. The high damage potential of lightning makes safety precautions highly critical for sensitive electronic systems such as weighing instruments and platforms. The power surge from lightning is so high that it is impossible to provide complete protection against its destructive force. However, a proper and standard grounding system together with safety equipments can prevent extensive damages. Safety equipments of any types and brand are ineffective without proper grounding system.

A grounding system is required for a weighbridge and, therefore, is a part of its design as performed by the producer.

Earthing system design has a key role in weighbridge performance.

Lightning

Lightning is produced when the accumulated electricity in clouds is discharged and its arc hits earth.

Lightning Voltage

Lightning voltage changes from 10 to 20 million volts. It can rise up to 100 million volts. One can realize the extent of power surge when it is compared with 220 volt household current. The voltage is high enough to overwhelm and cross the very high resistance of air against power current. Lightning Frequency

Lightning frequency is approximately 10,000 amperes. Lightning frequency is not constant and may increase up to 200,000 amperes. A regular home electric counter allows up to 25 amperes.

Lightning Strength

Lightning is capable of producing 100 billion watts of energy. This energy may go up as high as 16,000 billion watts. No such volume of energy can be found any place on earth.

A critical element of an earthing system is its ground well. Weighbridge owners should undertake to follow the guidelines provided below if they take the responsibility to build the ground well.

Important Note:
Ground well resistance should be about 2 ohms and should be checked twice a year to assure its resistance. The checking shall be arranged by weighbridge owner and is to be carried out by the local power company by means of especial equipment. The probability of damages from lightning or electric shocks increases when well resistance is higher than 2 ohms.

Weighbridge protection against lightning and transient currents

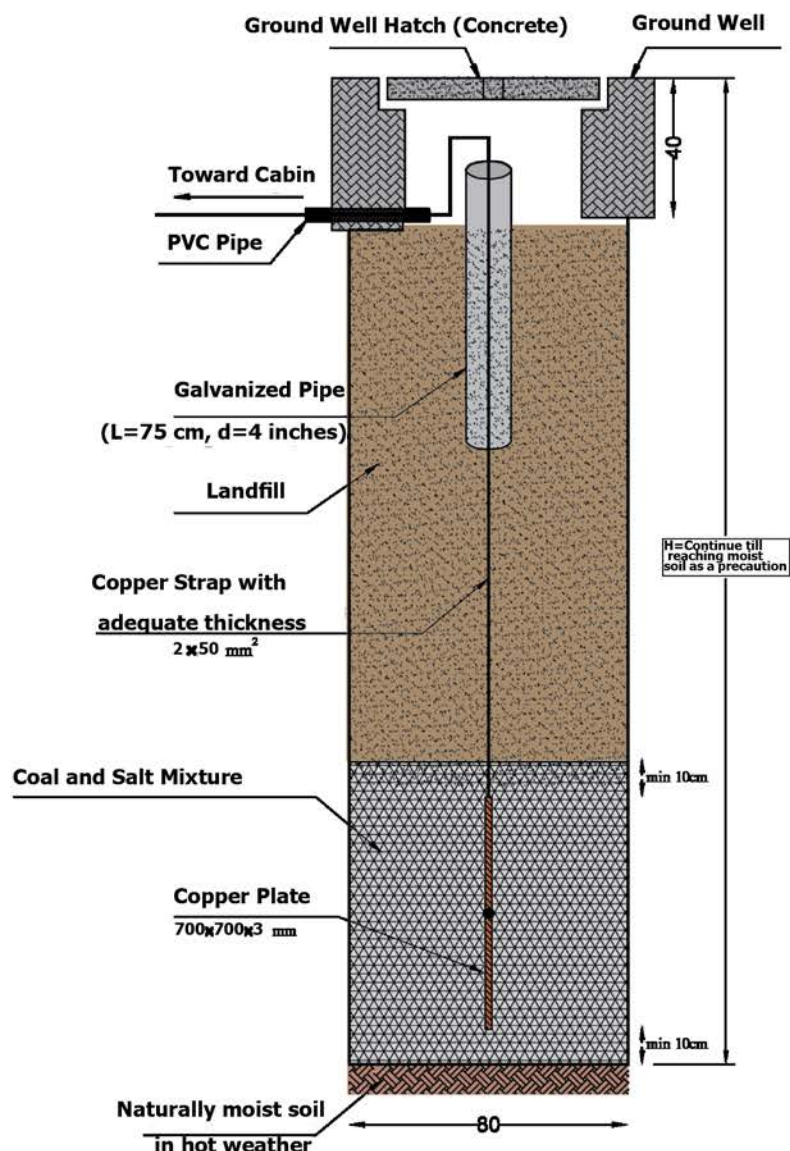
Loadcell Protection

Two protective mechanisms are required for effective weighbridge loadcell protection.

- Safety equipment for signal line
- Loadcell grounding system

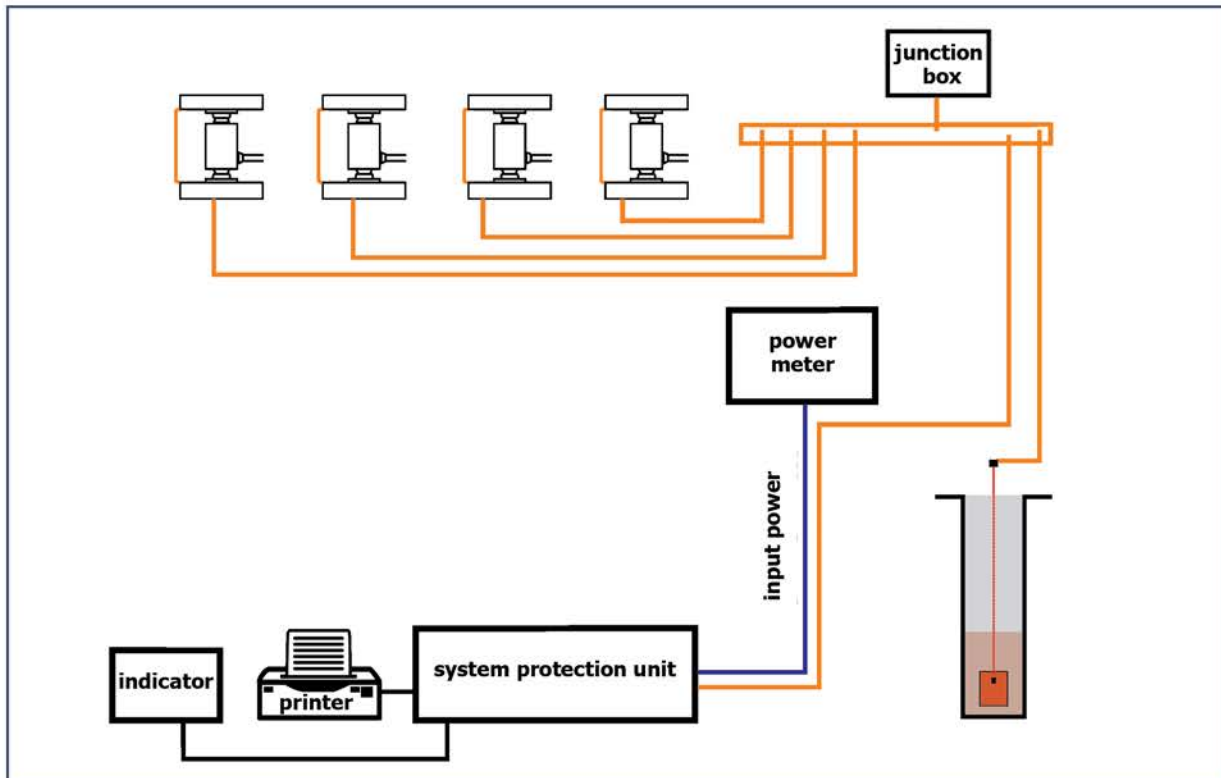
Even a good earthing rod and well system cannot provide proper protection without adequate equalization of weighbridge loadcells. A deep grounding well at zero ohms cannot protect weighbridge loadcells from potential lightning damages without proper wiring and grounding system.

Every weighbridge producer designs and incorporates its proprietary grounding system for the optimum performance of its equipment. The following section introduces Towzin Electric's weighbridge grounding system.



The following precautions should be considered during commissioning of implementation and improvement of ground connection system.

1. Implement grounding system conforming to the following diagram.



2. Use 16 gauge insulated stranded wire for grounding loadcells, display, j-box, and other related parts.

3. Cross ground cable through loadcell conduits to save on ground cable.

4. Use a panel for connecting ground cables.

5. Ground weighbridge display according to the following diagram and connect its ground cable (16 gauge insulated stranded wire) to the ground panel.

6. Ground J-box and connect its ground cable to ground panel.

7. Sand and grease the connection point before connecting the ground cable to lower disk jumper.

8. Run separate ground cables from loadcells, display, and J-box to the ground panel.

9. Connect ground cable to the loadcell lower retention plate.



Verification of Compliance



No. EC.1282.2E131205.TE3351

Certificate's Holder: **Towzin Electric Company**
3 Laleh St, Miremad St, Amir Kabir Industrial City,
Kashan, Iran

Product: **Truck Scale**

Directives: **2006/95/EC Low Voltage**

Standards: **EN ISO 12100:2010, EN 60204-1:2006+AC:2010**

Remark: This Verification of Compliance has been issued on a voluntary basis. ECM confirms that a Technical Construction File (TCF) is existent for the above listed product(s). The TCF satisfactorily covers the essential requirements of the above listed Directive(s). Other relevant Directives have to be observed in case they are applicable. This Document is only valid for the equipment and configuration described and in conjunction with the TCF detailed above. Whereas the Manufacturer is responsible of the certification of the product(s) and not exempted to perform all the necessary activities before placing the product(s) on the market. The Manufacturer is also responsible of the internal production control to ensure the product(s) are in compliance with the essential requirements of the above mentioned Directive(s). This certificate can be checked for validity at www.entecerma.org

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Expiry date **DECEMBER 2018**

Certification Chief Manager
Tim Mahan

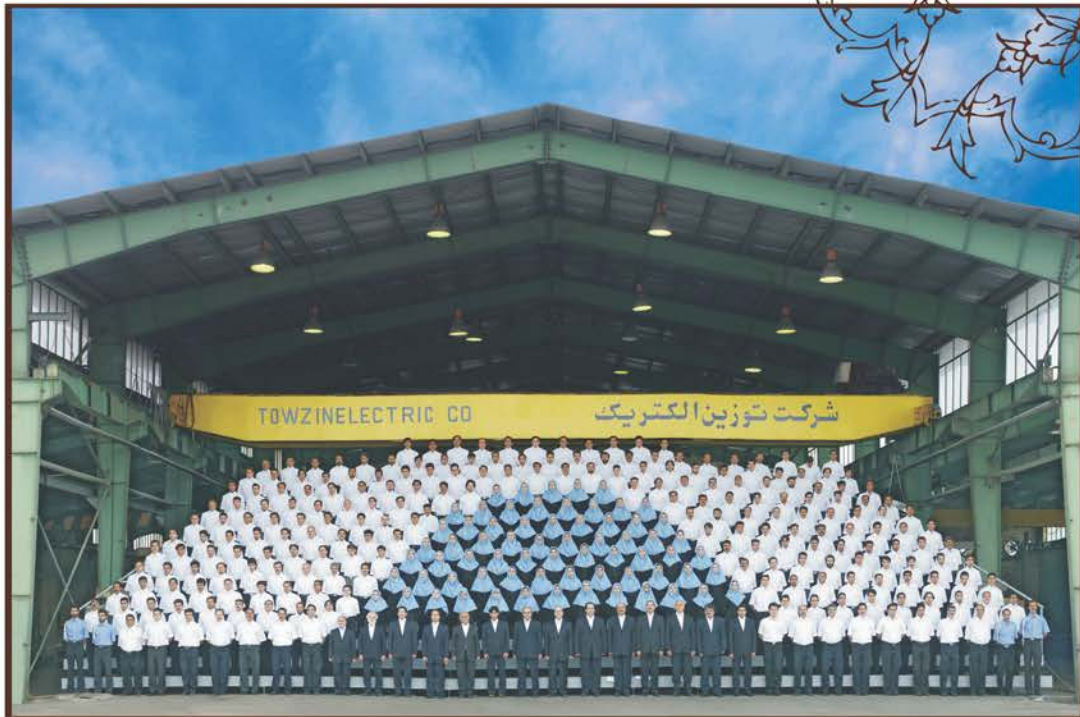


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