



صهار للجلفنة وصناعات الحديد الصلب ش م م  
**SOHAR GALVANIZING & STEEL INDUSTRIES LLC**

ISO 9001 : 2008 Certified Company

**HOT DIP GALVANIZING**

**We also have operations in Dubai-UAE and Doha-Qatar**

**Visit Our Website: [www.sohargalvanizing.com](http://www.sohargalvanizing.com)**

# Sohar Galvanizing & Steel Industries L.L.C.

## THE COMPANY

Sohar Galvanizing & Steel Industries LLC (SGSI) commenced its operations from June 2013. It is a joint venture between Qatar Galvanizing WLL (Almana Group), Doha, Qatar and Multitech LLC (Suhail Bahwan Group), Sultanate of Oman. SGSI aims to provide high quality and professional Hot Dip Galvanizing services to the Sultanate of Oman and nearby areas. The Management team with over 25 years of hot dip galvanizing experience aims to achieve this through a set quality system which is already in place and by making sure to comply with the specifications as well as client requirements for specific projects. Our aim is to provide top class service unmatched till date in Oman market, on time deliveries and competitive pricing.



## GALVANIZING

The importance of galvanizing as a cost effective method of corrosion protection for steel, has grown steadily over the years, ever since its utility was first noticed over 150 years ago, in the protection of corrugated iron sheets. Despite the stiff market competition it faces, its ability to grow is a shining tribute to the simplicity of the process and its unique advantages. Being a versatile process, articles ranging in size from nuts & bolts to long structural sections can be galvanized.

### Relevant International Standards are as follows:-

- A. 1. EN ISO 1461 – 2009 - Hot Dip Galvanized Coatings on fabricated iron and steel articles.
  2. ASTM – A 123 – Zinc Coating on Iron and Steel products.
  3. ASTM – A 153 – Zinc Coating on Steel Hardware.
  4. ASTM – A 385 – Providing High Quality Zinc coating.
  5. ISO 1460 – Hot Dip Galvanized coating on ferrous material.
  6. ISO 1461 – Hot Dip Galvanized coating on steel, specifications and test methods.
  7. ASTM – 143 – Safeguard against embrittlement in hot dip galvanizing.
  8. ASTM – A 90 – Standard test methods for weight of zinc coating.
  9. ASTM 780 – Repair of damaged and uncoated areas of Hot Dip Galvanized coating.
  10. ASTM 376 – Measuring coating thickness by magnetic field.
  11. ISO 8501-1 – Specification for surface profile comparators.
  12. ISO 14001 – Environmental Management System specification with guidance for users.
  13. ISO 9001 - 2008 Quality system.
  14. SSPC – SP10 Degree of cleanliness.
- B. Zinc coating requirements are generally 610 gms / m<sup>2</sup> or 85.4 microns average for steel thickness above 6 mm. Zinc coating of 700 gms / m<sup>2</sup> or 1000 gms / m<sup>2</sup> are often recommended for saline weather conditions.
- C. 1 gm / m<sup>2</sup> = 0.14 microns / 1 micron = 7.14 gms / m<sup>2</sup>



# DESIGNING ARTICLES FOR GALVANIZING

The key to obtaining the best results from the galvanizing process depends largely on timely consultation between the galvanizer, fabricator and designer. Quality of the coating can also be improved by matching design features that aids the access and drainage of molten Zinc. Good design requires proper means for the access and drainage of molten Zinc and for escape of gases from internal compartments (Air Venting).



## MAIN FEATURES

SGSI offers a broad range of galvanizing covering a wide range of applications. With its excellent corrosion resistant properties combined with very strong adhesion to the base steel, galvanizing is recommended as a surface protection coating system in wide range of applications from construction industry, lifestyle buildings, bridges, stadia, aircraft hangers, street furniture (lighting poles, sign posts, guardrails), shipyards, oil and gas installations, power generation and distribution, etc.



### Some of the key features of our facility are:

- Annual Capacity of 60,000 tons.
- Kettle of size 12.5M (L) x 1.3M/1.5M (W) x 2M (D)
- A single piece of 18M and 5 tons can be galvanized.
- Fully automated temperature control of Zinc bath.
- Fully enclosed kettle and white fume extraction system.
- State of art materials handling system in the plant.
- 100 % tracking of all the materials right from receiving inspection to final inspection and dispatch.
- Documented Quality Management System i.e. ISO 9001 : 2008 certified by TÜV SÜD
- Customized, project specific Inspection and Test Plans.



# PLANT CAPACITY

SGSI operates galvanizing facility at their state of the art galvanizing facility in Sohar Industrial Area - Phase V. The plant is capable of galvanizing 200 tons per day of Structural Steel. The facility includes kettle of size 12.5M (L) x 1.3M/1.5M (W) x 2M(D), holding more than 220 tons of Molten Zinc at 450 °C.



# GALVANIZING BENEFITS

As a method of corrosion protection, hot dip galvanizing has many benefits namely:-

- Provide steel with a coating which has a long, predictable and maintenance free life.
- Be highly competitive on a first cost basis.
- Be economical as it protects steel over long periods.
- Be a sustainable solution – zinc is essential to life.

Its unique nature provides a tough and abrasion resistant coating that means reduced site damage and speedy erection of structures. It also protects steel by barrier and sacrificial action, on damage. At the point of damage, only the zinc corrodes and those deposits form a protective cover stopping further corrosion. On the contrary, with paint coatings, once the damage occurs, additional protection would have to be applied immediately or the steel would rust leading to break down of the whole coating as rust creeps underneath the paint film.



# QUALITY SYSTEM

In an age, where success is measured in terms of quality awareness, we go the extra yard in ensuring that it is a way of life to us. Compliance with environmental regulations and guidelines and strict quality control standards have helped us gain ISO 9001:2008 certification. That indeed is our most cherished achievement, one that motivates us to get better each time, every time. A test certificate is issued for every piece of steel, galvanized or processed. In addition, an effective system of tracking and traceability is in place which ensures smooth and timely delivery to our customer.



## CERTIFICATE

The Certification Body of TÜV SÜD Management Service GmbH certifies that



**SOHAR GALVANIZING AND STEEL INDUSTRIES L.L.C.**  
P.O.Box: 617, P.C: 322, Falaj Al Qabail, Plot # 5163 / 5136, Phase - V, Opposite to Voltamp, Sohar Industrial Estate Sohar, Sultanate of Oman

has established and applies a Quality Management System for

Provision of Hot Dip Galvanizing Services, Surface Treatment and Coating Services

An audit was performed, Report No. 707020628 Proof has been furnished that the requirements according to

**ISO 9001:2008**

are fulfilled. The certificate is valid from 2013-11-11 until 2016-11-10. Certificate Registration No. 12 100 46599 TMS

*M. Anke*  
Product Compliance Management  
München, 2013-11-11



# TABLES

Following are the summaries of varied surface finishes, corrosion rates and coating thickness requirements.

Summary Of Variations In Galvanized Finish		Coating Thickness requirements			Indicative Zinc Corrosion Rates For Different Environments	
Appearance	Acceptability of protection (not necessarily of appearance)	Articles & Thickness	Mean Coating Mass (g/m <sup>2</sup> )	Mean Coating Thickness in microns (μ)	Corrosivity category	Average annual zinc corrosion rate (μ/year)
dull grey coating (all alloy, no free zinc)	acceptable	≥6mm thick	610	85 μ	C1 interior: dry	<0.1
rust stains	acceptable (easily removed by stiff brushing)	≥3<6mm	505	70 μ	C2 interior: occasional condensation exterior: rural	0.1 to 0.7
general roughness	acceptable unless otherwise agreed	≥1.5<3mm	395	55 μ	C3 interior: high humidity, some air pollution exterior: industrial and urban inland or mild coastal	0.7 to 2
lumpiness and runs	acceptable unless otherwise agreed (uneven drainage)	iron castings >6mm	575	80 μ	C4 interior: swimming pools, chemical plants, etc exterior: industrial inland or urban coastal	2 to 4
pimples	acceptable unless dross contamination is heavy	centrifuged >6mm	360	50 μ	C5 interior: industrial with high humidity or high salinity coastal	4 to 8
bulky white deposit (wet storage stain)	acceptable (provided coating weight remains in compliance with ENISO1461 : 2009)					
flux staining	not acceptable					
bare spots	not acceptable under ENISO1461 : 2009, damaged areas can be repaired following guidance given in the standard					

## HOT DIP GALVANIZING PROCESS

**STEEL SHOTS / GARNETS BLASTING TO GIVE A PROFILE OF 45 – 70 MICRONS AND OBTAIN SURFACE FINISH OF SA2.5**

**ACIDIC DEGREASING AT AMBIENT TEMPERATURE FOR HEAVILY GREASED AND PAINTED ITEMS TO REMOVE GREASE AND PAINTS**

**PICKLING IN 10 – 17% HCL AT AMBIENT TEMPERATURE TO REMOVE MILL SCALE, RUST AND OTHER OXIDES**

**RINSING IN WATER AT AMBIENT TEMPERATURE TO WASH OFF ACID**

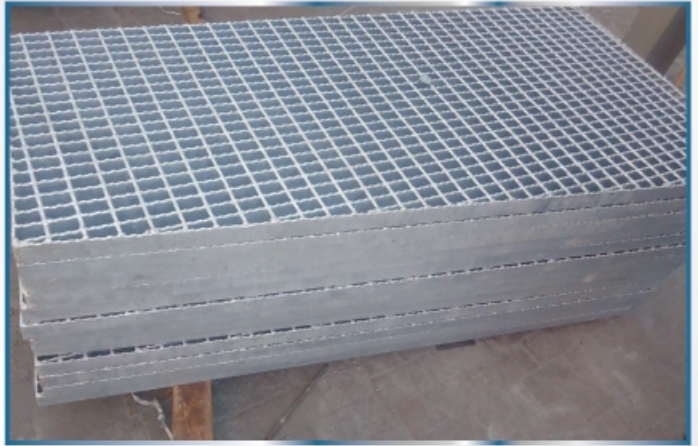
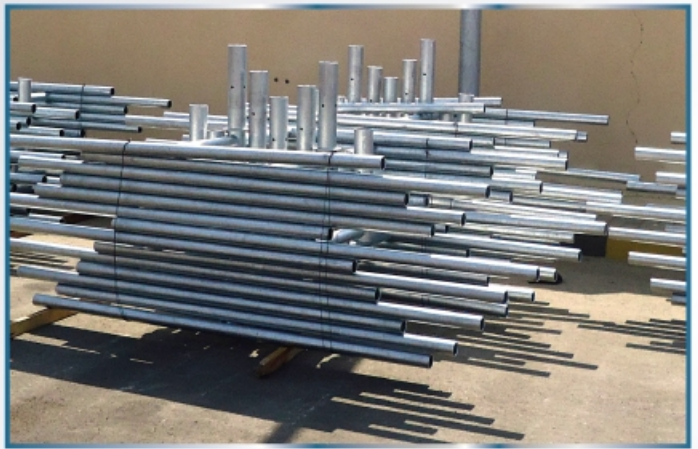
**FLUXING IN ZINC AMMONIUM CHLORIDE AT AMBIENT TEMPERATURE TO CONDITION THE STEEL SURFACE TO ENSURE REACTION BETWEEN STEEL SURFACE AND ZINC**

**DRYING IN HOT PIT AT TEMPERATURE BETWEEN 65 – 80` C**

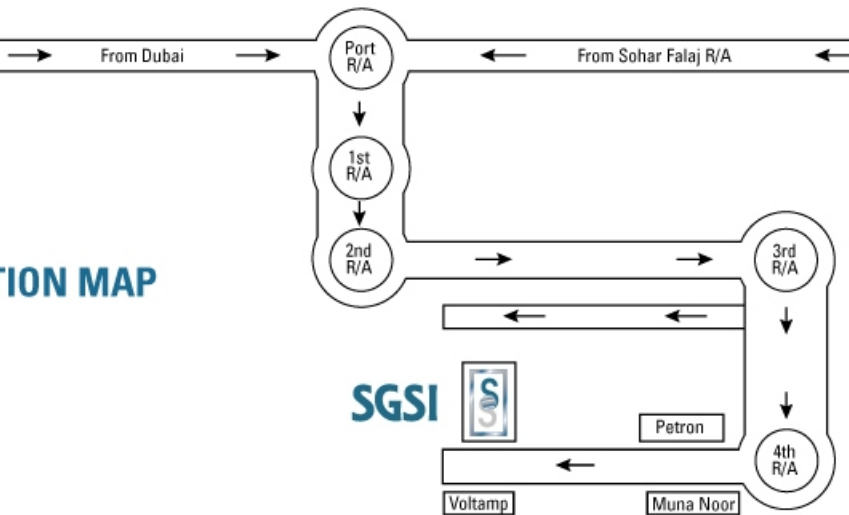
**HOT DIP GALVANIZING IN ZINC KETTLE AT 455` C**

**QUENCHING IN WATER AT AMBIENT TEMPERATURE**

**INSPECTION, DRESSING AND PACKING**



## LOCATION MAP



## SOHAR GALVANIZING & STEEL INDUSTRIES LLC

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