



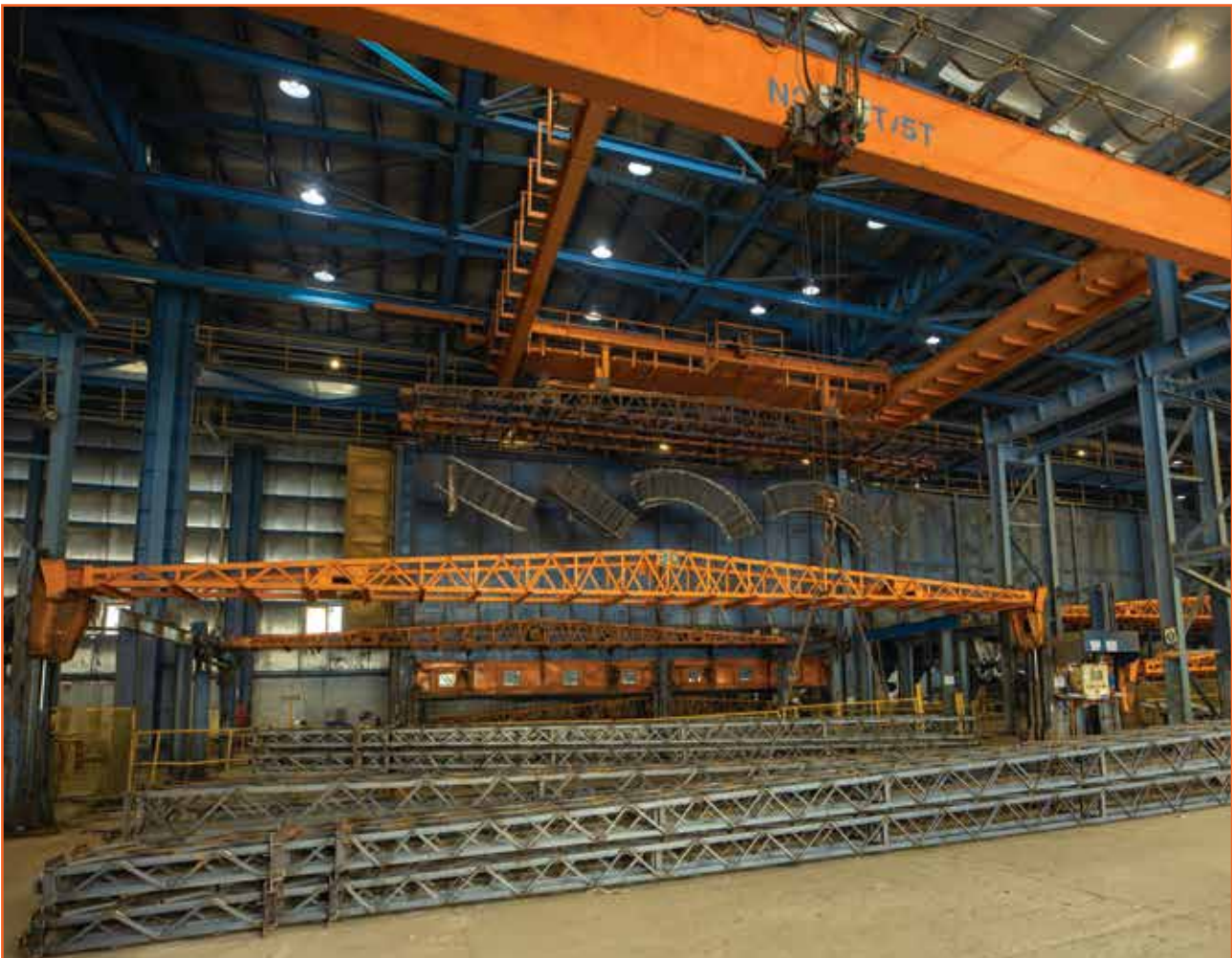
Galvanization



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Galvanization Plant



energya Hot dip galvanization factory is the biggest plant in the Middle East with most update technology.

energya Hot dip galvanization plant has the biggest Kettle Dimension in the Middle East with more than 16.5 L * 2 w * 2.75 h(m) and biggest production about 60.000 ton / year.

Our Vision

To be the leading Hot Dip Galvanization factory in Middle East.

Our Mission

- To present world class service to our clients.
- To provide the best service quality on time at competitive prices.
- To reach the highest possible levels of customer satisfaction.
- To improve our services and remain competitive.

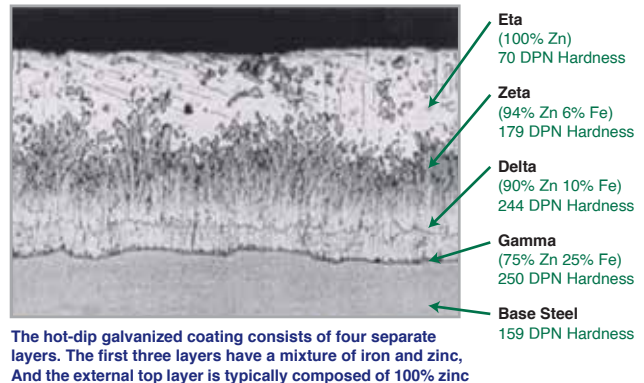
Our Values

- High standards of integrity.
- Outstanding customer services.
- On time, in full delivery.
- Products superiority.
- High levels of self-esteem, and trust.

Scope of HDG

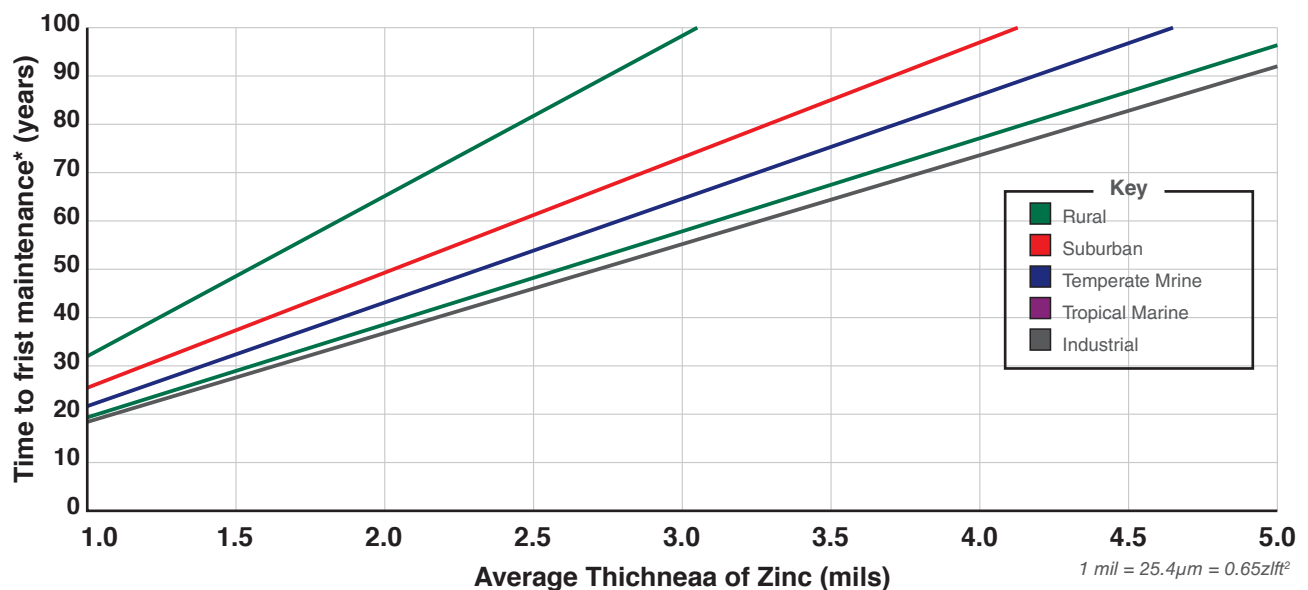
Hot-dip galvanizing (HDG) process known as (Cathodic Protection) general galvanizing produces a zinc coating on iron and steel products by immersion of the material in a bath of liquid zinc at 450°C.

The zinc metal then reacts with the iron on the steel surface to form a zinc / iron layers above these layers the pure zinc layer with suitable thickness.



Why HDG?

- HDG perform long life Steel protection
- The zinc coating has a good resistance against mechanical damages
- Good surfaces appearance
- Good adhesion
- Low cost



Service of Galvanizing Plant

energyya Hot dip galvanization plant is ready to Galvanize products with 16.5 m length, 2 m width, 2.75 m depth & 10 ton weight.

energyya Hot dip galvanization plant is ready to Galvanize products as:

**Transmission
Towers**

Lighting Poles

Beams

Gratings

**Communication
Towers**

High Masts

Columns

Handrails

Lattice Towers

Cable Trays

Girders

Piping

Storage Tanks

Mono Poles

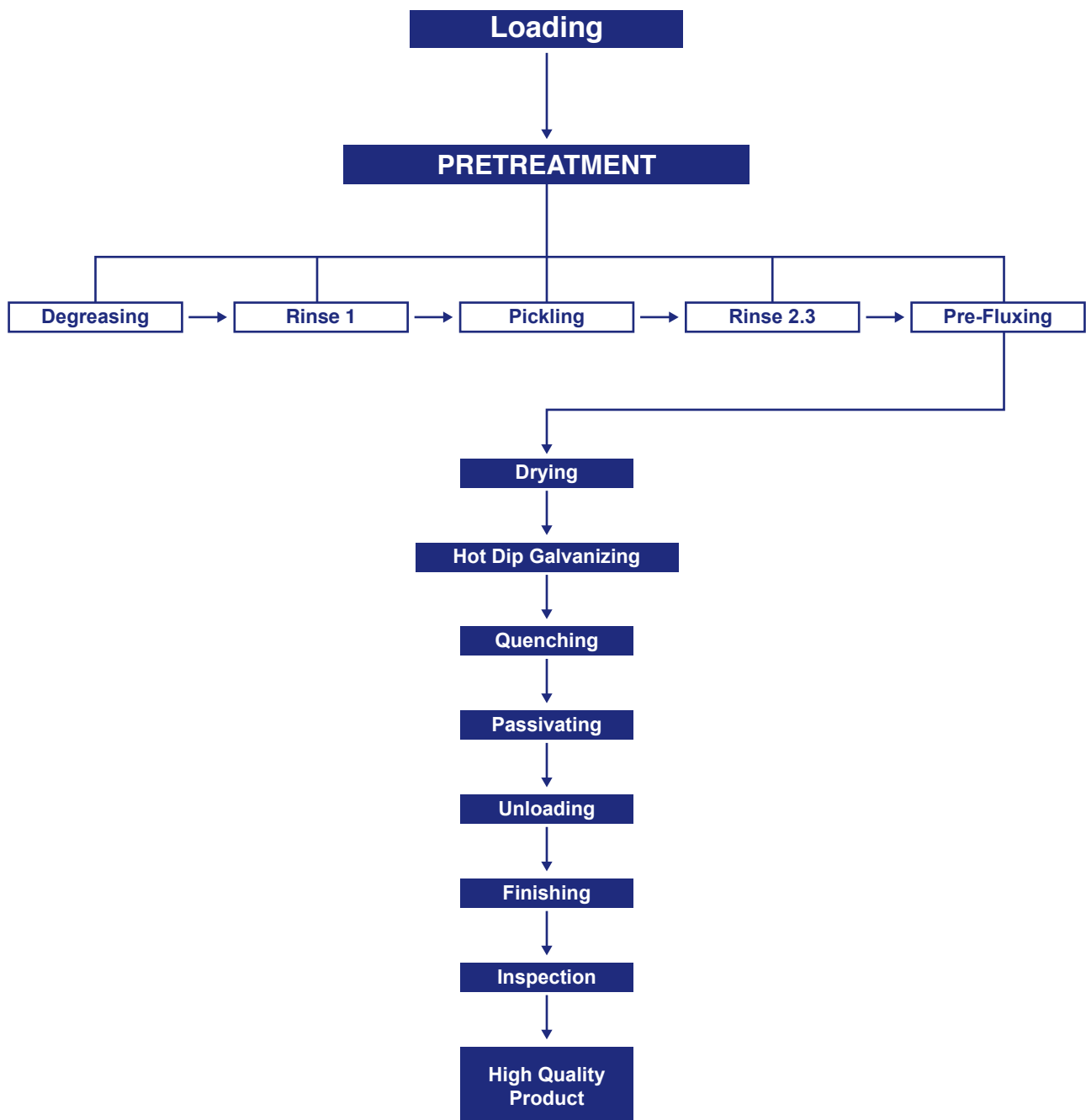
Ladders

All Steel Products





HDG Process



1- Loading

The steel items need to be supported during the hot dip galvanizing process.

Solutions and molten zinc must be able to flow into all sections and drain off all sections.

Jig Capacity 10 ton.



2- Pretreatment Area

energya HDG plant Unique with hot Acidic degreaser

Surface are treated chemically inside a pretreatment area, environmental friendly.

A hot Acidic solution (at 35°C) is used to remove grease, oil from the steel surfaces.

Scale and rust normally are removed from the steel surface by pickling in hot Hydrochloric Acid (at 35°C).

Fluxing is the final surface preparation step in the galvanizing process.



3- Drying

The material is then dried at (100: 150°C) before immersing in molten zinc.



4- Hot Dip Galvanizing

In this step, the material is completely immersed in a bath consisting of 99.995% pure molten zinc at 450°C until they reach bath temperature. The zinc metal then reacts with the iron on the steel surface to form zinc / iron layers above these layers the pure zinc layer with suitable thickness.

Kettle Dimension is 16.5 L * 2 w * 2.75 h (m).

Double HDG Technique

energya hot dip galvanization plant is ready to Galvanize products with 16.5m length, 2m width, 2.75m depth.

Also we can galvanize products within lengths up to 20m & depth up to 4.2m with double dip technique.



5- Quenching

After hot dip galvanized steel item is removed from the galvanizing bath, it is immediately quenched in water to prevent reaction between zinc layers.



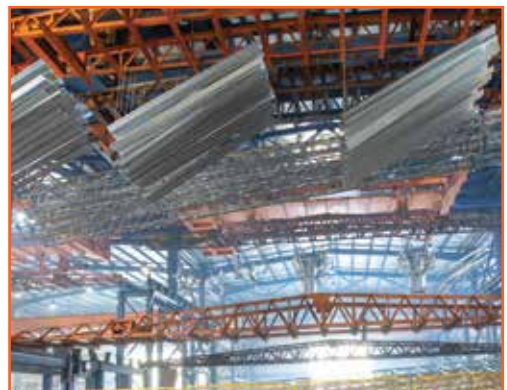
6- Passivating

energya HDG plant Unique with passivation process.

The passivation cools the item so that it can be, quickly handled and passivates the surface of the galvanized coating to maintain its bright appearance.

The passivation will reduce white rusting problems.

White rust forms when rainwater reacts with newly galvanized steel to form zinc hydroxide.



7- Unloading & Finishing

Known as touch up, it is final operation that is applied to the coating in order to remove excess zinc, sharp edge tears, or spikes, and also repair of un-galvanized areas according to galvanization standards.



8- High Quality Product

energya HDG plant Unique with Q.C during the galvanization process.

During the galvanization process we have excellent Q.C.

We have check Thickness & Appearance before Unloading.



9- Inspection

Finally, products are tested by the quality control department to assure the galvanization thickness, Surface appearance and the adhesion of zinc to the products surface.

International standard of HDG:

All international specs as:

ASTM A-123, A-153, A-385, A-780

EN ISO 1461

DIN 50976

BS 729

Client specs

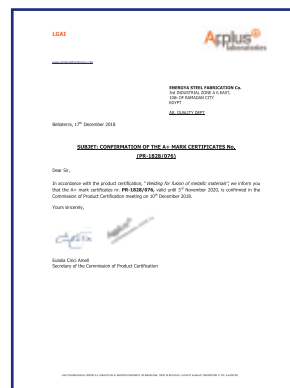
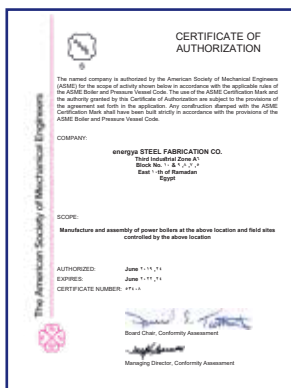


10- Storing & Dispatching

energya has a storage area about 6000 m²



Our Certificates





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