

ASTM A123/123 M

Minimum Average Coating Thickness Grade by Material Category

TABLE-1 All Specimens Tested

Material Category	Steel Thickness Range (Measured), in. (mm.)				
	<1/16 (<1.6)	1/16 to <1/8 (1.6 to <3.2)	1/8 to 3/16 (3.2 to 4.8)	>3/16 to <1/4 (>4.8 to 6.4)	>1/4 (>6.4)
Structural Shapes	45	65	85	85	100
Strip	45	65	75	85	100
Pipe	-	-	75	85	75
Wire	45	45	65	65	85

BS 729

Hot-Dip Galvanizing Service

Specifications (Excepts) BS 729: 1971 Hot-Dip galvanized coatings on Iron & Steel

Articles

Table 1. Coating Weight

Category	Minimum average coating weight for any individual test area ** (in g/m ²)
Steel articles which are not centrifugal***	5 mm thick and over Under 5 mm but not less than 2 mm Under 2 mm but not less than 1 mm
Grey and malleable iron castings	610
Threaded work and other articles which are centrifuged@	305

* The coating weight per unit area of surface is given in term of g/m² of surface. If the coating thickness is required, the following conversion factor should be used, which assumes the density of the coating to be 7 g/m³.
 1g/m² = 0.14 um (305 g/m² = 1 oz/ft² = 43 um = 0.0017 in.)



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GALVANIZING
 "GALVANIZING COSTS LESS AND LAST LONGER"



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Introduction

บริษัท คอโก้-เอสวี อีสเทิร์นสตีลไพพ์ จำกัด ได้ถูกก่อตั้งขึ้นเมื่อปี พ.ศ. 2537 บนพื้นที่ 170 ไร่ ในเขตจังหวัดระยอง โดยได้รับการส่งเสริมการลงทุนจากคณะกรรมการส่งเสริมการลงทุนแห่งประเทศไทย เพื่อดำเนินการผลิตและจำหน่ายท่อเหล็ก คุณภาพสูงทั้งประเภทตะเข็บตรงและตะเข็บเกลียว ขนาดเส้นผ่าศูนย์กลาง 21 มม. - 3,000 มม.

ในภาวะปัจจุบัน ความจำเป็นในการชุบสังกะสีเพื่อป้องกันการกัดกร่อนของสตีล สำหรับงานโครงสร้างเหล็กมีความต้องการสูงมากขึ้นตามการขยายตัวของเศรษฐกิจ โดยเฉพาะงานเหล็กที่มีพื้นที่ใกล้เคียง หรืองานในทะเล ในเขตพื้นที่ชายฝั่งตะวันออก บริษัทฯ จึงได้ขยายกำลังการผลิต การรับชุบสังกะสี โดยมีกำลังการผลิตมากกว่า 4,000 ตันต่อเดือนเพื่อให้ บริการแก่ลูกค้าได้ อย่างมีประสิทธิภาพ

COTCO-SV Eastern steel pipe Ltd. Under the promotion privileges by the Board of Investment of Thailand or BOI, was established in 1994 located at Rayong, with total area used more than 272,000 m² to produce and distribute the highest quality of steel pipe products of both longitudinal and spiral forming with an outside diameter from 21 mm. up to 3,000 mm.

Recently the company has entered into a galvanizing market due to an increasing demand of steel galvanizing services mainly used for both onshore and offshore works situated along the Eastern coast area. With the total capabilities of galvanizing from two zinc kettles of more than 4,000 mt. Per month we assure that we can provide the best possible services to any requirement effectively and professionally.

1. Area Used :	Indoor 5,800 m ² Out door 5,000 m ²																		
2. Galvanizing Capacity :	4,000 Mt./Month																		
3. Staff Personal	<table border="0"> <tr> <td>Production Engineer</td> <td>1</td> <td>Position</td> </tr> <tr> <td>QA Engineer</td> <td>1</td> <td>Position</td> </tr> <tr> <td>Technicians</td> <td>5</td> <td>Positions</td> </tr> <tr> <td>Skilled Workers</td> <td>20</td> <td>Positions</td> </tr> <tr> <td>Unskilled Workers</td> <td>10</td> <td>Positions</td> </tr> </table>	Production Engineer	1	Position	QA Engineer	1	Position	Technicians	5	Positions	Skilled Workers	20	Positions	Unskilled Workers	10	Positions			
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QA Engineer	1	Position																	
Technicians	5	Positions																	
Skilled Workers	20	Positions																	
Unskilled Workers	10	Positions																	
4. Zinc Kettle Dimension (2 sets)	9000 mm. x 1750 mm. x 2000 mm. (L x W x D)																		
5. Heating by Natural Gas																			
6. Lift up capacity	3.2 x 2 Mt.																		
7. Pre-treatment facilities (2 sets)	<table border="0"> <tr> <td>- Degreasing</td> <td>1</td> <td>Tank</td> </tr> <tr> <td>- Water Rinsing</td> <td>3</td> <td>Tanks</td> </tr> <tr> <td>- Pickling</td> <td>2</td> <td>Tanks</td> </tr> <tr> <td>- Quenching</td> <td>1</td> <td>Tank</td> </tr> <tr> <td>- Chromating</td> <td>1</td> <td>Tank</td> </tr> <tr> <td>- Jigs / Fixtures</td> <td colspan="2">Designed by production requested</td> </tr> </table>	- Degreasing	1	Tank	- Water Rinsing	3	Tanks	- Pickling	2	Tanks	- Quenching	1	Tank	- Chromating	1	Tank	- Jigs / Fixtures	Designed by production requested	
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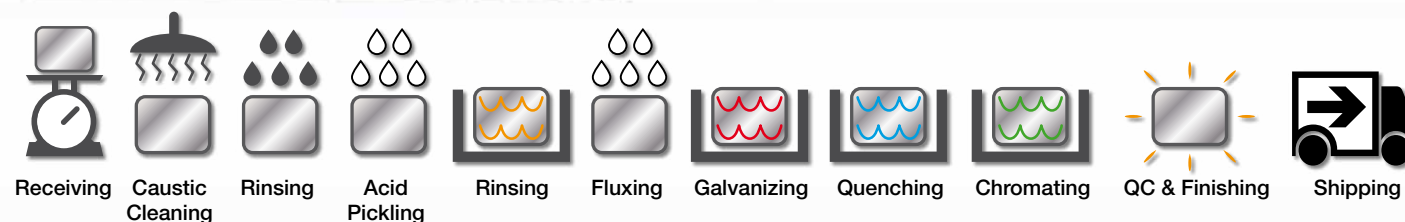
Why galvanize?

Corrosion is the destructive result of the chemical reaction between a metal and its environment. More simply, it is the process of metal being worn away. If left unprotected, iron and steel will react with the surrounding environment and revert to more stable oxide compounds, thus consuming your product in the process. This leads to expensive repairs and eventual replacement of components.



Commonly Galvanized Items

Concrete reinforcing steel, Walkway grating, Marine Equipment, Power Transmission Equipment, Pre-fabricated metal buildings, Petrochemical Plant Components, Fire suppression equipment, Recreational boat trailers, Pipe and pipe fittings, Ornamental Iron Work, Recreational Equipment, Scaffolding Barricades, Material Handling Equipment, Chemical Plant Components, Offshore platform components, Utility trailers Structural Steel, Stairways and Handrails, Agricultural Equipment, Commercial fishing equipment, Highway & Bridge Components, Rental tool handing equipment, Pipe Hangers and supports, Etc.



Galvanizing Process

1. Surface preparation :

- 1.1 Caustic (alkaline) bath : with a concentration 10-15% at a control temperature 65-80 deg. Celsius, in order to remove organic contaminants, including grease, oil paint markings, and dirt.
- 1.2 Pickling (Hydrochloric acid) bath: Removes rust and scale.
- 1.3 Flux (zinc ammonium chloride) bath: Prevents oxides from forming on the steel before galvanizing.

2. Galvanizing :

- 2.1 Molten zinc bath (450-460 deg. Celsius): Metallurgic bond between steel and zinc occurs at this point.
- 2.2 Water quench: Cools steel to a water handling temperature stops galvanizing process.

3. Cleaning and Inspection:

Drips and handing marks are removed from the product. The product is inspected to insure adequate galvanized coating and prepped for shipping.

