

R.W. CONKLINSTEEL

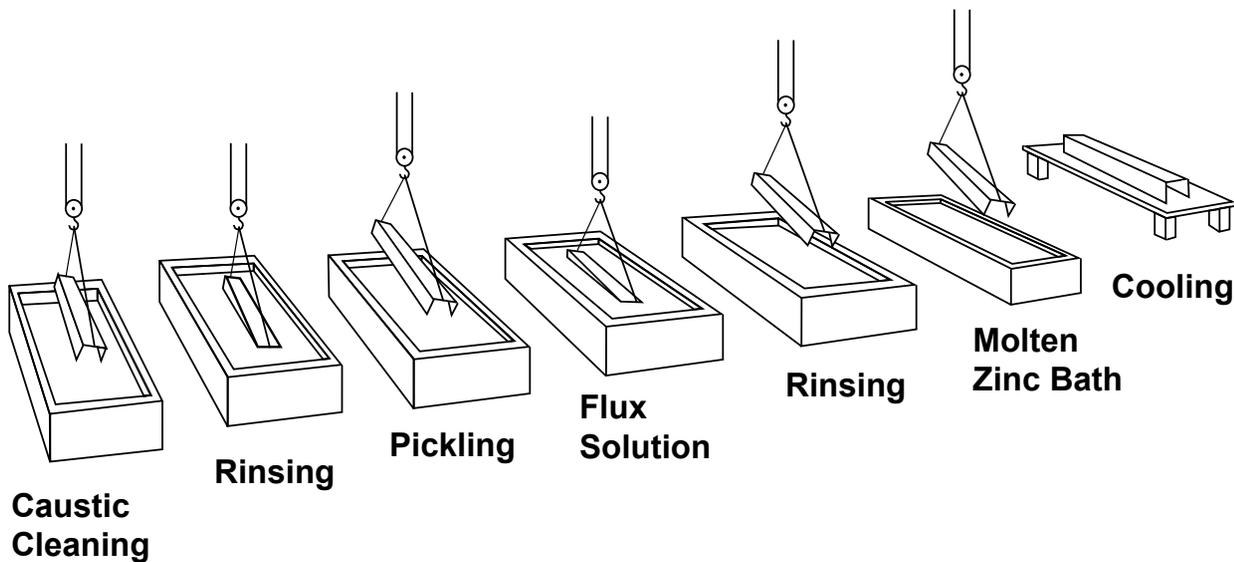
100% Melted & Manufactured in the USA

1-888-CONKLIN (266-5546)

www.conklinsteel.com

HOT DIP GALVANIZING

Surface Prep, Galvanizing, Inspection



CAUSTIC CLEANING

A hot alkaline solution removes dirt, oil, grease, shop oil and souble markings. Caustic cleaning will not remove some surface containments, such as epoxies, vinyls, asphalts, or welding slag.

PICKLING

Dilute solutions of either hydrochloric or sulfuric acid remove surface rust and mill scale to provide a chemically clean metallic surface.

FLUX SOLUTION

Steel is immersed in liquid flux to remove oxides and to prevent oxidation prior to dipping into the molten zinc bath. In the "dry" galvanizing process the item is separately dipped in a liquid flux bath, removed, allowed to dry and then galvanized.

In the "wet" galvanizing process, the flux floats atop the molten zinc and the item passes through the flux immediately prior to galvanizing.

MOLTEN ZINC BATH

The article is immersed in a bath of molten zinc at between 815° F - 850° F (435° C - 455° C). During galvanizing, the zinc metallurgically bonds to the steel, creating a series of highly abrasion-resistant zinc-iron alloy layers, topped by a layer of impact-resistant pure zinc.

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ZINC COATINGS

METHOD	PROCESS	SPECIFICATIONS	COATING THICKNESS	APPLICATION
Electro Galvanizing	Electrolysis	ASTM A-879	Up to 0.28 mils ¹	Interior. Appliance panels, studs acoustical ceiling members.
Zinc Plating	Electrolysis	ASTM B-633	0.2 to 1.0 mils ²	Interior & Exterior. Fasteners and hardware items.
Mechanical Plating	Peening	ASTM B-695	0.2 to 4.3 mils ²	Interior & Exterior. Fasteners and hardware items.
Zinc Spraying (Metallizing)	Spray	AWS C2.2	3.3 to 8.3 mils	Interior or Exterior. Items that cannot be galvanized because of size or because on-site coating application is needed.
Continuous Sheet Galvanizing	Hot Zinc Spray	ASTM A-653	Up to 4.0 mils ¹	Interior or Exterior. Roofing, gutters, culverts and automobile bodies.
Batch Hot-Dip Galvanizing	Hot-Dip	ASTM A-123 ASTM A-153 ASTM A-767 CSA G164	1.4 to 3.9 mils ³	Interior or Exterior. Nearly all shapes and sizes ranging from nails, nuts and bolts to large structural assemblies, including rebar.
Zinc Painting	Spray Roller Brush	SSPC-PS Guide 12.00, 22.00 SSPC-PS Paint 20 SSPC-PS 12.01	0.6 to 5.0 mils/coat	Interior or Exterior. Items that cannot be galvanized because of size or because on-site coating application is needed. Large structural assemblies. Aesthetic requirements.

¹ Total for both sides of sheet.

² Range based on ASTM minimum thickness for all grades, classes, etc., encompassed by specifications.

³ Range based on ASTM and CSA minimum thickness for all grades, classes, etc., encompassed by specifications.