

## **Hot Dip Galvanizing Specification**

Hot Dip Galvanizing shall comply with ASTM A 123/ 123M for fabricated products and ASTM A 153/153M for hardware. ASTM standard practices A143, A384 and A 385 should also be observed so that a high quality coating can be achieved. Hot Dip Galvanizing for Concrete Reinforcing Steel shall comply with ASTM A 767. Repair of Hot Dip Galvanized coatings shall comply with ASTM A 780. Preparation of Zinc coated (Hot Dip Galvanizing) iron and steel product and hardware surfaces for powder coating or painting shall comply with ASTM D 6386. An American Galvanizers Association trained Master Galvanizer shall be present when the processes described below are undertaken:

1. Pickling shall take place in a solution of 8% to 14% sulfuric acid at a temperature of 140° to 150° Fahrenheit. Calibrated timing devices shall monitor the pickling process.
2. Only the dry kettle galvanizing process shall be used. This requires a pre flux solution of Zinc Ammonium Chloride with a Baume' of 12° to 14°. The wet kettle process shall be prohibited.
3. The steel shall be galvanized in a zinc bath containing .04 to .09 percent nickel, .08 to .12 percent bismuth and .0005-.005 percent aluminum. A certified weighing device shall document the galvanized weight.
4. Unless the product is to be powder coated or painted, or as specified by the designer/fabricator, for example, to control distortion, the galvanized steel shall be chromate treated immediately after galvanizing by quenching in a solution of .02 to .05 percent chromic acid.
5. All material shall be finished by filing and grinding so that it may be installed without additional finish work. i.e. bolt holes free and clear of zinc, matching surfaces filed smooth and no sharp zinc tears or spikes.