



American Galvanizers Association *Galvanize It!* Seminar Program Outline



Bridge Design Seminar (HSW Credit) (Scheduled – Classroom)

- I. Introduction and Learning Objectives**
- II. Current Bridge Market**
 - a. Planning for the Future: HDG Steel Bridges
- III. Hot-Dip Galvanizing (HDG) Process**
- IV. Benefits of HDG Steel Bridges**
 - a. Corrosion Protection
 - i. Barrier protection
 - ii. Cathodic Protection
 - iii. Zinc Patina
 - b. Durability
 - i. Abrasion Resistance
 - ii. Uniform Protection
 - iii. Complete Coverage
 - c. Longevity
 - i. In Atmosphere
 - d. Availability & Versatility
 - i. Abundant
 - ii. Efficiency
 - iii. Safety
 - e. Aesthetics
 - i. Modern, Natural Appearance
 - ii. Duplex Systems
 - f. Sustainability
 - i. Environmental Advantages
 - ii. Economic Advantages
 - iii. Cost Parameters
- V. HDG Bridge Design**
 - a. Specification & Design Considerations
 - b. Minimizing Warpage & Distortion
 - c. Connection Concerns
 - d. Inspection & Repair



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- VI. Specifications & Design Considerations**
 - a. Size Limitations
 - b. Steel Selection & Girder Design
 - c. Dissimilar Metals

- VII. Minimizing Warpage & Distortion**
 - d. Causes of Warpage & Distortion
 - e. Best Practices to Avoid Warpage & Distortion

- II. Connection Concerns**
 - a. Overtapping Guidelines
 - b. Bearing & Slip Critical Concerns
 - c. Hydrogen Embrittlement

- VIII. Inspection & Repair**
 - a. In Plant Inspection
 - b. Touch-up & Repair in Plant
 - c. Field Inspection: Areas of Concern
 - d. Touch-Up & Repair in Field
 - e. Touch-Up & Repair Methods

- IX. Summary**