

ICZ: Expanding the HDG Market in Brazil

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Sao Paulo

American Galvanizers Association

- Marketing Tools & Training
 - Description & Objectives
- Technical Tools & Training
 - Description & Objectives
- Administrative Tools & Training
 - Descriptive & Objectives

Marketing Tools & Training

- ThinkZinc Seminar
 - Sales v. Marketing
 - Presentation Skills
 - GI seminar
 - SD seminar
 - Technical Foundation
 - Life-cycle cost calculator



Marketing Tools & Training

- Web site
www.galvanizeit.org
 - Micro-sites
 - GalvaSource
 - Knowledge Base
 - Uses of HDG Steel



Marketing Tools & Training

- Drivers to the web site
 - Advertising Campaign
 - Literature
 - Advertorials
 - Trade Shows
 - Vertical
 - Horizontal



Marketing Tools & Training

- Surveys of A&Es
 - Learn why they galvanize and why they don't galvanize
 - AGA response is to construct communications reinforcing why and addressing the why not



Marketing Tools & Training

- Trade Shows
 - National by AGA staff
 - Regional by AGA galvanizer members
 - Booth rental from AGA



Marketing Tools & Training

- Networking with Affiliate Associations
 - Steel Day with AISC
 - AISI lobbying
 - Participate in NACE, SSPC, CRSI



Marketing Objectives

- Pareto's Rule
 - AGA 20% of marketing
 - Galvanizers 80%
- Seminar presentation is key
- Drive to the web site



Marketing Objectives

- Cooperative effort
 - Paint, weathering steel, & concrete are the competition
- Fair margins
- Best corrosion protection system available today



Technical Tools & Training

- Technical Services Committee
 - Health & Safety
 - Environmental
 - Processing
 - Coating Performance
 - TechForum

Degreasing



TechForum

Technical Tools & Training

- Manuals
 - Safety
 - Environmental
 - Quality Assurance
- CDs/DVDs
 - Processing & Maintenance
 - Safety
 - Inspection

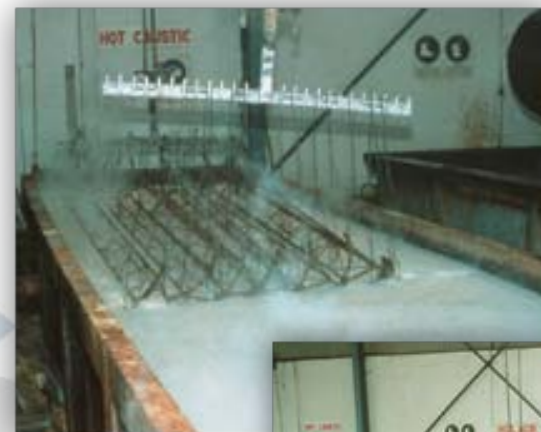
Degreasing



Technical Tools & Training

- Seminars – In plant
 - Processing I, II, III, IV
 - Basic HDG
 - Chemicals
 - Kettle
 - Material Handling
 - Inspection

Degreasing



Fluxing

Technical Tools & Training

- Networking & Committees
 - ASTM
 - IEEE
 - NACE
 - FHWA
 - DOT
 - AISC

Degreasing



Technical Tools & Training

- Research & Development
- Galvanizing Handbook
 - Plant floor FAQs
- Processing Survey
 - Benchmarking
 - Chemical usage
 - Zinc usage
 - Productivity
 - Practices

Degreasing



Galvanizing

Technical Tools & Training

- TechNotes
- Galvanizing Notes
 - Walking Surfaces, etc.
 - Caustic cleaning
 - Acid recycling
 - Skimmings & Dross etc.
- Galvanizing Guidelines
 - Wire & Chain
 - Air Monitoring
 - Confined Spaces

Degreasing



Technical Objectives

- Committee Structure drives R&D, manuals, projects in response to galvanizer needs in the market
- Control specifications and influence of other organizations on HDG markets.

Degreasing



Administrative Tools & Objectives

Administrative Tools

- E-newsletter
- Printed Newsletter
- Benchmarking Surveys
 - Price
 - Insurance

Administrative Tools

- Legal Practices
- Warranty Guidelines
- Purchase Order Confirmation
- Crisis Management Plan

Administrative Tools

- Position Papers
 - Pb in the coating
 - Zn Runoff in Aquatic Systems
 - Zn in Soils
 - Sustainable Development
 - Welding HDG steel

Administrative Objectives

- Unified industry voice
- Learn from others mistakes
- AGA as the clearinghouse of information

Hot-Dip Galvanizing Costs Less Lasts Longer

The Cost of Corrosion Protection

- Initial cost will always factor into decision
- Life-cycle cost analysis is more complete
 - Includes all future maintenance costs
 - Provides total cost of the project over its life
- Life-cycle cost calculation automated online at www.galvanizeit.org/galvanizingcost/



Quantitative Analysis

- Data Sources:
 - Paint – 2008 KTA Tator paper
 - Nationwide survey of the paint industry
 - Presented at NACE 2009
 - Galvanizing – 2008 AGA Industry Survey
- Project Parameters
 - Standard mix of steel (structural, tubing, plate)
 - 30,000 ft² project
 - Moderately industrial environment

Initial Cost Parameters

- Paint
 - Material (one- or two-pack product, number of coats, etc)
 - Shop cleaning labor
 - Shop/field application
 - Field labor
- Galvanizing
 - Process is inclusive of all cleaning, material, and labor



Initial Cost

Coating System	\$/ft²	Total
Inorganic Zinc	\$1.35	\$40,410
Hot-Dip Galvanizing	\$1.60	\$48,000
Inorganic Zinc/Epoxy	\$2.16	\$64,800
Acrylic WB Primer/ Acrylic WB Intermediate/ Acrylic WB Topcoat	\$2.55	\$76,620
Inorganic Zinc Primer/ Epoxy/ Polyurethane Topcoat	\$3.17	\$94,950

Life-Cycle Cost

- Maintenance costs calculated on a practical maintenance cycle (vs. ideal)
 - Unique to each paint system
 - Manufacturer recommended cycles provided in the KTA Tator paper
- NACE model for NFV and NPV calculations
 - 2% inflation; 4% interest
- 50-year life
- Maintenance repaint at 5% rust

Life-Cycle Cost (\$/ft²)

60-Year Life

Coating System	
Hot-Dip Galvanizing	\$1.60
Inorganic Zinc	\$5.16
Inorganic Zinc/Epoxy	\$8.07
Inorganic Zinc Primer/Epoxy Intermediate/ Polyurethane Topcoat	\$10.04
Acrylic WB Primer/ Acrylic WB Intermediate/ Acrylic WB Topcoat	\$14.82

Total Cost of 60-Year Project

Coating System	Total
Hot-Dip Galvanizing	\$48,000
Inorganic Zinc	\$154,800
Inorganic Zinc/Epoxy	\$242,100
Inorganic Zinc Primer/ Epoxy/ Polyurethane	\$301,200
Acrylic WB Primer/ Acrylic WB Intermediate/ Acrylic WB Topcoat	\$444,600

Galvanized Steel Projects

7th Avenue Light Rail Transit

Date Galvanized
2005

Components Galvanized
Columns, arms, light posts,
handrails, benches, hardware

Environment
Urban

Location
Calgary, AB



Michigan/M-102 Bridge Rail

Date Galvanized
2007



Components Galvanized
Guide rails

Environment
Urban

Location
Detroit, MI

Harley Davidson Museum

Date Galvanized
2008

Components Galvanized
I-beams, columns, gusset plates,
and cross bracing

Environment
Urban

Location
Milwaukee, WI



San Joaquin Solar Farm

Date Galvanized
2007

Components Galvanized
Frames, hardware

Environment
Industrial

Location
Oakdale, CA



Bergen County Bridge



Date Galvanized
2009

Components Galvanized
Trusses, floor beams, flooring-
diaphragms, supports, rail, plates

Environment
Suburban

Location
Fairlawn/Patterson, NJ

AGA Resources

- www.galvanizeit.org
- aga@galvanizeit.org
- 1-800-HOT-SPEC
(1-800-468-7732)
- Technical Library
- AGA KnowledgeBase
 - www.galvanizeit.org/aga/knowledgebase
- *Galvanizing Insights*
 - Quarterly e-newsletter



Questions & Comments

