

Hot-Dip Galvanized Sheet Production Course



December 3-5, 2019

JW Marriott Indianapolis Indianapolis, IN 46204



International
Zinc Association

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The GalvInfo Center
and
International Zinc Association

IZA/GalvInfo Center – Hot-Dip Galvanized Sheet Operations Course Program

December 3-5, 2019 – JW Marriott Indianapolis, 10 S West Street, Indianapolis, IN 46204

Tuesday, Dec 3, 2019	Registration 4 PM – 6 PM Reception 6 PM – 8 PM	
Wednesday, Dec 4, 2019 Registration 7:30 – 8:00 AM	MORNING SESSION	AFTERNOON SESSION
	8:00 – 8:15 Introduction – <i>Frank Goodwin</i>	1:00 – 2:15 HD Bath Chemistry and Control II – <i>Martin Gagné</i>
	8:15 – 9:15 Product and Process Overview – <i>Gary Dallin</i>	
	9:15 – 9:45 BREAK	2:15 – 2:30 BREAK
	9:45 – 11:15 Furnace Operations – Atmosphere Control & Annealing – <i>Gary Dallin</i>	2:30 – 3:30 Advanced High Strength Steels – <i>Frank Goodwin</i>
	11:15 – NOON HD Bath Chemistry and Control I – <i>Martin Gagné</i>	3:30 – 4:30 Galvanneal – Process and Product – <i>Gary Dallin</i>
Thursday, Dec 5, 2019	8:00 – 9:30 Coating Weight Control & Air Knives I – <i>Frank Goodwin</i>	12:45 – 2:00 Coated Sheet Defects and Their Avoidance – <i>Gary Dallin</i>
	9:30 – 9:45 BREAK	2:00 – 2:15 BREAK
	9:45 – 10:30 Coating Weight Control & Air Knives II – <i>Gary Dallin</i>	2:15 – 3:15 After Pot Processes – <i>Frank Goodwin & Gary Dallin</i>
	10:30 – 11:45 Zinc Bath Hardware – <i>Frank Goodwin</i>	3:15 – 3:45 Review of Key Process Indicators – <i>Gary Dallin</i>
		3:45 – 4:00 Question & Answer Session

Registration Fee – USD695 until November 15, 2019, USD795 after November 15 (\$545/\$645 for employees of GalvInfo Sponsors, and \$595/\$695 for employees of Galvanized Auto Partnership member companies)

Course Elements

Tuesday, December 3, 2019 – Registration 4 pm – 6 pm, Reception 6 pm – 8 pm

Wednesday, December 4, 2019

MORNING SESSION 8:00 A.M. - NOON

Introduction: *Frank Goodwin, International Zinc Association*

Hot Dip Coating – Process Overview: *Gary Dallin, GalvInfo Center*

The continuous hot-dip galvanizing process is a closely controlled sequence of steps. The process will be outlined in its entirety so that the student can understand how the subsequent course presentations fit together.

Furnace Operations – Atmosphere Control and Annealing: *Gary Dallin*

The fundamentals of coating line operations prior to the strip reaching the coating section will be explained.

Hot Dip Galvanizing Bath Chemistry & Control: *Martin Gagné, Independent Consultant for IZA*

Central to the entire hot-dip coating process is the bonding reaction between the steel and coating metal. A thin layer of zinc is diffusion-bonded to the steel allowing the sheet to be formed into many shapes without loss of coating adhesion. This reaction, and how to control it, receives considerable attention in this module.

AFTERNOON SESSION 1:00–4:45 P.M.

Hot Dip Galvanizing Bath Chemistry & Control (cont.): *Martin Gagné*

Advanced High Strength Steels: *Frank Goodwin*

A review of the most recent product and process developments in this rapidly evolving segment of the coated sheet industry. The focus will be on Advanced High Strength Steels.

Galvanneal – Process and Product: *Gary Dallin*

The process requirements needed to produce high quality galvanneal, along with the metallurgy and microstructure of this coating will be reviewed.

Question and Answer Session

Thursday, December 5, 2019

MORNING SESSION 8:00 A.M. – 11:45 A.M.

Coating Weight Control & Air Knives: *Gary Dallin & Frank Goodwin*

Air knives are an integral part of the hot-dip coating process and the many facets of how these systems operate will be presented. The focus will be on optimizing control of coating weight.

Zinc Bath Hardware: *Frank Goodwin*

Molten zinc is very corrosive to the submerged hardware in a zinc bath. Much work is underway to improve the life of pot equipment and will be reviewed in this session.

AFTERNOON SESSION 12:45–3:45 P.M.

Hot Dip Galvanize Products – Defects & Their Avoidance: *Gary Dallin*

Achieving good surface quality is a key part of galvanized sheet production. Common problems will be reviewed along with actions that can be taken to avoid them.

Galvanizing Line Operations – After Pot Processes: *Frank Goodwin*

The fundamentals of the finishing operations on a modern coating line are covered.

Review of Key Process Indicators: *Gary Dallin*

A review of the key process indicators that need constant monitoring to ensure minimum downtime and high product quality.

Question and Answer Session

Hot-Dip Galvanized Sheet Production Course

Course Dates: December 3-5, 2019

JW Marriott Indianapolis, Indianapolis, IN

About this Course

This course provides a comprehensive overview of hot dip galvanized sheet production. The course covers coating line production processes, including annealing, coating weight control, galvannealing, post galvanizing surface treatments, and coated sheet defects, as well as zinc bath management principles and technology.

The course deals primarily with the operation of continuous galvanizing lines, including the metallurgical processes involved. A review and listing of key process variable is included. Time will be allowed in each module for questions, along with general questions at the end of the course.

Who Should Attend?

Anyone interested in expanding his or her knowledge of the basic principles of galvanized steel sheet production. The course is especially beneficial to process engineers, maintenance personnel, production operators, and process related quality assurance staff. R&D engineers, technical sales people, and anyone whose job requires knowledge of how coated sheet is made will benefit. Equipment manufacturers and industry service suppliers can also benefit from this course.

Course Director - Gary W. Dallin, P. Eng.

Gary Dallin has over 50 years of experience with galvanized and prepainted steel sheet products acquired while working as a metallurgist for Stelco Inc. in Hamilton, ON, Canada. Gary held numerous positions in the coated product area including Manager, Metallurgy and Quality Assurance, Cold Roll & Coated Products, Senior Product Metallurgist-Coated, and Manager of Customer Service Metallurgy, dealing with marketplace product issues in the appliance, construction, building products, and automotive industries. Gary is chairman of ASTM Subcommittee A05.07 on Testing of Metallic-Coated Sheet Steel Products, Director of the GalvInfo Center, a registered Professional Engineer in the Province of Ontario, and is President of his own consulting company, Steel Technology Services Inc. in Burlington, ON.

Course Registration

The advanced course registration fee by November 15, 2019 is USD695. Registration after November 15 is USD795. Advanced/late fees of \$545/\$645 are available for registrants employed by GalvInfo Sponsor companies, and \$595/\$695 for employees of Galvanized Auto Partnership member companies. The registration fee includes a welcoming reception Tuesday evening, lunches, and coffee breaks during the two-day course. Attendees will also receive a USB flash drive containing all the presentations, along with handouts of the speaker slides.

Cancellation / Substitution

Cancellations and registration refunds will be accepted up until November 15 subject to a USD50 administrative fee. All cancellations must be received in writing prior to the cut-off date. Substitutions are acceptable until November 29, 2019.

Hotel Accommodations

A block of rooms has been reserved at the Springhill Suites by Marriott Downtown, 602 W Washington St. Indianapolis, IN 46204. Room rate is USD139 per night (includes breakfast). Meeting rooms are in the JW Marriott. Please call 1-317-822-8554 and ask for the International Zinc Association IZA/GalvInfo Course to arrange your reservation, or at website:

<https://book.passkey.com/go/IZAHotDipGalvCourse>

before cut-off date of November 12, 2019.

Registration Procedure

On line course registration is available at:

<https://cvent.me/awdoV>

Registration information is also available on-line at www.galvinfo.com

**Presented by the International Zinc Association and
the GalvInfo Center**