





## Zinc/Zinc-Alloy/Aluminum Continuous Sheet Coating Lines - North America

Colour Code → Operating HD Lines

EG Lines

Under Construction

Publicly Announced

Idle Lines

**METRIC (SI) VERSION**

(Master Sheet - CoatingLinesInLb sheet calculates sizes and tons from this sheet)

Country	Producer	Location	Line ID	Date Built	Latest Rebuild	Thickness (mm)		Width (mm)		Furnace Type(*)	Annual Hot-Dip Capacity - 1000's of metric tonnes (k MT)						Total Company D MT	Annual EG Capacity - k MT				Roll Coatings	Status	Est. Zn Usage: MT/yr.	Comments	
						Min	Max	Min	Max		GI only	GA/GI	AZ	GF or ZM	Al, Al-Si	Combi.		Total	Zn	Zn-Ni	other					Total
United States	United States Steel Corporation	Midwest Plant, Portage, IN	72" GACT	1970	2018	0.56	3.2	610	1829	H&V-RT	-	454	-	-	-	-	454	5,114 ↑ Minus 50% of Double G Coatings tonnes, includes BRS	-	-	-	-	Prephos, Chem. Treat.	OP	4,400	Induction GA, roll coater; GI & GA UHSS
			No.3 CL	1998	2006	0.23	0.9	610	1245	H-DFRT	245	-	-	-	-	-	245		-	-	-	-	Acrylic	OP	4,400	Junkers coreless main & PM pots; 55Al-Zn until 2006
		Mon Valley Works, Irvin Plant, Dravosburg, PA	GAL1	1948	2004	0.91	4.3	560	1321	L-DFRT	200	-	-	-	-	-	200		-	-	-	-	-	OP	5,400	HRS and CRS substrate; Selas NOx DFF line
			GAL2	1949	1998	0.36	1.6	610	1219	V-DFRT	160	-	stop 2000	-	stop 1982	-	160		-	-	-	-	Acrylic	OP	2,500	Construction & appliance. Converted to dual line in 1997
		Mon Valley Works, Fairless Plant, Fairless Hills, PA	GAL3	1968	1999	0.37	2.0	610	1626	H-RT	-	299	-	-	-	-	299		-	-	-	-	n/a	OP	5,400	Horizontal RT fce.; gas-fired GA; 1999 new Clecim TM, TL, CT, etc.
			*Mini-mill location to be announced	TBA	-	-	TBA	TBA	TBA	TBA	TBA	TBA	TBA	-	-	-	TBA		-	-	-	-	-	PA	13,000	Oct. 29, 2021 earnings call: \$3 Bn new flat rolled mini-mill, start construction 1H22; includes AHSS galv., HR galv., painting, slitting
		PRO-TEC Coating Company, Leipsic, OH	CGL1	1993	2007	0.58	2.6	914	1880	V-RT	-	544	-	-	-	-	544		-	-	-	-	Prephos, CT	OP	9,500	US Steel/Kobe Steel JV; 2 roll coaters; UHSS & exposed GA; robot skim; LIBS pot chem. Sensor
			CGL2	1998	2006	0.38	1.7	610	1702	V-RT	-	454	-	-	-	-	454		-	-	-	-	Prephos	OP	9,500	US Steel/Kobe Steel JV; roll coater, exposed GA & AHSS; robot skim
			CGL3	2020	-	0.6	2.7	870	1670	TBA	-	454	-	-	-	-	454		-	-	-	Prephos, CT	OP	10,000	U. S. Steel/Kobe Steel JV; UHSS GEN3 GI, GA - start 2020 (AMM - Sep '17); 2 coating pots	
		USS UPI, Pittsburg, CA	No. 2CC Line	1963	1997	0.38	3.21	610	1410	V-RT	-	363	-	-	-	-	363		-	-	-	-	n/a	OP	11,200	Induction GA, RoHS CT; was 50-50 JV of U. S. Steel and POSCO since 1984 to 100% U. S. Steel Feb. 29, 2020
Wheeling-Nippon Steel, Inc.	Follansbee, WV	No.1 AGL	1988	-	0.36	2.7	610	1549	H-DFRT	-	260	-	12	91	260	-	-	-	-	-	OP	5,400	ZAM™ added in 2013-2014; Makes Aluminized stainless; Gas-fired GA furnace; 100% Nisshin Steel Co., Ltd. since 2008			
		No.2 CGL	1993	2000	0.20	1.2	610	1270	H-DFRT	190	-	82	-	-	-	272	-	-	-	-	Acrylic	OP	8,600	Construction; Carosel reels; roll coater		
Worthington Industries	Delta, OH	No.1	1997	2008	0.64	6.35	813	1575	L-DFRT	-	363	-	-	-	363	-	-	-	-	-	OP	13,600	CQ, culvert, guardrail markets (mostly HR substrate)			
		Spartan Steel Coating, Monroe, MI	No.1	1998	2019	0.46	1.9	711	1575	V-DFRT	-	544	-	-	-	544	-	-	-	-	Prephos, CT, Acrylic	OP	8,000	Worthington 52%/Cleveland-Cliffs 48% JV; DFF lining change to fiber; RJC upgrade		

Production Capacity:	Canada	Mexico	USA		Est. Total Zn MT
North American - Galvanize Only	611	948	5,408	6,967	24,811
- Galvanneal/Galvanize Lines	2,010	2,428	13,860	18,298	1,000's MT
- GALVALUME® & 55Al-Zn	136	420	1,561	2,117	
- GALFAN®, ZM or ZAM™	0	0	51	51	
- Aluminized Types I, II	160	0	917	1,077	
- TOTAL Hot-Dip	2,917	3,796	21,797	28,540	1,000's MT
- EG Zn	41	48	1,476	1,565	
- EG Zn-Ni	0	0	170	170	
- EG Zn-Fe/other metallic plating	0	0	60	60	
- Total EG	41	48	1,706	1,795	1,000's MT
- Total Hot Dip & EG	2,958	3,844	23,503	30,335	1,000's MT

### North American Line Summary

Type	Total Coating Lines				Operating				Being Built, Major Coating Upgrade				Combi. (Combination CGL & CAL or Pickle & CGL)				Idle				Publicly Announced								
	Canada	Mexico	USA	N.A. Total	Canada	Mexico	USA	N.A. Total	Canada	Mexico	USA	N.A. Total	Canada	Mexico	USA	N.A. Total	Canada	Mexico	USA	N.A. Total	Canada	Mexico	USA	N.A. Total					
Hot Dip Lines - TOTAL (all coatings)	9	15	65	89	8	14	55	77	1	0	1	2	0	0	4	4	0	0	1	1	0	1	8	9					
Hot Dip Galvanize Lines (GI but no GA)	3	6	28	37	3	6	22	31	0	0	0	0	0	0	1	1	0	0	0	0	0	0	6	6					
HDG Lines with GI & GA capability	5	10	36	51	5	9	31	45	0	0	1	1	0	0	3	3	0	0	1	1	0	1	3	4					
Lines with 55Al-Zn, GALVALUME capability	1	4	13	18	1	4	9	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4					
Lines with Galfan capability	0	0	3	3	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lines with ZM, ZAM™ capability	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lines with Aluminizing capability	1	0	4	5	0	0	4	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0					
<b>EG Lines</b>	<b>1</b>	<b>1</b>	<b>10</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>					
Total EGLs + CGLs				<b>101</b>					<b>87</b>					<b>2</b>					<b>4</b>					<b>3</b>					<b>9</b>

Revised Mar 2022 by GalvInfo Center, a Program of the International Zinc Association, Gary Dallin, with input from AIST GTC members, including E. A. Silva

### NOTES:

- Production tonnes based on most recent data or recent estimates
- Zinc usage cited is mainly from the 2004 ILZSG World Directory; CG Lines or estimated
- GI = Galvanize
- GA = Galvanneal
- AZ = 55Al-Zn (GALVALUME®, ZINCALUME®, etc.)
- AL = Aluminized ASTM A463 type I (Al-non 9% Si (5 to 11%)), type II (Al, <=0.35%Si)
- ZAM™ = Zn-Al-Mg alloy coating
- GF = GALFAN®, 5Al-Zn
- CT = Passivation chemical treatment
- CAGL = (Combination) Continuous Annealing Galvanizing Line
- PGL = (Combination) Pickling-Galvanizing Line

Status Abbreviations	
BB	Being Built
BBE	Being Built EGL
ID	Idle Hot-Dip Line
IDE	Idle EGL
OP	Operating Hot-Dip Line
OPE	Operating EGL
PA	Publicly Announced Line
TBA	To Be Announced

### (\*) Furnace types

- V = Vertical
- H = Horizontal
- L = Vert & Horiz (may or may not be "L" shaped)
- NA = not applicable / not available

\*Furnace Suffix: DF = Direct Fired; RT = Radiant Tube; IND = Induction; HTC = Heat to Coat