

# Mineral Industry Surveys

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## ZINC IN JANUARY 2017

Domestic mine production (recoverable) of zinc in January 2017 was 56,300 metric tons (t) (table 2). Average daily mine production in January was 1,820 t, 7% more than that in December and 21% less than that in January 2016 (fig. 1). Total domestic mine production (recoverable) for 2016 was 772,000 t, slightly less than that of 2015 (797,000 t),

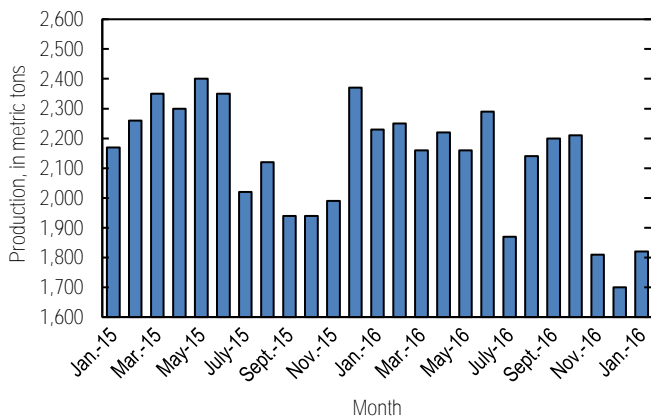


Figure 1. Average daily domestic zinc mine production (recoverable) from January 2015 through January 2017. Source: U.S. Geological Survey.

Global London Metal Exchange Ltd. (LME) stocks of Special High Grade (SHG) zinc decreased by 31,775 t to 396,075 t in January, 7% less than stocks at the end of December 2016 and 16% less than stocks at the end of January 2016 (fig. 2, table 7).

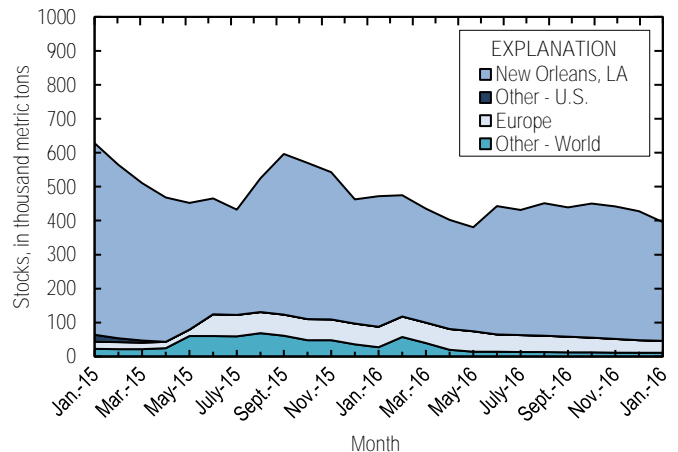


Figure 2. Global LME stocks of Special High Grade zinc, monthend, from January 2015 through January 2017. Source: London Metal Exchange Ltd.

The monthly average Platts Metals Week North American SHG zinc price in January 2017 was \$1.29 per pound, a slight increase from that in December 2016 and 72% more than that in January 2016. The January 2017 average LME cash price for SHG zinc was \$2,712.68 per metric ton, a slight increase from that in the previous month and 79% more than that in January 2016. The North American premium to the LME cash price in January averaged about 6.2 cents per pound, a slight increase from that in December, and despite the increase in prices, 6% below that in January 2016 (fig. 3, table 6). Monthly average SHG zinc prices increased significantly during 2016, with the January 2017 average North American SHG and LME cash prices increasing by about 72% and 79%, respectively, from those in January 2016. Among the LME-traded base metals, zinc has experienced the greatest increase in price coincident with increased investment interest and an increasing production-to-

consumption deficit in the zinc metal market resulted from several significant mine closures and production cutbacks. The International Lead and Zinc Study Group indicated that global zinc metal consumption exceeded production by 268,000 t in 2016 and forecasted that the market would remain in deficit in 2017 (International Lead and Zinc Study Group, 2016, 2017; Onstad, 2016).

**Update**

On February 12, unionized workers at Noranda Income Fund (Canada) initiated a strike at the company’s zinc refinery in Salaberry-de-Valleyfield, Quebec. As of March 1, the facility was operating at a partial production level, although the reduced rate was not disclosed. As a result of the strike, spot zinc premiums were expected to increase in the United States (Dent, 2017b, c; Jennemann, 2017).

On March 2, total cancelled zinc warrants at LME-approved warehouses in New Orleans reached 170,975 t. The destination of the containers of zinc leaving the warehouses was under speculation (Dent, 2017a).

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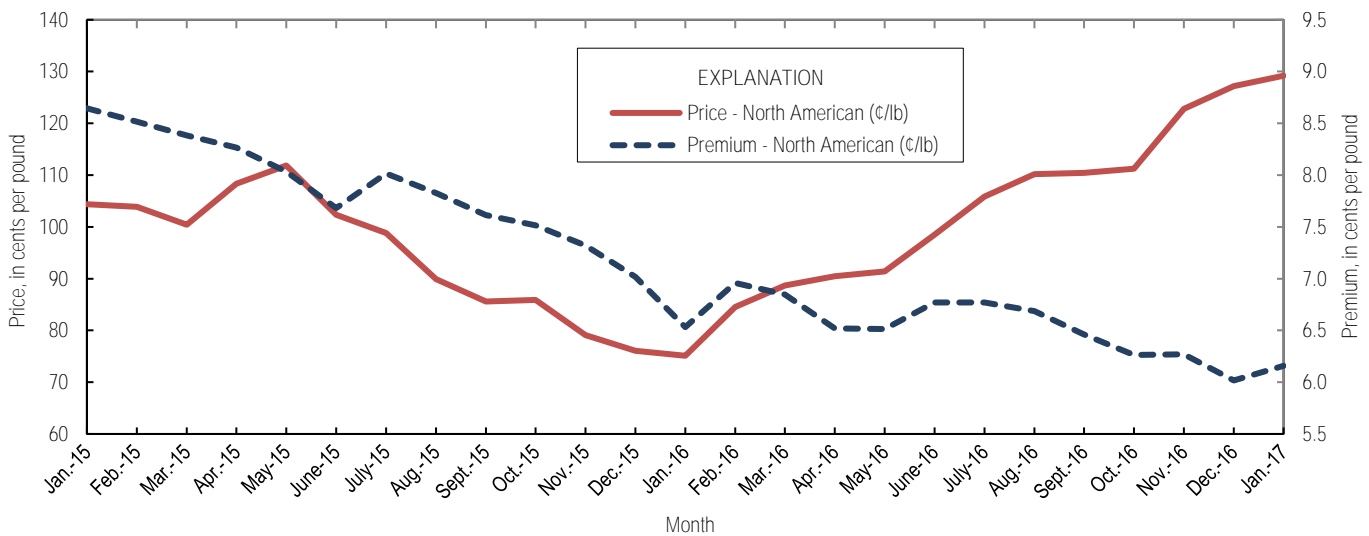


Figure 3. Average monthly North American price and premium for Special High Grade zinc from January 2015 through January 2017. Source: Platts Metals Week.

TABLE 1  
SALIENT ZINC STATISTICS<sup>1</sup>

(Metric tons, unless otherwise specified)

	2016		2017 January
	January– December <sup>p</sup>	December	
<b>Production:</b>			
Mine, zinc content of concentrate <sup>2</sup>	798,000	54,400	58,200
Mine, recoverable zinc <sup>2</sup>	772,000	52,600	56,300
Smelter, refined zinc <sup>e</sup>	126,000	11,300	10,600
Consumption of refined zinc, apparent <sup>3</sup>	789,000 <sup>r</sup>	64,800	106,000
<b>Imports for consumption:</b>			
Ore and concentrate (zinc content)	60	--	--
Refined zinc	713,000	53,800	97,000
<b>Exports:</b>			
Ore and concentrate (zinc content)	604,000	6,840	24,200
Refined zinc	49,800	172	2,050
<b>Price:<sup>4</sup></b>			
London Metal Exchange cash, average, dollars per metric ton	2,090.34	2,671.34	2,712.68
Platts Metals Week North American, average, cents per pound	101.37	127.19	129.20

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

<sup>2</sup>Reported zinc content in both zinc and lead concentrates.

<sup>3</sup>Smelter production plus imports for consumption minus domestic exports.

<sup>4</sup>Special High Grade Zinc.

TABLE 2  
MINE AND SMELTER PRODUCTION OF ZINC  
IN THE UNITED STATES<sup>1</sup>

(Metric tons)

Period	Mine <sup>2</sup>		Smelter <sup>e</sup>
	Zinc content	Recoverable	
<b>2016:</b>			
January	74,100	71,700	10,600
February	67,300	65,200	10,600
March	69,300	67,000	10,600
April	68,800	66,600	10,600
May	69,100	66,900	10,600
June	71,000	68,600	10,600
July	60,100	58,100	9,580
August	68,500	66,200	9,580
September	68,300	66,000	9,580
October	71,000	68,600	11,300
November	56,000	54,200	11,300
December	54,400	52,600	11,300
January–December	798,000	772,000	126,000
2017, January	58,200	56,300	10,600

<sup>e</sup>Estimated.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes the zinc content in both lead and zinc concentrates.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF ZINC<sup>1</sup>

(Gross weight, unless otherwise specified)

Material	2016		2017 January	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	60	\$15	--	--
Unwrought:				
Refined zinc	713,000	1,490,000	97,000	\$258,000
Zinc alloys	7,590	15,700	930	2,510
Wrought:				
Bars, rods, profiles, wire	2,710	8,330	211	721
Plates, sheets, strip, foil	3,650	12,000	308	1,150
Ash and residues:				
Hard zinc spelter	247	392	--	--
Zinc dross and skimmings	3,770	5,620	651	1,250
Other (zinc content)	1,200	886	1,040	551
Other:				
Powders, flakes, dust	27,800	85,400	2,140	7,370
Waste and scrap	11,300	12,800	655	1,470
Chemicals:				
Lithopone	2,660	6,310	451	149
Zinc oxide	123,000	239,000	8,960	22,100
Zinc chloride	137	1,290	6	56
Zinc sulfate	80,100	60,500	6,500	5,580
Zinc sulfide	572	1,570	101	244

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Material and country	General imports		Imports for consumption	
	2016	2017 January	2016	2017 January
<b>Ore and concentrate (zinc content):</b>				
Japan	10	--	10	--
Korea, Republic of	50	--	50	--
Total	60	--	60	--
<b>Refined zinc:</b>				
Australia	26,000	26,000	29,200	36,200
Belgium	--	--	2,190	1,620
Canada	506,000	44,600	506,000	44,600
China	5	--	405	--
France	(2)	--	(2)	--
Germany	4	--	4	--
India	3,020	--	3,020	--
Japan	--	--	397	--
Korea, Republic of	6	--	9,310	--
Latvia	(2)	--	(2)	--
Mexico	88,800	9,060	88,800	9,060
Namibia	--	--	123	--
Netherlands	--	--	346	--
Peru	66,600	2,580	66,600	2,580
Poland	294	--	294	--
Spain	--	--	6,190	2,940
Sweden	(2)	--	(2)	--
Taiwan	31	6	31	6
Total	691,000	82,200	713,000	97,000
<b>Oxide:</b>				
Australia	97	15	97	15
Belgium	12	2	12	2
Canada	69,100	5,730	69,100	5,730
China	428	43	427	43
France	31	(2)	31	(2)
Germany	2,490	219	2,490	219
Hong Kong	--	9	--	9
India	101	--	101	--
Indonesia	27	--	27	--
Israel	34	--	34	--
Japan	352	57	352	57
Korea, Republic of	14	--	14	--
Mexico	35,100	2,210	35,100	2,210
Netherlands	5,390	573	5,390	573
Norway	4	--	4	--
Peru	9,180	36	9,180	36
Russia	11	--	11	--
Switzerland	8	--	8	--
Taiwan	10	--	10	--
Thailand	14	--	14	--
United Kingdom	273	67	273	67
Other (3 countries)	(2) <sup>r</sup>	(2)	(2) <sup>r</sup>	(2)
Total	123,000	8,960	123,000	8,960

<sup>1</sup>Revised. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5  
U.S. EXPORTS OF ZINC<sup>1</sup>

(Gross weight, unless otherwise specified)

Material	2016		2017 January	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	604,000	\$927,000	24,200	\$27,000
Unwrought:				
Refined zinc	49,800	96,500	2,050	5,490
Zinc alloys	16,200	40,900	1,350	3,950
Wrought:				
Bars, rods, profiles, wire	8,100	20,200	600	1,450
Plates, sheets, strip, foil	6,960	23,900	666	2,360
Ash and residues:				
Hard zinc spelter	12,100	18,200	671	1,240
Other (zinc content)	22,800	29,900	1,640	3,050
Other:				
Powders, flakes, dust	12,700	39,600	1,120	3,260
Waste and scrap	30,100	37,800	1,890	2,180
Chemicals:				
Lithopone	1,260	7,160	75	441
Zinc oxide	55,200	56,300	5,420	7,220
Zinc chloride	853	1,130	23	45
Zinc sulfate	588	850	114	172
Zinc sulfide	1,040	14,600	52	1,160

<sup>1</sup>Data are rounded to no more than three significant digits.

Source: U.S. Census Bureau.

TABLE 6  
AVERAGE PRICES FOR SPECIAL HIGH GRADE ZINC

Period	North American <sup>1</sup>	London Metal Exchange cash <sup>2</sup>	
	¢/lb.	¢/lb.	\$/t
2016:			
January	75.11	68.58	1,511.88
February	84.54	77.59	1,710.46
March	88.69	81.84	1,804.32
April	90.48	83.97	1,851.12
May	91.38	84.86	1,870.86
June	98.51	91.74	2,022.59
July	105.85	99.08	2,184.43
August	110.22	103.53	2,282.40
September	110.44	103.98	2,292.44
October	111.22	104.95	2,313.83
November	122.77	116.50	2,568.41
December	127.19	121.17	2,671.34
January–December	101.37	94.82	2,090.34
2017, January	129.20	123.05	2,712.68

<sup>1</sup>Platts Metals Week North American price. Based on the London Metal Exchange cash price plus premium.

<sup>2</sup>Average of the cash buyer price and the cash seller and settlement price.

Source: Platts Metals Week.

TABLE 7  
LONDON METAL EXCHANGE (LME) STOCKS OF SPECIAL HIGH GRADE ZINC, END OF PERIOD

(Metric tons)

Period	United States			Europe	Other	Total LME
	Detroit, MI	New Orleans, LA	Total			
2016:						
January	25	384,250	384,275	60,850	26,925	472,050
February	25	357,075	357,100	60,725	57,275	475,100
March	25	334,825	334,850	60,700	39,475	435,025
April	--	321,000	321,000	60,700	20,100	401,800
May	--	305,775	305,775	60,700	13,975	380,450
June	--	377,450	377,450	51,700	13,550	442,700
July	--	368,150	368,150	49,850	13,200	431,200
August	--	390,000	390,000	48,250	12,850	451,100
September	--	380,025	380,025	46,050	12,600	438,675
October	--	395,225	395,225	43,550	11,950	450,725
November	--	390,475	390,475	39,875	11,650	442,000
December	--	380,125	380,125	36,750	10,975	427,850
2017, January	--	350,325	350,325	34,775	10,975	396,075

-- Zero.

Source: London Metal Exchange, Ltd.