

# Mineral Industry Surveys

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## ZINC IN MARCH 2017

Domestic mine production (recoverable) of zinc in March 2017 was 60,500 metric tons (t) (table 2). Average daily mine production in March was 1,950 t, 8% more than that in February and 10% less than that in March 2016 (fig. 1).

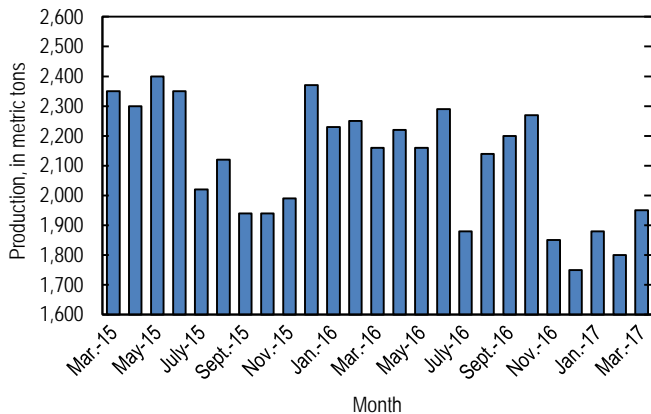


Figure 1. Average daily domestic zinc mine production (recoverable) from March 2015 through March 2017. Source: U.S. Geological Survey.

Global London Metal Exchange Ltd. (LME) stocks of Special High Grade (SHG) zinc decreased by 13,150 t to 370,950 t in March, 3% less than stocks at the end of February 2017 and 15% less than stocks at the end of March 2016 (fig. 2, table 7).

The monthly average Platts Metals Week North American SHG zinc price in March 2017 was \$1.34 per pound, a slight decrease from that in February 2017 and 51% more than that in March 2016. The March 2017 average LME cash price for SHG zinc was \$2,781.33 per metric ton, a slight decrease from that in the previous month and 54% more than that in March 2016.

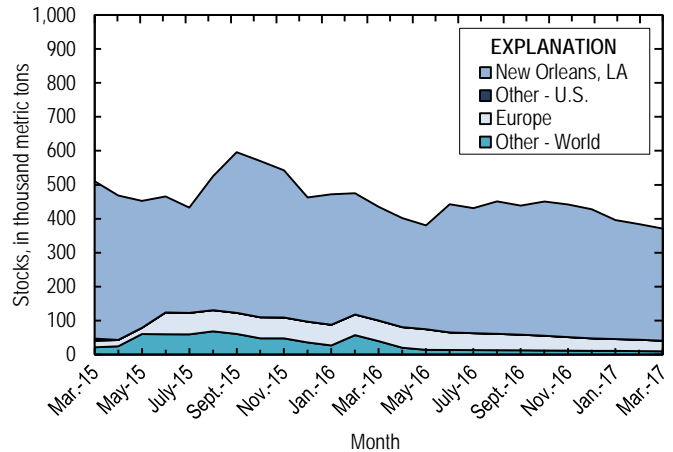


Figure 2. Global LME stocks of Special High Grade zinc, monthend, from March 2015 through March 2017. Source: London Metal Exchange Ltd.

The North American premium to the LME cash price in March averaged about 7.9 cents per pound, a 23% increase from that in February and 15% more than that in March 2016 (fig. 3, table 6). Zinc supply in the United States remained severely constrained in the first quarter primarily owing to the ongoing strike at Noranda Income Fund’s (Canada) zinc processing facility and severe flooding in Peru, with decreased on-warrant zinc ingots in LME-approved warehouses in New Orleans, LA (Dent, 2017a, c; Hotter, 2017; Hunter, 2017).

Among the LME-traded base metals, zinc has experienced the greatest increase in price coincident with an increasing production-to-consumption deficit in the zinc metal market that 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, p. 52; Onstad, 2016).

## Update

In April, Teck Resources Ltd. (Canada) reduced its zinc production forecast for 2017 to between 590,000 to 615,000 t from its previous forecast of 660,000 to 680,000 t owing mostly to anticipated lower production at its Red Dog Mine in northern Alaska. In the first quarter of 2017, Red Dog’s zinc in concentrate production was 120,500 t, 23% less than that of the same period of the prior year as a result of decreased mill throughput, lower ore grades, and reduced mill recovery (Dent, 2017b).

In May, zinc recycler Horsehead Corp. (Pittsburgh, PA) changed its name to American Zinc Recycling Corp. The company exited Chapter 11 bankruptcy protection as a private company last September, and its zinc recycling facility in Mooresboro, NC, has been idled since early 2016 (Maltais, 2017).

In May, Glencore plc (Switzerland) announced that the company has no current plans to restart its idled zinc mine production capacity in Australia (Lady Loretta Mine) and Peru (Iscaycruz Mine). The company’s zinc production guidance for 2017 remains unchanged at 1.19 million tons (Teo, 2017).

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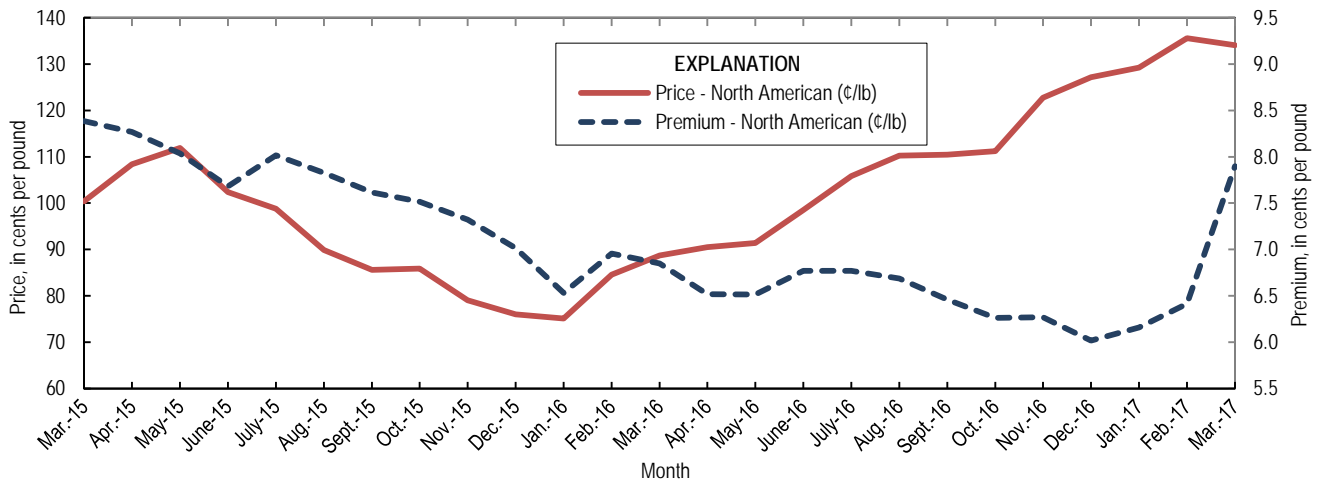


Figure 3. Average monthly North American price and premium for Special High Grade zinc from March 2015 through March 2017. Source: Platts Metals Week.

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

(Metric tons, unless otherwise specified)

	2016	2017		
	January– December <sup>p</sup>	February	March	January– March <sup>2</sup>
<b>Production:</b>				
Mine, zinc content of concentrate <sup>3</sup>	803,000	52,200	62,600	175,000
Mine, recoverable zinc <sup>3</sup>	777,000	50,500	60,500	169,000
Smelter, refined zinc <sup>e</sup>	126,000	10,900 <sup>r</sup>	10,900	32,800
Consumption of refined zinc, apparent <sup>4</sup>	789,000	57,800 <sup>r</sup>	96,100	259,000
<b>Imports for consumption:</b>				
Ore and concentrate (zinc content)	60	23	7	30
Refined zinc	713,000	52,200	89,300	238,000
<b>Exports:</b>				
Ore and concentrate (zinc content)	604,000	12,400	18,900	55,400
Refined zinc	49,800	5,360	4,100	11,500
<b>Price:<sup>5</sup></b>				
London Metal Exchange cash, average, dollars per metric ton	2,090.34	2,848.04	2,781.33	2,780.68
Platts Metals Week North American, average, cents per pound	101.37	135.60	134.06	132.95

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

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

<sup>2</sup>May include revisions to previously published data.

<sup>3</sup>Reported zinc content in both zinc and lead concentrates.

<sup>4</sup>Smelter production plus imports for consumption minus domestic exports.

<sup>5</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>		
	Zinc content	Recoverable	Smelter <sup>e</sup>
<b>2016:</b>			
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	60,200	58,200	9,580
August	68,500	66,300	9,580
September	68,300	66,100	9,580
October	72,700	70,300	11,300
November	57,400	55,500	11,300
December	56,100	54,300	11,300
January–December	803,000	777,000	126,000
<b>2017:</b>			
January	60,100	58,200	10,900 <sup>r</sup>
February	52,200	50,500	10,900 <sup>r</sup>
March	62,600	60,500	10,900
January–March	175,000	169,000	32,800

<sup>e</sup>Estimated. <sup>r</sup>Revised.

<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			
	Quantity (metric tons)	Value (thousands)	March		January–March <sup>2</sup>	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	60	\$15	7	\$7,900	30	\$7,910
Unwrought:						
Refined zinc	713,000	1,490,000	89,300	239,000	238,000	646,000
Zinc alloys	7,590	15,700	542	1,570	2,180	6,180
Wrought:						
Bars, rods, profiles, wire	2,710	8,330	267	1,040	729	2,700
Plates, sheets, strip, foil	3,650	12,000	166	670	697	2,600
Ash and residues:						
Hard zinc spelter	247	392	57	123	57	126
Zinc dross and skimmings	3,770	5,620	615	1,220	1,900	3,570
Other (zinc content)	1,200	886	--	--	1,060	586
Other:						
Powders, flakes, dust	27,800	85,400	2,120	7,550	6,470	22,600
Waste and scrap	11,300	12,800	590	1,520	1,730	4,160
Chemicals:						
Lithopone	2,660	6,310	103	250	953	610
Zinc oxide	123,000	239,000	9,610	24,500	28,400	70,600
Zinc chloride	137	1,290	10	91	31	246
Zinc sulfate	80,100	60,500	9,540	8,320	21,300	18,700
Zinc sulfide	572	1,570	264	716	475	1,220

-- Zero.

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

<sup>2</sup>May include revisions to previously published data.

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		2016	2017	
		March	January–March <sup>2</sup>		March	January–March <sup>2</sup>
<b>Ore and concentrate (zinc content):</b>						
Canada	--	--	23	--	--	23
Japan	10	--	--	10	--	--
Korea, Republic of	50	--	--	50	--	--
Peru	--	7	7	--	7	7
Total	60	7	30	60	7	30
<b>Refined zinc:</b>						
Australia	26,000	--	26,000	29,200	44,700	81,000
Belgium	--	--	--	2,190	--	1,770
Canada	506,000	34,000	115,000	506,000	34,000	115,000
China	5	--	1	405	50	481
India	3,020	799	2,500	3,020	799	2,500
Japan	--	--	--	397	--	--
Korea, Republic of	6	--	--	9,310	500	1,170
Mexico	88,800	2,910	17,700	88,800	2,910	17,700
Namibia	--	--	--	123	--	--
Netherlands	--	--	--	346	50	340
Peru	66,600	5,630	14,500	66,600	5,630	14,500
Poland	294	--	--	294	--	--
Spain	--	--	--	6,190	617	3,550
Taiwan	31	--	6	31	--	6
Other (4 countries)	4 <sup>r</sup>	(3)	(3)	4 <sup>r</sup>	(3)	(3)
Total	691,000	43,400	176,000	713,000	89,300	238,000
<b>Oxide:</b>						
Australia	97	--	16	97	--	16
Belgium	12	--	2	12	--	2
Canada	69,100	5,510	16,800	69,100	5,510	16,800
China	428	1	44	427	1	44
France	31	--	(3)	31	--	(3)
Germany	2,490	122	607	2,490	122	607
India	101	--	--	101	--	--
Indonesia	27	--	--	27	--	--
Israel	34	--	--	34	--	--
Japan	352	43	114	352	43	114
Korea, Republic of	14	--	--	14	--	--
Mexico	35,100	3,240	8,680	35,100	3,240	8,680
Netherlands	5,390	617	1,830	5,390	617	1,830
Peru	9,180	37	111	9,180	37	111
Russia	11	--	--	11	--	--
Switzerland	8	--	--	8	--	--
Taiwan	10	--	--	10	--	--
Thailand	14	--	--	14	--	--
United Kingdom	273	33	182	273	33	182
Other (4 countries)	4	--	9	4	--	9
Total	123,000	9,610	28,400	123,000	9,610	28,400

<sup>r</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>May include revisions to previously published data.

<sup>3</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			
	Quantity (metric tons)	Value (thousands)	March		January–March <sup>2</sup>	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Ore and concentrate (zinc content)	604,000	\$927,000	18,900	\$17,400	55,400	\$73,400
Unwrought:						
Refined zinc	49,800	96,500	4,100	10,700	11,500	31,400
Zinc alloys	16,200	40,900	1,130	3,280	3,670	10,700
Wrought:						
Bars, rods, profiles, wire	8,100	20,200	723	2,040	1,890	4,940
Plates, sheets, strip, foil	6,960	23,900	645	2,560	1,930	7,260
Ash and residues:						
Hard zinc spelter	12,100	18,200	651	1,350	2,000	3,870
Other (zinc content)	22,800	29,900	1,570	1,940	4,350	6,800
Other:						
Powders, flakes, dust	12,700	39,600	1,070	3,450	3,130	9,930
Waste and scrap	30,100	37,800	1,850	2,340	6,270	7,720
Chemicals:						
Lithopone	1,260	7,160	90	540	252	1,490
Zinc oxide	55,200	56,300	5,080	7,480	13,800	19,100
Zinc chloride	853	1,130	9	28	40	92
Zinc sulfate	588	850	20	21	191	273
Zinc sulfide	1,040	14,600	34	1,720	152	3,830

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

<sup>2</sup>May include revisions to previously published data.

Source: U.S. Census Bureau.

TABLE 6  
AVERAGE PRICES FOR SPECIAL HIGH GRADE ZINC

Period	North American <sup>1</sup> ¢/lb.	London Metal Exchange cash <sup>2</sup>	
		¢/lb.	\$/t
2016:			
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
February	135.60	129.18	2,848.04
March	134.06	126.16	2,781.33
January–March	132.95	126.13	2,780.68

<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:						
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
February	--	340,400	340,400	33,500	10,200	384,100
March	--	330,100	330,100	31,200	9,650	370,950

-- Zero.

Source: London Metal Exchange, Ltd.