

# Mineral Industry Surveys

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#### ZINC IN MARCH 2019

Domestic mine production (recoverable) of zinc in March 2019 was 50,800 metric tons (t) (tables 1, 2). Average daily mine production in March was 1,640 t, 6% more than that in the previous month but 4% less than that in March 2018 (fig. 1). Teck Resources Ltd. (Canada) reported lower zinc- and lead-inconcentrate production at the Red Dog Mine in Alaska in the first quarter of 2019 compared with that in the first quarter of 2018. Severe weather conditions at the mine in January and February resulted in a 20-day shutdown of the mill (Teck Resources Ltd., 2019, p. 17).

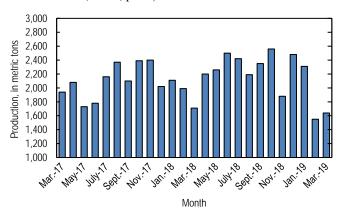


Figure 1. Average daily domestic zinc mine production (recoverable) from March 2017 through March 2019.

#### **Stocks and Prices**

Global London Metal Exchange Ltd. (LME) stocks of Special High Grade (SHG) zinc were 51.275 t at the end of March 2019. 21% less than stocks at the end of February and 76% less than stocks at the end of March 2018 (fig. 2, table 7).

The monthly average Platts Metals Week North American SHG zinc price in March 2019 was \$1.38 per pound, 5% higher than that in the previous month but 12% lower than that in March 2018. The March 2019 average LME cash price for SHG zinc was \$2,850.91 per metric ton, 5% higher than that in February 2019 but 13% lower than that in March 2018 (fig. 3, table 6).

The North American premium to the LME cash price in March 2019 averaged 8.52 cents per pound, essentially unchanged from that in February and slightly more than that in March 2018 (fig. 3, table 6).

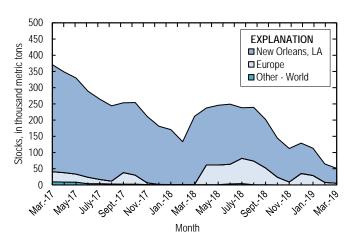


Figure 2. Global LME stocks of Special High Grade zinc, monthend, from March 2017 through March 2019. Source: London Metal Exchange Ltd.

#### Reference Cited

Teck Resources Ltd., 2019. Teck reports unaudited first quarter results for 2019: Vancouver, British Columbia, Canada, Teck Resources Ltd. news release, April 22, 77 p. (Accessed May 24, 2019, at https://www.teck.com/ media/Q1-2019-NR.pdf.)

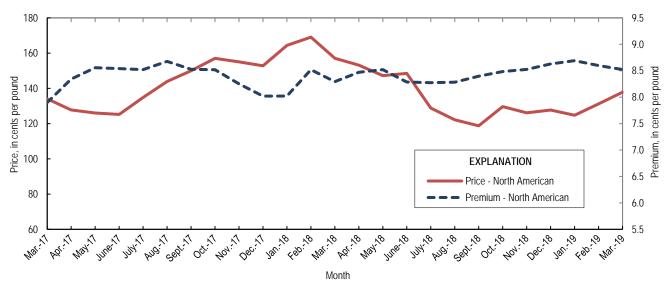


Figure 3. Average monthly North American price and premium for Special High Grade zinc from March 2017 through March 2019. Source: Platts Metals Week.

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https://www.usgs.gov/centers/nmic/minerals-information-publication-list-services.

# $\label{eq:table 1} \text{SALIENT ZINC STATISTICS}^1$

(Metric tons, unless otherwise specified)

	2018		2019	
	January-			January-
	December <sup>p</sup>	February	March	March <sup>2</sup>
Production:				
Mine, zinc content of concentrate <sup>3</sup>	838,000	44,900	52,700	172,000
Mine, recoverable zinc <sup>3</sup>	812,000	43,300	50,800	166,000
Smelter, refined zinc <sup>e</sup>	116,000	8,600 r	8,600	25,800
Consumption of refined zinc, apparent <sup>4</sup>	867,000	67,900 <sup>r</sup>	77,500	227,000
Imports for consumption:				
Ore and concentrate (zinc content)	32			
Refined zinc	775,000	60,200	69,200	204,000
Exports:				·
Ore and concentrate (zinc content)	790,000	37,000	37,300	87,400
Refined zinc	23,200	925	319	2,610
Price: <sup>5</sup>				_
London Metal Exchange cash, average,				
dollars per metric ton	2,924.55	2,702.34	2,850.91	2,703.91
Platts Metals Week North American, average,				
cents per pound	141.05	131.17	137.84	131.25

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

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

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

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

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

<sup>&</sup>lt;sup>5</sup>Special High Grade Zinc.

### TABLE 2 MINE AND SMELTER PRODUCTION OF ZINC IN THE UNITED STATES $^{\!1}$

# (Metric tons)

	Mir	Mine <sup>2</sup>			
Period	Zinc content	Recoverable	Smelter <sup>e</sup>		
2018:					
March	54,900	53,000	10,900		
April	67,700	65,900	11,300		
May	72,500	70,100	11,300		
June	77,500	74,900	11,300		
July	77,700	75,100	9,920		
August	70,300	68,000	9,920		
September	71,700	70,500	9,920		
October	82,300	79,500	11,900		
November	58,400	56,500	11,900		
December	79,600	77,000	11,900		
January-December	838,000	812,000	116,000		
2019:					
January	74,000	71,600	8,600 r		
February	44,900	43,300	8,600 r		
March	52,700	50,800	8,600		
January-March	172,000	166,000	25,800		

<sup>&</sup>lt;sup>e</sup>Estimated. <sup>r</sup>Revised.

<sup>&</sup>lt;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  $\mathsf{ZINC}^1$ 

(Gross weight, unless otherwise specified)

		2019				
2018		March		January–March <sup>2</sup>		
Quantity	Value	Quantity	Value	Quantity	Value	
(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	
32	\$23					
775,000	2,350,000	69,200	\$194,000	204,000	\$552,000	
4,400	14,300	359	1,000	943	2,620	
3,470	13,900	270	992	767	2,730	
5,410	16,400	318	1,250	731	2,810	
	31					
4,280	8,160	410	654	854	1,380	
1,230	794	66	60	389	248	
26,600	106,000	2,570	9,170	6,290	23,000	
12,900	22,100	634	1,340	2,080	3,980	
272	835	42	190	249	975	
115,000	334,000	8,860	24,000	26,200	72,300	
208	1,840	4	41	21	187	
98,700	106,000	5,020	4,630	18,400	18,500	
2,710	10,400	77	274	227	875	
	Quantity (metric tons)  32  775,000 4,400  3,470 5,410  19 4,280 1,230  26,600 12,900  272 115,000 208 98,700	Quantity (metric tons)         Value (thousands)           32         \$23           775,000         2,350,000           4,400         14,300           3,470         13,900           5,410         16,400           19         31           4,280         8,160           1,230         794           26,600         106,000           12,900         22,100           272         835           115,000         334,000           208         1,840           98,700         106,000	Quantity (metric tons)         Value (thousands)         Quantity (metric tons)           32         \$23            775,000         2,350,000         69,200           4,400         14,300         359           3,470         13,900         270           5,410         16,400         318           19         31            4,280         8,160         410           1,230         794         66           26,600         106,000         2,570           12,900         22,100         634           272         835         42           115,000         334,000         8,860           208         1,840         4           98,700         106,000         5,020	Quantity Quantity (metric tons)         March Quantity (thousands)           32         \$23             775,000         2,350,000         69,200         \$194,000           4,400         14,300         359         1,000           3,470         13,900         270         992           5,410         16,400         318         1,250           19         31             4,280         8,160         410         654           1,230         794         66         60           26,600         106,000         2,570         9,170           12,900         22,100         634         1,340           272         835         42         190           115,000         334,000         8,860         24,000           208         1,840         4         41           98,700         106,000         5,020         4,630	Quantity         Value (metric tons)         Quantity (thousands)         Value (metric tons)         January-Quantity (metric tons)           32         \$23              775,000         2,350,000         69,200         \$194,000         204,000           4,400         14,300         359         1,000         943           3,470         13,900         270         992         767           5,410         16,400         318         1,250         731           -         19         31              4,280         8,160         410         654         854           1,230         794         66         60         389           26,600         106,000         2,570         9,170         6,290           12,900         22,100         634         1,340         2,080           272         835         42         190         249           115,000         334,000         8,860         24,000         26,200           208         1,840         4         41         21           98,700         106,000         5,020         4,630         18,400	

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits.
<sup>2</sup>May include revisions to previously published data.

 $\label{eq:table 4} \textbf{U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY OR LOCALITY}^1$ 

(Metric tons, gross weight, unless otherwise specified)

2018 (3) 32 32 	March	January–March <sup>2</sup>	2018 (3) 32 32	March	January–March <sup>2</sup>
(3) 32 32	  	 	(3) 32		January–March -
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32 32			32		
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					29,400
	10,800	29,400			29,400
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					11,900
	,	,		4,560	11,900
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					(3
					204,000
701,000	03,900	173,000	773,000	09,200	204,000
127	20	80	127	20	80
					10
					10
					12,200
	,	,		,	53
					388
	73			73	4(
					-
					34
					242
					13
				-	9,880
		,	,		2,470
					481
					48.
					314
					312
					26,200
	601 524,000 22 2,840 101,000 46,300 641 5,480 20,000 36 3 701,000  127 6 127 51,200 422 1,150 120 58 119 19 776 76 49,800 8,400 2,540 46 99 75 115,000	524,000     50,200       22     (3)       2,840            101,000     10,800           46,300     4,380       641        5,480        20,000        36        3     (3)       701,000     65,900       127     29       6        127        51,200     4,070       422     13       1,150     75       120        58        119     4       19     5       776     86       76     9       49,800     3,120       8,400     1,080       2,540     248       46        99     132       75	524,000       50,200       130,000         22       (3)       9         2,840                101,000       10,800       29,400                   46,300       4,380       11,900         641           20,000           36           3       (3)       (3)         701,000       65,900       173,000         127       29       80         6        10         127        5         51,200       4,070       12,200         422       13       53         1,150       75       388         120        40         58           119       4       34         19       5       5         776       86       242         76       9       13         49,800       3,120       9,880         8,400       1,080 <td>524,000         50,200         130,000         524,000           22         (3)         9         5,380           2,840           2,840             (6,810)           101,000         10,800         29,400         101,000              122              6,040           46,300         4,380         11,900         46,300           641           641           5,480              20,000           76,100           36          5         36           3         (3)         (3)         3           701,000         65,900         173,000         775,000           127         29         80         127           6          10         6           127          5         127           51,200         4,070         12,200         51,200           422         13         53         422           1,150         75</td> <td>524,000         50,200         130,000         524,000         50,200           22         (3)         9         5,380         700           2,840           2,840               6,810            101,000         10,800         29,400         101,000         10,800              6,040               6,040            46,300         4,380         11,900         46,300         4,380           641           641            20,000           76,100         2,660           36          -         -         76,100         2,660           36          -         -         76,100         2,660           36          -         -         76,100         2,660           36          -         -         76,100         2,660           36          -         -         775,000         69,200           127</td>	524,000         50,200         130,000         524,000           22         (3)         9         5,380           2,840           2,840             (6,810)           101,000         10,800         29,400         101,000              122              6,040           46,300         4,380         11,900         46,300           641           641           5,480              20,000           76,100           36          5         36           3         (3)         (3)         3           701,000         65,900         173,000         775,000           127         29         80         127           6          10         6           127          5         127           51,200         4,070         12,200         51,200           422         13         53         422           1,150         75	524,000         50,200         130,000         524,000         50,200           22         (3)         9         5,380         700           2,840           2,840               6,810            101,000         10,800         29,400         101,000         10,800              6,040               6,040            46,300         4,380         11,900         46,300         4,380           641           641            20,000           76,100         2,660           36          -         -         76,100         2,660           36          -         -         76,100         2,660           36          -         -         76,100         2,660           36          -         -         76,100         2,660           36          -         -         775,000         69,200           127

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

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

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

<sup>&</sup>lt;sup>3</sup>Less than ½ unit.

TABLE 5 U.S. EXPORTS OF  $ZINC^1$ 

(Gross weight, unless otherwise specified)

			2019				
	2018		Mai	rch	January–March <sup>2</sup>		
	Quantity	Value	Quantity	Value	Quantity	Value	
Material	(metric tons)	(thousands)	(metric tons)	(thousands)	(metric tons)	(thousands)	
Ore and concentrate (zinc content)	790,000	\$1,500,000	37,300	\$66,200	87,400	\$141,000	
Unwrought:							
Refined zinc	23,200	57,800	319	861	2,610	6,810	
Zinc alloys	21,100	65,200	1,720	5,230	5,660	16,700	
Wrought:							
Bars, rods, profiles, wire	10,600	30,600	816	2,310	2,450	6,970	
Plates, sheets, strip, foil	7,170	29,900	383	1,810	1,450	5,650	
Ash and residues:							
Hard zinc spelter	8,300	16,200	927	1,760	2,090	3,970	
Other (zinc content)	23,900	43,000	2,260	3,360	5,830	8,960	
Other:							
Powders, flakes, dust	13,500	56,600	1,880	6,430	4,940	17,600	
Waste and scrap	39,900	49,100	2,710	4,370	8,610	12,200	
Chemicals:	<u></u>						
Lithopone	179	1,280	10	69	19	137	
Zinc oxide	60,200	91,800	921	2,180	2,910	7,090	
Zinc chloride	281	438	17	34	48	89	
Zinc sulfate	998	874	30	63	170	245	
Zinc sulfide	1,730	15,900	333	1,300	604	3,930	

<sup>&</sup>lt;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

	North	London Metal Exchange		
	American <sup>1</sup>	casl	1-	
Period	¢/lb.	¢/lb.	\$/t	
2018:				
March	157.07	148.78	3,280.02	
April	153.19	144.72	3,190.48	
May	147.20	138.68	3,057.41	
June	148.50	140.22	3,091.21	
July	128.85	120.57	2,658.18	
August	122.14	113.85	2,510.05	
September	118.74	110.35	2,432.71	
October	129.65	121.17	2,671.26	
November	126.11	117.58	2,592.28	
December	127.69	119.06	2,624.87	
January-December	141.05	132.66	2,924.55	
2019:				
January	124.74	116.05	2,558.49	
February	131.17	122.58	2,702.34	
March	137.84	129.32	2,850.91	
January-March	131.25	122.65	2,703.91	

<sup>&</sup>lt;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.

 ${\it TABLE~7} \\ {\it LONDON~METAL~EXCHANGE~(LME)~STOCKS~OF~SPECIAL~HIGH~GRADE~ZINC,~END~OF~PERIOD}$ 

# (Metric tons)

		United States				
Period	Chicago, IL	New Orleans, LA	Total	Europe	Other	Total LME
2018:						
March		210,000	210,000	600	875	212,000
April		176,000	176,000	60,700	1,030	237,000
May		184,000	184,000	60,700	875	246,000
June		185,000	185,000	60,700	3,180	249,000
July		156,000	156,000	78,200	4,080	238,000
August		165,000	165,000	73,100	675	239,000
September		149,000	149,000	51,900	675	202,000
October		120,000	120,000	23,500	250	144,000
November		104,000	104,000	8,980	25	113,000
December	350	93,600	94,000	35,000	25	129,000
2019:						
January	25	84,000	84,000	29,200	25	113,000
February		56,600	56,600	7,900	25	64,600
March		45,900	45,900	5,350	25	51,300
Zero						·

Source: London Metal Exchange, Ltd.