

Mineral Industry Surveys

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VANADIUM IN JUNE 2014

Reported domestic consumption of vanadium in June 2014 was slightly more than that of the previous month and was 6% more than that of June 2013. Consumer stocks of vanadium, in all forms, were 166 metric tons (t) at yearend 2013 and 169 t at the end of June.

According to Ryan's Notes, U.S. ferrovanadium (FeV) prices ranged from \$13.050 to \$13.688 per pound of vanadium content in June, compared with \$13.272 to \$13.889 in May. European FeV prices ranged from \$26.163 to \$26.575 per kilogram in June, compared with \$27.000 to \$27.500 in May. Vanadium pentoxide (V₂O₅) prices ranged from \$5.500 to \$6.000 per pound in both May and June.

EVRAZ Highveld Steel and Vanadium Ltd. (Moscow, Russia) announced that it produced 10,959 t of vanadium slag containing 1,436 t of vanadium in the first quarter of 2014, compared with 12,057 t of vanadium slag containing 1,627 t of

vanadium in the same quarter of 2013 (EVRAZ Highveld Steel and Vanadium Ltd., 2014, p. 3).

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Reference Cited

EVRAZ Highveld Steel and Vanadium Ltd., 2014, Group unaudited results for the quarter ended 31 March 2014: Moscow, Russia, EVRAZ Highveld Steel and Vanadium, Ltd., May 28, 13 p. (Accessed September 17, 2014, via <http://www.evrazhighveld.co.za/>.)

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM¹

(Kilograms, contained vanadium)

	2013		2014					
	January–December		May		June		January–June	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	2,810,000	93,400	235,000	102,000	243,000	98,100	1,400,000	98,100
Vanadium-aluminum alloy and other forms ³	812,000	72,600	69,900	70,300	66,500	70,900	405,000	70,900
Total	3,620,000	166,000	305,000	172,000	310,000	169,000	1,800,000	169,000

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

²Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

³Includes vanadium-aluminum alloy, other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, and other specialty chemicals.

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE¹

(Kilograms, contained vanadium)

	2013		2014	
	January–December	May	June	January–June
Steel:				
Carbon	518,000	40,300 ^r	45,100	253,000
Full alloy	1,430,000	121,000	121,000	731,000
High-strength low-alloy	W	W	W	W
Stainless and heat resisting	59,200	4,930	4,940	29,600
Tool	W	W	W	W
Total steel	2,010,000	167,000 ^r	171,000	1,010,000
Superalloys	2,810	117	126	852
Miscellaneous and unspecified ²	W	W	W	W
Total	3,620,000	305,000 ^r	310,000	1,800,000

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total."

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

²Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3
U.S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOYS AND VANADIUM
METAL, INCLUDING WASTE AND SCRAP¹

(Kilograms, gross weight)

	Aluminum-vanadium master alloy ²		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2013	169,000	\$4,660,000	35,300	\$1,310,000
2014:				
May	63,300	1,400,000	46,300	1,000,000
June:				
Australia	38,100	892,000	--	--
China	17,700	380,000	--	--
Germany	1,050	8,760	453	19,900
Total	56,800	1,280,000	453	19,900
January–June	249,000	5,600,000	89,900	2,120,000
Exports:				
2013	347,000	9,800,000	57,500	1,700,000
2014:				
May	2,280	95,300	--	--
June:				
Malaysia	--	--	42	5,500
Russia	52,300	1,320,000	--	--
Total	52,300	1,320,000	42	5,500
January–June	205,000	5,690,000	6,840	397,000

-- Zero.

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

²Aluminum-vanadium master alloy consisting of 35% aluminum and 64.5% vanadium. Includes Harmonized Tariff Schedule code 8112.99.2000.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND
OTHER OXIDES AND HYDROXIDES OF VANADIUM¹

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) ²		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
2013	3,710,000	\$89,800,000	2,040,000	\$29,900,000	205,000	\$2,560,000
2014:						
May	188,000	5,190,000	180,000	2,830,000	8,370	197,000
June:						
Austria	19,100	866,000	999	21,200	--	--
Canada	64,000	1,920,000	--	--	--	--
China	--	--	200	6,400	--	--
Czech Republic	193,000	4,710,000	--	--	--	--
Germany	400	25,300	19,000	260,000	--	--
Japan	9,090	222,000	--	--	--	--
Korea, Republic of	77,000	2,010,000	--	--	--	--
Russia	--	--	227,000	2,090,000	--	--
South Africa	--	--	60,800	1,200,000	--	--
Taiwan	--	--	10,100	217,000	--	--
Total	363,000	9,750,000	318,000	3,790,000	--	--
January–June	1,920,000	48,300,000	1,590,000	22,000,000	42,900	1,010,000
Exports:						
2013	395,000	8,790,000	89,600	1,340,000	448,000	4,850,000
2014:						
May	41,500	1,010,000	20,200	281,000	47,200	510,000
June:						
Canada	22,500	558,000	--	--	200	7,550
Colombia	190	6,500	--	--	--	--
Italy	--	--	14,400	227,000	--	--
Kuwait	7,920	202,000	--	--	--	--
Mexico	--	--	1,000	18,600	--	--
Netherlands	--	--	--	--	39,900	633,000
United Kingdom	--	--	--	--	420	3,740
Total	30,600	767,000	15,400	245,000	40,500	644,000
January–June	194,000	3,990,000	61,800	1,020,000	185,000	2,460,000

-- Zero.

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

²May include catalysts containing vanadium pentoxide.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG¹

(Kilograms, contained vanadium pentoxide, unless otherwise specified)

	Ash and residues ²		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity (gross weight)	Value
2013	4,190,000	\$22,500,000	66,100,000	\$8,480,000
2014:				
May	549,000	3,620,000	113,000	89,300
June:				
Canada	420,000	1,970,000	9,020,000	350,000
Russia	370,000	3,000,000	--	--
Total	790,000	4,970,000	9,020,000	350,000
January–June	2,970,000	19,100,000	37,500,000	2,200,000

-- Zero.

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

²Includes Harmonized Tariff Schedule code 2620.40.0030 and 2620.99.1000.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS¹

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2013	29,500	\$306,000	276,000	\$5,700,000
2014:				
May	--	--	28,700	716,000
June:				
Austria	--	--	131	5,860
China	--	--	6,620	198,000
Japan	62	2,960	164	18,700
South Africa	--	--	23,800	371,000
Total	62	2,960	30,800	594,000
January–June	13,200	134,000	111,000	2,430,000

-- Zero.

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

Source: U.S. Census Bureau.