Mineral Industry Surveys

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VANADIUM IN JULY 2013

Reported domestic consumption of vanadium in July 2013 was slightly more than that of the previous month and was slightly less than that of July 2012. Consumer stocks of vanadium, in all forms, were 228 metric tons (t) at the beginning of 2013 and 201 t at the end of July.

According to Ryan's Notes, U.S. ferrovanadium (FeV) prices ranged from $13.000 to $13.500 per pound of vanadium content in both June and July. European FeV prices ranged from $25.511 to $25.989 per kilogram in July compared with $27.281 to $27.781 per kilogram in June. Vanadium pentoxide (V_2O_5) prices ranged from $5.667 to $6.067 per pound in July compared with $6.000 to $6.200 in June.

Evraz Group S.A. (Moscow, Russia) reported total production of vanadium in slag increased slightly to 5,473 t of vanadium in the second quarter of 2013, compared with 5,363 t of vanadium in the first quarter of 2013, mainly as a result of improved vanadium extraction yields at EVRAZ Highveld Steel and Vanadium Ltd. following plant maintenance and reduction of unprocessed stock. Total FeV production was unchanged in the second quarter of 2013, compared with 3,188 t in the first quarter of 2013. The decrease was mainly attributed to lower volumes of FeV processed at third parties' facilities, while EVRAZ's own plants operated at full capacity in the first and second quarter of 2013 (EVRAZ Group S.A., 2013, p. 10).

Reference Cited

EVRAZ Group S.A., 2013, EVRAZ Q2 production report: Moscow, Russia, EVRAZ Group S.A., July 16, 17 p.

TABLE 1

U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM[1]

(Kilograms, contained vanadium)

	2012[p]		2013					
			June		July		January–July	
	Consumption	Stocks, end of period	Consumption	Stocks, end of period	Consumption	Stocks, end of period	Consumption	Stocks, end of period
Ferrovanadium[2]	3,140,000	167,000	229,000 r	137,000 r	232,000	131,000	1,660,000	131,000
Vanadium-aluminum alloy and other forms[3]	839,000	61,000	66,900	70,500	65,900	70,500	474,000	70,500
Total	3,980,000	228,000	296,000 r	208,000 r	298,000	201,000	2,140,000	201,000

[p]Preliminary. [r]Revised.

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

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

[3]Includes 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 USE[1]

(Kilograms, contained vanadium)

		2013		
	2012[p]	June	July	January–July
Steel:				
Carbon	759,000	44,000 r	46,000	324,000
Full alloy	1,510,000	145,000 r	115,000	832,000
High-strength low-alloy	W	W	W	W
Stainless and heat resisting	61,500	4,930	4,930	34,500
Tool	165,000	W	W	W
Total steel	2,500,000	194,000 r	166,000	1,190,000
Superalloys	9,050	142	205	1,170
Miscellaneous and unspecified[2]	W	W	W	W
Total	3,980,000	296,000 r	298,000	2,140,000

[p]Preliminary. [r]Revised. W Withheld to avoid disclosing company proprietary data; included in "Total."

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

[2]Includes 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 SCRAP[1]

(Kilograms, gross weight)

	Aluminum-vanadium master alloy[2]		Unwrought aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
2012	--	--	103,000	$681,000	154,000	$4,840,000
2013:						
June	17,900	$501,000	20,200	97,100	1,290	68,200
July:						
Germany	--	--	--	--	14,200	511,000
United Kingdom	1	5,060	--	--	--	--
Total	1	5,060	--	--	14,200	511,000
January–July	70,900	1,930,000	55,200	202,000	19,600	707,000
Exports:						
2012	--	--	924,000	5,140,000	26,000	698,000
2013:						
June	4,600	218,000	323,000	1,050,000	5	5,400
July:						
Australia	467	33,700	--	--	--	--
Canada	--	--	412,000	989,000	--	--
China	--	--	11,900	52,900	--	--
Germany	881	34,000	--	--	--	--
India	--	--	--	--	1,300	50,000
Japan	--	--	7,610	220,000	--	--
Mexico	--	--	14,600	38,200	--	--
Russia	26,300	670,000	--	--	--	--
Total	27,600	738,000	447,000	1,300,000	1,300	50,000
January–July[3]	171,000	4,840,000	770,000	10,900,000	31,600	906,000

-- Zero.

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

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

[3]May include revisions to previously published data.

Source: U.S. Census Bureau; data adjusted by the U.S. Geological Survey.

TABLE 4
U.S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND OTHER OXIDES AND HYDROXIDES OF VANADIUM[1]

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride)[2]		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
2012	4,190,000	$108,000,000	1,640,000	$26,500,000	905,000	$12,800,000
2013:						
June	268,000	6,700,000	143,000	2,470,000	8,350	196,000
July:						
Austria	--	--	7,380	107,000	--	--
Canada	18,300	538,000	--	--	--	--
China	--	--	4,460	124,000	--	--
Czech Republic	338,000	7,240,000	--	--	--	--
Germany	132	16,200	--	--	--	--
Japan	8,710	226,000	--	--	--	--
Korea, Republic of	73,600	1,900,000	--	--	--	--
Russia	--	--	56,600	559,000	--	--
South Africa	--	--	80,700	1,480,000	--	--
Taiwan	--	--	10,100	229,000	--	--
Total	438,000	9,920,000	159,000	2,500,000	--	--
January–July	2,470,000	62,500,000	956,000	15,600,000	174,000	1,910,000
Exports:						
2012	454,000	11,000,000	61,800	1,160,000	287,000	3,540,000
2013:						
June	24,400	616,000	1,910	43,900	8,170	140,000
July:						
Bahrain	--	--	1,240	23,800	--	--
Germany	--	--	--	--	11,200	155,000
Japan	--	--	--	--	2,390	21,200
Korea, Republic of	2,850	116,000	--	--	--	--
Mexico	--	--	--	--	1,660	16,700
Peru	16,400	119,000	--	--	--	--
Spain	--	--	10,500	157,000	--	--
Total	19,300	235,000	11,700	181,000	15,200	193,000
January–July	269,000	6,100,000	61,900	844,000	284,000	2,910,000

-- Zero.

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

[2]May include catalysts containing vanadium pentoxide.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG[1]

(Kilograms, contained vanadium pentoxide, unless otherwise specified)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity	Value	Quantity (gross weight)	Value
2012	2,040,000	$9,880,000	175,000	$141,000	108,000,000	$14,700,000
2013:						
June	354,000	2,060,000	--	--	92,400	630,000
July:						
Canada	316,000	2,090,000	--	--	40,500,000	1,970,000
Mexico	--	--	--	--	44,900	4,490
Saudi Arabia	4,050	32,600	--	--	--	--
Total	320,000	2,120,000	--	--	40,500,000	1,980,000
January–July	1,840,000	11,300,000	5,560	11,500	41,600,000	7,370,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS[1]

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2012	29,100	$370,000	280,000	$6,190,000
2013:				
June	6,080	55,000	6,930	129,000
July:				
Austria	--	--	3,990	126,000
Canada	1	3,360	--	--
China	13	5,750	--	--
Japan	--	--	81	8,300
Total	14	9,110	4,070	134,000
January–July	24,700	244,000	198,000	4,060,000

-- Zero.

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

Source: U.S. Census Bureau.