

Mineral Industry Surveys

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VANADIUM IN JUNE 2013

Reported domestic consumption of vanadium in June 2013 was slightly greater than that of the previous month, and was 7% less than that of June 2012, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were 214 metric tons (t) at the beginning of 2013 and 208 t at the end of June.

According to Ryan's Notes, U.S. ferrovanadium (FeV) prices ranged from \$13.000 to \$13.500 per pound of vanadium content in June, as compared with \$13.344 to \$13.956 in May. European FeV prices ranged from \$27.281 to \$27.781 per kilogram in June, as compared with \$27.522 to \$28.022 in May. Vanadium pentoxide (V₂O₅) prices ranged from \$6.000 to \$6.200 per pound in May and June.

China's exports of V₂O₅ decreased by 37% to 3,108 t in the first half of 2013 compared with 4,966 t in the first half of 2012, according to Chinese customs data. Industry sources attribute the decrease to low buying interest in both the United States and European markets (Metal-Pages, 2013).

Reference Cited

Metal-Pages, 2013, China's vanadium pentoxide exports down 30.4% in June on reduced European demand: Metal-Pages, August 2. (Accessed September 6, 2013, via <http://www.metal-pages.com/>.)

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

(Kilograms, contained vanadium)

	2012 ^p		2013					
	Consumption	Stocks, end of period	May		June		January–June	
			Consumption	Stocks, end of period	Consumption	Stocks, end of period	Consumption	Stocks, end of period
Ferrovandium ²	3,140,000	167,000	235,000	132,000	238,000	134,000	1,440,000	134,000
Vanadium-aluminum alloy and other forms ³	839,000	61,000	68,300	70,400	66,900	70,500	408,000	70,500
Total	3,980,000	228,000	303,000	203,000	305,000	204,000	1,850,000	204,000

^pPreliminary.

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)

	2012 ^p	2013		
		May	June	January– June
Steel:				
Carbon	759,000	38,900	44,900	278,000
Full alloy	1,510,000	125,000	122,000	724,000
High-strength low-alloy	W	W	W	W
Stainless and heat resisting	61,500	4,930	4,930	29,600
Tool	165,000	W	W	W
Total steel	2,500,000	169,000	172,000	1,030,000
Superalloys	9,050	149	142	961
Miscellaneous and unspecified ²	W	W	W	W
Total	3,980,000	303,000	305,000	1,850,000

^pPreliminary. 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		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:						
May	5,470	\$173,000	7,640	10,700	1	2,140
June:						
China	--	--	20,200	97,100	--	--
Germany	22	39,600	--	--	1,290	68,200
Russia	17,900	462,000	--	--	--	--
Total	17,900	501,000	20,200	97,100	1,290	68,200
January–June	70,900	1,920,000	55,200	202,000	5,380	196,000
Exports:						
2012	--	--	924,000	5,140,000	26,000	698,000
2013:						
May	52,600	1,450,000	316,000	1,030,000	--	--
June:						
Australia	1,070	76,400	--	--	--	--
Brazil	--	--	366	4,760	--	--
Canada	--	--	273,000	649,000	--	--
France	--	--	--	--	5	5,400
Germany	3,470	139,000	--	--	--	--
Israel	--	--	1,740	25,000	--	--
Korea, Republic of	66	2,540	19,100	142,000	--	--
Mexico	--	--	16,500	43,500	--	--
United Kingdom	--	--	12,200	183,000	--	--
Total	4,600	218,000	323,000	1,050,000	5	5,400
January–June ³	143,000	4,100,000	1,970,000	9,560,000	30,300	856,000

-- 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.

³May 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 VANADIUM¹

(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:						
May	424,000	11,000,000	94,300	1,900,000	--	--
June:						
Austria	62,600	1,650,000	7,410	116,000	8,350	196,000
Canada	24,800	721,000	--	--	--	--
China	--	--	31,800	420,000	--	--
Czech Republic	113,000	2,480,000	--	--	--	--
Germany	387	24,400	--	--	--	--
Japan	19,900	544,000	--	--	--	--
Korea, Republic of	47,700	1,270,000	--	--	--	--
South Africa	--	--	104,000	1,930,000	--	--
Total	268,000	6,700,000	143,000	2,470,000	8,350	196,000
January–June	2,040,000	52,600,000	796,000	13,100,000	174,000	1,910,000
Exports:						
2012	454,000	11,000,000	61,800	1,160,000	287,000	3,540,000
2013:						
May	34,600	880,000	22,700	177,000	57,700	616,000
June:						
Brazil	--	--	106	4,630	--	--
Canada	6,160	140,000	--	--	--	--
China	--	--	200	7,400	--	--
Ecuador	15,000	374,000	--	--	--	--
Korea, Republic of	1,440	57,900	--	--	8,170	140,000
Mexico	--	--	400	7,420	--	--
Peru	1,790	44,700	--	--	--	--
Saudi Arabia	--	--	1,200	24,500	--	--
Total	24,400	616,000	1,910	43,900	8,170	140,000
January–June	250,000	5,870,000	50,200	664,000	269,000	2,720,000

-- 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		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:						
May	135,000	808,000	--	--	155,000	1,150,000
June:						
Canada	354,000	2,060,000	--	--	44,000	22,100
Mexico	--	--	--	--	8,440	16,900
South Africa	--	--	--	--	40,000	591,000
United Kingdom	24	4,530	--	--	--	--
Total	354,000	2,060,000	--	--	92,400	630,000
January–June	1,520,000	9,160,000	5,560	11,500	1,110,000	5,390,000

-- Zero.

¹Data 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 CHEMICALS¹

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2012	29,100	\$370,000	280,000	\$6,190,000
2013:				
May	7,840	90,400	69,800	1,420,000
June:				
China	6,020	52,200	--	--
Japan	62	2,790	--	--
South Africa	--	--	6,930	129,000
Total	6,080	55,000	6,930	129,000
January–June	24,700	235,000	194,000	3,920,000

-- Zero.

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

Source: U.S. Census Bureau.