

Mineral Industry Surveys

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VANADIUM IN NOVEMBER 2012

Reported domestic consumption of vanadium in November 2012 was slightly more than that of the previous month, and was slightly more than that of November 2011. Consumer stocks of vanadium, in all forms, were 185 metric tons (t) at the beginning of 2012 and 232 t at the end of November.

According to Ryan's Notes, U.S. ferrovanadium (FeV) prices ranged from \$12.200 to \$14.375 per pound of vanadium content in November, as compared with \$13.333 to \$15.778 in October. European FeV prices ranged from \$23.500 to \$24.500 per kilogram in November, as compared with \$23.722 to \$24.722 in October. Vanadium pentoxide (V₂O₅) prices ranged from \$6.000 to \$6.500 per pound in November, compared with \$6.500 to \$7.000 in October.

Evraz Group S.A. (Moscow, Russia) announced that it produced 32,923 t of vanadium slag (4,717 t of vanadium) in the third quarter compared with 46,623 t of vanadium slag (6,087 t of vanadium) in the same period of 2011.

Reference Cited

Evraz Group S.A., 2011, Group unaudited results for the nine months ended 30 September 2012: Luxembourg, Luxembourg, Evraz Group S.A., September 30, 12 p. (Accessed February 12, 2013, at http://www.evrazhighveld.co.za/abridged_reports/Evraz_Highveld_Results_Sep_Quarter_2012.pdf.)

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

(Kilograms, contained vanadium)

	2011		2012					
			October		November		January–November	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	4,240,000	122,000	320,000	169,000	321,000	170,000	3,640,000	170,000
Vanadium-aluminum alloy and other forms ³	882,000	63,300	59,600 ^r	76,000 ^r	63,000	65,800	754,000	65,800
Total	5,120,000	185,000	379,000 ^r	245,000	384,000	235,000	4,400,000	235,000

^rRevised.

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)

	2011	2012		
		October	November	January–November
Steel:				
Carbon	677,000	47,400	45,500	598,000
Full alloy	2,120,000	168,000	171,000	1,900,000
High-strength low-alloy	W	W	W	W
Stainless and heat resisting	61,500	5,110	5,110	56,400
Tool	W	W	W	W
Total steel	2,860,000	221,000	222,000	2,550,000
Superalloys	15,300	433 ^r	455	4,940
Miscellaneous and unspecified ²	W	W	W	W
Total	5,120,000	379,000 ^r	384,000	4,400,000

^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 ALLOY AND VANADIUM
METAL, INCLUDING WASTE AND SCRAP¹

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2011	278,000	\$1,210,000	43,900	\$1,930,000
2012:				
October	5,310	30,500	18,600	617,000
November:				
Germany	--	--	12,100	356,000
Netherlands	7,140	40,000	--	--
Total	7,140	40,000	12,100	356,000
January–November	103,000	681,000	144,000	4,570,000
Exports:				
2011	920,000	6,930,000	102,000	3,340,000
2012:				
October	2,400,000	6,170,000	5,060	135,000
November:				
Brazil	907	11,800	--	--
Canada	393,000	1,080,000	--	--
Japan	5,440	139,000	--	--
Kuwait	15,900	77,700	--	--
Mexico	1,950,000	5,030,000	--	--
New Zealand	1,440	6,750	--	--
Saudi Arabia	360	9,190	--	--
Singapore	--	--	81	3,120
Venezuela	1,170	16,400	--	--
Total	2,360,000	6,370,000	81	3,120
January–November	22,000,000	60,300,000	16,000	445,000

-- Zero.

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

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:						
2011	2,220,000	\$64,600,000	2,800,000	\$45,800,000	886,000	\$17,400,000
2012:						
October	371,000	9,460,000	228,000	3,420,000	8,370	183,000
November:						
Austria	15,000	361,000	--	--	--	--
Canada	89,300	2,140,000	--	--	--	--
China	--	--	15,800	273,000	--	--
Czech Republic	130,000	3,380,000	--	--	--	--
Germany	--	--	925	46,200	--	--
Korea, Republic of	45,000	1,170,000	--	--	--	--
South Africa	--	--	70,500	1,110,000	--	--
Total	279,000	7,040,000	87,300	1,430,000	--	--
January–November	3,910,000	101,000,000	1,490,000	25,100,000	896,000	12,600,000
Exports:						
2011	314,000	9,970,000	88,700	1,410,000	254,000	2,390,000
2012:						
October	67,700	1,520,000	16,100	286,000	10,000	157,000
November:						
Brazil	--	--	--	--	3,870	55,400
Canada	30,300	669,000	--	--	--	--
China	--	--	--	--	8,610	130,000
Germany	--	--	--	--	11,200	155,000
Hong Kong	--	--	--	--	767	6,830
Russia	--	--	--	--	20,100	349,000
Saudi Arabia	--	--	8,870	172,000	--	--
Total	30,300	669,000	8,870	172,000	44,600	696,000
January–November	414,000	10,100,000	61,600	1,150,000	268,000	3,300,000

-- 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
2011	1,420,000	\$1,570,000	89,600	\$479,000	189,000,000	\$5,170,000
2012:						
October	235,000	1,400,000	36,000	2,970	352,000	524,000
November:						
Austria	--	--	--	--	7,440	100,000
Canada	71,800	273,000	--	--	104,000	42,500
Mexico	81,700	865,000	--	--	--	--
South Africa	--	--	--	--	20,000	261,000
United Kingdom	--	--	--	--	57,500	267,000
Total	154,000	1,140,000	--	--	189,000	671,000
January–November	1,610,000	6,200,000	175,000	141,000	107,000,000	13,500,000

-- 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
2011	42,200	\$738,000	303,000	\$7,400,000
2012:				
October	4,820	66,200	34,700	741,000
November:				
China	5,000	43,500	--	--
South Africa	--	--	18,900	273,000
Total	5,000	43,500	18,900	273,000
January–November	29,100	365,000	278,000	6,140,000

-- Zero.

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

Source: U.S. Census Bureau.