

# Mineral Industry Surveys

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## VANADIUM IN OCTOBER 2002

According to Ryan's Notes (2002c), the range for U.S. ferrovanadium prices during October was \$4.47 to \$4.69 per pound of vanadium content, compared with \$4.55 to \$5.00 in September. European ferrovanadium ranged from \$6.93 to \$7.34 per kilogram of vanadium content in October as compared to \$7.30 to \$8.40 in September. In October, vanadium pentoxide prices ranged from \$1.60 to \$1.70 per pound versus \$1.35 to \$1.65 in September. U.S. prices for ferrovanadium weakened during September as a result of price decreases in Europe to close the gap between the U.S. and European markets (Ryan's Notes, 2002a).

In early October, the Ferroalloys Association (TFA) issued a press release that Xstrata Plc and Highveld Steel and Vanadium Corp., Ltd. refused to allow the U.S. Commerce Department to conduct on-site verification of information provided during the preliminary investigation of ferrovanadium dumping in the

United States by the South African companies (Ryan's Notes, 2002a). In addition, the TFA, Vanadium Committee, requested that the Commerce Department conduct an anti-circumvention inquiry to determine if ferrovanadium converted in third countries using Russian vanadium oxide should be included in a dumping order against Russian ferrovanadium (Ryan's Notes, 2002b).

### References Cited

- Ryan's Notes, 2002a, FeV prices weaken worldwide; South Africans refuse on-site inspections: Ryan's Notes, v. 8, no. 40, October 7, p. 1.  
Ryan's Notes, 2002b, TFA pursues anticircumvention case against converters of Russian V<sub>2</sub>O<sub>5</sub>: Ryan's Notes, v. 8, no. 41, October 14, p. 1.  
Ryan's Notes, 2002c, [untitled]: Ryan's Notes, v. 8, no. 44, November 4, insert.

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

(Kilograms, contained vanadium)

	2001 p/		2002			
	Consumption	Stocks	September		October	
			Consumption	Stocks	Consumption	Stocks
Ferrovandium 2/	2,800,000	245,000	241,000	245,000	238,000	255,000
Vanadium-aluminum alloy	W	10,500	W	8,990	W	W
Other 3/	484,000	7,910	23,600	6,840	23,400	20,400
Total	3,280,000	264,000	265,000	260,000	261,000	275,000

p/ Preliminary. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to 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 other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol W.

TABLE 2  
U.S. CONSUMPTION OF VANADIUM, BY END USE 1/

(Kilograms, contained vanadium)

	2001 p/	2002		
		September	October	Year to date
Steel:				
Carbon	997,000	80,800	74,600	736,000
High-strength low-alloy	769,000	W	W	W
Stainless and heat-resisting	26,300	W	W	W
Full alloy	701,000	66,800	67,500	639,000
Tool	261,000	18,900	20,600	223,000
Total steel	2,750,000	239,000	234,000	2,310,000
Superalloys	16,000	826	902	11,500
Miscellaneous and unspecified 2/	514,000	25,200	26,700	333,000
Total consumption	3,280,000	265,000	261,000	2,660,000

p/ Preliminary. W Withheld to avoid disclosing company proprietary data; included with "Total steel."

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 ALLOY AND VANADIUM  
METAL, INCLUDING WASTE AND SCRAP 1/

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
<b>Imports for consumption:</b>				
2001	10,100	\$45,100	50,000	\$639,000
<b>2002:</b>				
July	--	--	18,400	256,000
August	--	--	4,350	259,000
<b>September:</b>				
Germany	--	--	105	51,500
Russia	--	--	3,500	218,000
Total	--	--	3,610	269,000
Year to date	78,400 r/	170,000	29,700	1,040,000
<b>Exports:</b>				
2001	363,000	6,990,000	26,300	380,000
<b>2002:</b>				
July	23,600	647,000	10	5,490
August	44,500	825,000	1,170	12,100
<b>September:</b>				
Austria	--	--	63	70,300
Canada	16,400	428,000	--	--
Hong Kong	9,920	182,000	--	--
New Zealand	4,750	61,800	--	--
Russia	--	--	9,620	87,500
Singapore	334	4,340	--	--
Taiwan	300	4,080	--	--
United Kingdom	137	4,020	18,500	140,000
Total	31,800	685,000	28,200	298,000
Year to date	390,000	8,700,000	43,800	831,000

r/ Revised. -- Zero.

1/ Data 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 VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Imports for consumption:</b>						
2001	2,550,000	\$20,500,000	600,000	\$3,460,000	1,080,000	\$510,000
<b>2002:</b>						
July	206,000	1,640,000	70,800	373,000	--	--
August	337,000	2,800,000	10,300	48,100	4,690	79,400
<b>September:</b>						
Austria	66,800	642,000	--	--	--	--
Belgium	16,800	144,000	--	--	--	--
Canada	49,000	369,000	--	--	--	--
China	--	--	8,960	59,200	--	--
Czech Republic	76,500	707,000	--	--	--	--
Germany	--	--	518	27,500	--	--
Mexico	15,800	149,000	--	--	--	--
South Africa	--	--	32,900	250,000	--	--
United Arab Emirates	--	--	--	--	2	2,510
Total	225,000	2,010,000	42,400	336,000	2	2,510
Year to date	2,050,000	15,300,000	305,000	1,580,000	42,200	545,000

See footnotes at end of table.

TABLE 4--Continued  
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
Exports:						
2001	70,000	\$768,000	71,400	\$407,000	63,000	\$562,000
2002:						
July	70,000	364,000	1,040	8,970	15,500	170,000
August	19,200	206,000	11,300	52,300	4,660	47,900
September:						
Canada	8,850	121,000	--	--	4,920	47,000
Japan	--	--	1,260	11,900	--	--
Mexico	--	--	600	8,270	--	--
Trinidad and Tobago	--	--	168	7,500	--	--
Total	8,850	121,000	2,030	27,700	4,920	47,000
Year to date	116,000	1,250,000	45,000	269,000	148,000	1,110,000

-- 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)

	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	Value
2001	1,980,000	\$2,270,000	1,980,000	\$1,290,000	998,000	\$1,170,000
2002:						
July	--	--	230,000	167,000	--	--
August	--	--	200,000	172,000	--	--
September:						
Canada	--	--	125,000	148,000	--	--
United Kingdom	--	--	--	--	--	--
Total	--	--	125,000	148,000	--	--
Year to date	--	--	1,800,000	1,120,000	--	--

-- 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
2001	--	--	102,000	\$623,000
2002:				
July	1,580	\$42,400	41	3,750
August	--	--	6,440	64,400
September:				
Canada	68	6,030	--	--
Germany	--	--	123	5,360
Japan	--	--	100	3,900
Total	68	6,030	223	9,260
Year to date	14,100	390,000	35,200	427,000

-- Zero.

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

Source: U.S. Census Bureau.