

Mineral Industry Surveys

For information, contact:

Michael J. Magyar, Vanadium Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4964, Fax: (703) 648-7757
E-mail: mmagyar@usgs.gov

Jackie Arbour (Data)
Telephone: (703) 648-4792
Fax: (703) 648-7975
E-mail: jarbour@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

VANADIUM IN NOVEMBER 2007

Reported domestic consumption of vanadium in November 2007 was about 3% less than that of the previous month, and was about 14% more than that of November 2006, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were 296 metric tons (t) at the beginning of 2007 and 312 t at the end of November.

According to Ryan's Notes (2007b), U.S. ferrovanadium (FeV) prices ranged from \$18.750 to \$19.250 per pound of vanadium content in November, as compared with \$18.789 to \$19.278 in October. European FeV prices ranged from \$37.188 to \$38.063 per kilogram in November, as compared with \$38.000 to \$38.500 in October. Vanadium pentoxide (V₂O₅) prices ranged from \$7.200 to \$7.700 per pound in November, as compared with \$7.556 to \$7.856 in October.

Strategic Minerals Corp. (Stratcor) re-approved International Specialty Alloys Inc.'s (ISA) plant (New Castle, PA) for production of vanadium-aluminum master alloys. ISA, owned by Kennometal Inc., produced master alloys for Stratcor. The ISA plant closed after an explosion in August and restarted production of master alloys in November. Producers who use vanadium-aluminum master alloy to strengthen titanium alloys were recertifying ISA's master alloys (Ryan's Notes, 2007a).

References Cited

Ryan's Notes, 2007a, Ferroalloy notes: Ryan's Notes, v. 13, no. 45, November 12, p. 6.

Ryan's Notes, 2007b, [untitled]: Ryan's Notes, v. 13, no. 48, December 3, p. 12.

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

(Kilograms, contained vanadium)

	2006 ^P		2007					
	Consumption	Stocks	October		November		Year to date	
			Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	3,350,000	247,000	257,000	253,000	249,000	268,000	3,050,000	268,000
Vanadium-aluminum alloy	W	W	W	W	W	W	W	W
Other ³	298,000	48,100	70,000	43,900	70,000	43,900	732,000	43,900
Total	3,650,000	296,000	327,000	297,000	319,000	312,000	3,780,000	312,000

^PPreliminary. W Withheld to avoid disclosing company proprietary data; included with "Other."

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 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 USE¹

(Kilograms, contained vanadium)

	2006 ^P	2007		
		October	November	Year to date
Steel:				
Carbon	931,000	52,600	54,900	829,000
High-strength low-alloy	1,020,000	106,000	106,000	1,140,000
Stainless and heat-resisting	60,700	5,120	5,120	56,300
Full alloy	1,020,000	104,000	95,400	1,070,000
Tool	322,000	34,600	32,200	399,000
Total steel	3,350,000	302,000	294,000	3,490,000
Superalloys	4,130	495	438	6,660
Miscellaneous and unspecified ²	296,000	24,200	24,200	282,000
Total consumption	3,650,000	327,000	319,000	3,780,000

^PPreliminary.

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:				
2006	102,000	\$312,000	121,000	\$5,270,000
2007:				
September	19,900	52,600	--	--
October:				
Total	--	--	--	--
Year to date	817,000	1,180,000	--	--
Exports:				
2006	17,000,000	54,500,000	491,000	13,200,000
2007:				
September	1,300,000	4,250,000	--	--
October:				
Canada	764,000	2,190,000	--	--
Japan	8,170	26,400	--	--
Mexico	1,130,000	3,510,000	--	--
Total	1,910,000	5,730,000	--	--
Year to date	18,200,000	62,200,000	--	--

-- 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:						
2006	2,140,000	\$90,500,000	1,920,000	\$45,200,000	129,000	\$3,370,000
2007:						
September	203,000	7,710,000	150,000	3,310,000	4,520	89,300
October:						
Austria	15,800	645,000	--	--	8,420	250,000
Brazil	532	25,300	--	--	--	--
Canada	33,800	1,300,000	--	--	--	--
China	--	--	53,800	1,280,000	--	--
Czech Republic	16,300	685,000	--	--	--	--
Germany	136	12,000	990	47,700	5,430	196,000
Korea, Republic of	70,500	2,570,000	--	--	--	--
Russia	--	--	94,500	1,400,000	--	--
South Africa	--	--	66,800	1,210,000	--	--
Taiwan	--	--	7,270	229,000	--	--
Total	137,000	5,240,000	223,000	4,170,000	13,900	446,000
Year to date	1,840,000	67,200,000	2,000,000	39,500,000	36,500	1,140,000
Exports:						
2006	515,000	11,400,000	341,000	7,150,000	832,000	7,780,000
2007:						
September	13,100	498,000	21,800	435,000	72,600	631,000
October:						
Brazil	--	--	87	4,080	2,710	39,000
Canada	7,580	345,000	--	--	--	--
Italy	--	--	8,080	265,000	--	--
Japan	--	--	--	--	48,000	846,000
Romania	7,810	174,000	--	--	--	--
Russia	--	--	--	--	63,700	876,000
Saudi Arabia	--	--	217	4,210	--	--
United Kingdom	--	--	--	--	910	8,100
Total	15,400	518,000	8,380	274,000	115,000	1,770,000
Year to date	136,000	5,020,000	279,000	4,620,000	551,000	6,800,000

-- 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)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)	
	Quantity	Value	Quantity	Value
2006	637,000	\$7,320,000	1,140,000	\$1,130,000
2007:				
September	95,400	1,110,000	54,500	75,300
October:				
Canada	--	--	51,200	87,600
Mexico	114,000	1,320,000	--	--
Total	114,000	1,320,000	51,200	87,600
Year to date	888,000	8,920,000	576,000	829,000

-- 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
2006	16	\$26,700	115,000	\$3,330,000
2007:				
September	--	--	334	18,900
October:				
China	2	11,100	--	--
Japan	--	--	44,500	231,000
Russia	--	--	7	5,600
South Africa	--	--	22,000	346,000
Total	2	11,100	66,500	582,000
Year to date	80,200	783,000	194,000	3,180,000

-- Zero.

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

Source: U.S. Census Bureau.