

Mineral Industry Surveys

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TUNGSTEN IN NOVEMBER 2004

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from metal powder, in January through November 2004 was 26% lower than net production during the same period in 2003, according to the U.S. Geological Survey.

Total U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during January through November 2004 was 6% higher than reported consumption during the same period in 2003. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports through October 2004 are published in this issue.

Update

Prices for tungsten ore concentrates, in dollars per metric ton unit from Metal Bulletin, are listed below. Prices in dollars per short ton unit were converted from metric ton unit prices and rounded to the nearest dollar. These prices represent combined prices for wolframite and scheelite ore concentrates with a minimum tungsten trioxide (WO₃) content of 65%. The prices for December 1-31, 2004, are as follows:

Low—\$62/metric ton unit WO₃ (\$56/short ton unit WO₃)

High—\$64/metric ton unit WO₃ (\$58/short ton unit WO₃)

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS¹

(Metric tons, tungsten content)

Period	Concentrate				Reported scrap consumption	Intermediate products			
	Reported consump- tion	Imports for consumption	Stocks, end of period Industry ²	U.S. Gov- ernment ³		Net production ⁴	Reported consump- tion ⁵	Stocks, end of period Industry ⁶	U.S. Gov- ernment ³
2003:									
November	W	244	W	29,400	311	476	679	813	767
December	W	402	W	29,400	265	509	697	806	765
January-December	W	4,690	XX	XX	4,010	9,030	9,400	XX	XX
2004:									
January	W	328	W	28,900	318	535	788	834	757
February	W	92	W	28,800	220	560	797	769	743
March	W	157	W	28,800	335	578	855	734	736
April	W	207	W	28,500	321	606	853	749	730
May	W	68	W	28,400	369	537	830	845	729
June	W	190	W	28,400	326	581	947	833	729
July	W	78	W	28,400	268	529	825	828	724 ^r
August	W	326	W	28,400	238	590	833	871	724 ^r
September	W	255	W	28,400	268	569	851	853	724 ^r
October	W	218	W	28,400	280	610	836	757	724 ^r
November	W	NA	W	28,400	268	580	839	756	685
Total	W	NA	XX	XX	3,210	6,280	9,250	XX	XX

^rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

²Reported by consumers.

³Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁴Net production of tungsten metal powder and tungsten carbide powder.

⁵Includes estimates and scrap.

⁶Data for tungsten metal powder and tungsten carbide powder reported by producers.

TABLE 2
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF
AMMONIUM PARATUNGSTATE, BY MONTH¹

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period ²
2003:			
November	W	933	W
December	W	W	W
January-December ³	W	6,590	XX
2004:			
January	W	790	W
February	W	650	W
March	W	W	W
April	W	881	W
May	W	769	129
June	W	827	W
July	W	634	150
August	W	W	95
September	W	759	69
October	W	694	47
November	W	722	W
Total ³	W	6,730	XX

W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

²Producers and consumers.

³Does not include withheld data.

TABLE 3
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS¹

(Metric tons, tungsten content)

Product ³	Net production ²				Stocks at end of period		
	2004				2004		
	2003	October	November	Year to date	2003	October	November
Metal powder	5,350	262	214	2,460	544	438	461
Tungsten carbide powder (made from metal powder)	3,680	348	367	3,820	263	319	295
Total	9,030	610	580	6,280	806	757	756

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

²Gross production less quantity used to make other products in table.

³Data for cast and crystalline tungsten carbide powder and tungsten chemicals are withheld to avoid disclosing company proprietary data; not included in "Total."

TABLE 4
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE^{1,2,3}

(Metric tons, tungsten content)

End use	2004		
	October	November	Year to date
Steels	22	22	243
Superalloys	W	W	W
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	432	442	4,820
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	382	374	4,190
Total	836	839	9,250

W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

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

²Does not include materials used in making primary tungsten products.

³Includes estimates.

⁴Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

⁵Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

TABLE 5
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS¹

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials ²	Total
Consumption:						
2003:						
November	22	W	436	W	6	679
December	22	W	445	W	6	697
January-December	275	W	5,300	W	72	9,400
2004:						
January	21	W	452	W	6	788
February	21	W	450	W	6	797
March	22	W	444	W	6	855
April	21	W	447	W	6	853
May	22	W	441	W	6	830
June	22	W	445	W	6	947
July	21	W	434	W	6	825
August	21	W	438	W	6	833
September	22	W	457	W	6	851
October	22	W	437	W	6	836
November	22	W	450	W	6	839
Total	237	W	4,900	W	66	9,250
Stocks:						
2003:						
November	33	30	347	28	9	447
December	31	33	301	24	9	398
2004:						
January	30	33	312	25	9	409
February	29	31	307	23	9	399
March	27	31	308	26	9	401
April	26	30	304	29	9	398
May	24	33	317	24	9	407
June	33	31	308	18	9	399
July	31	28	307	27	9	403
August	30	26	313	26	9	404
September	29	28	308	27	9	400
October	27	30	310	29	9	404
November	25	28	302	34	9	397

W Withheld to avoid disclosing company proprietary data; included in "Total."

¹Includes estimates.

²Includes tungsten chemicals.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY¹

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferro-tungsten	Metal powder	Tungsten carbide powder	Other ²	Total	Total, year to date
2003	4,690	2,640	377	1,090	1,370	1,020	11,200	XX
2004:								
August	326	219	31	236	152	199	1,160	6,200
September	255	310	14	187	143	44	952	7,160
October:								
Australia	--	--	--	--	--	--	--	(3)
Austria	--	--	--	--	--	2	2	31
Belgium	--	--	--	--	--	1	1	6
Bolivia	72	--	--	--	--	--	72	368
Brazil	--	--	--	--	--	--	--	14
Canada	43	--	--	--	26	--	69	1,210
China	--	105	29	25	77	17	254	3,650
Congo (Kinshasa)	15	--	--	--	--	--	15	28
Costa Rica	--	--	--	--	--	--	--	(3)
Czech Republic	--	--	--	--	2	(3)	2	10
France	--	--	--	--	1	--	1	7
Germany	--	13	--	31	8	2	55	599
Hong Kong	--	--	--	--	--	(3)	(3)	87
Hungary	--	--	--	--	--	(3)	(3)	5
India	--	--	--	--	--	(3)	(3)	4
Israel	--	--	--	--	6	(3)	6	317
Italy	--	--	--	--	--	(3)	(3)	33
Japan	--	15	--	1	(3)	2	18	84
Kenya	--	--	--	--	--	--	--	38
Korea, Republic of	--	--	--	12	2	--	13	132
Liechtenstein	--	--	--	--	--	--	--	41
Malaysia	--	--	--	--	--	--	--	(3)
Mexico	--	--	--	9	--	--	9	31
Mongolia	--	--	--	--	--	--	--	15
Netherlands	--	--	--	--	--	(3)	(3)	51
Norway	--	--	--	--	--	--	--	(3)
Panama	--	--	--	--	--	--	--	(3)
Poland	--	--	--	--	--	--	--	(3)
Portugal	19	--	--	--	--	--	19	391
Russia	--	--	--	--	--	--	--	181
Rwanda	14	--	--	--	--	--	14	138
Singapore	--	--	--	--	--	4	4	10
Spain	--	--	--	--	--	--	--	(3)
Sweden	--	--	--	--	--	(3)	(3)	(3)
Switzerland	--	--	--	--	--	(3)	(3)	1
Taiwan	--	--	--	--	--	(3)	(3)	12
Thailand	26	--	--	--	--	--	26	184
Uganda	--	--	--	--	--	--	--	8
United Kingdom	12	--	--	--	(3)	(3)	12	69
Vietnam	19	--	--	--	--	--	19	19
Total	218	134	29	77	121	29	609	7,770
Total, year to date	1,920	1,710	180	1,250	1,490	1,220	7,770	XX

XX Not applicable. -- Zero.

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

²Includes other unwrought tungsten, wrought tungsten, calcium and other tungstates, tungsten oxides, tungsten chlorides, other tungsten compounds, ash and residues containing mainly tungsten, and other mixtures of inorganic compounds containing tungsten. Tungsten content estimated in part.

³Less than 1/2 unit.

Note: Imports of waste and scrap in October 2004 totaled 86 metric tons, tungsten content, to give a year-to-date total of 978 metric tons, tungsten content.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY ¹

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates ²	Ammonium tungstates	Metal powder ²	Tungsten carbide powder	Other ³	Total	Total, year to date
2003	20	99	1,130	1,700	1,440	4,390	XX
2004:							
August	4	--	40	85	70	198	2,220
September	7	--	32	138	93	270	2,490
October:							
Argentina	--	--	(4)	--	--	(4)	1
Australia	--	--	(4)	2	(4)	2	31
Austria	--	--	--	--	--	--	7
Belgium	--	--	--	--	(4)	(4)	12
Brazil	--	--	1	--	(4)	1	22
Canada	--	--	4	9	6	19	189
Chile	--	--	--	(4)	--	(4)	2
China	--	--	3	--	(4)	3	41
Columbia	--	--	--	--	(4)	(4)	5
Czech Republic	--	--	--	--	1	1	10
France	--	--	1	11	(4)	12	144
Georgia	--	--	--	--	(4)	(4)	1
Germany	--	--	14	47	49	110	532
Hong Kong	--	--	--	--	(4)	(4)	4
Hungary	--	--	--	--	1	1	77
India	--	--	(4)	4	(4)	4	26
Indonesia	--	--	--	1	--	1	1
Ireland	--	--	--	--	(4)	(4)	5
Israel	--	--	(4)	--	1	1	17
Italy	--	--	1	--	(4)	1	62
Japan	--	--	2	1	13	16	113
Korea, Republic of	--	--	1	(4)	1	2	34
Luxembourg	--	--	--	3	--	3	32
Malaysia	--	--	--	--	4	4	16
Mexico	--	--	(4)	1	4	5	260
Netherlands	--	--	--	--	(4)	(4)	22
Norway	--	--	--	--	(4)	(4)	5
Peru	--	--	--	--	--	--	3
Philippines	--	--	--	--	1	1	4
Poland	--	--	--	--	--	--	1
Romania	--	--	--	--	--	--	1
Saudi Arabia	--	--	--	--	--	--	1
Singapore	--	--	--	(4)	4	4	12
Slovakia	--	--	--	--	(4)	(4)	2
South Africa	--	--	(4)	9	--	9	31
Spain	--	--	(4)	--	2	2	23
Sweden	--	--	8	11	2	22	112
Switzerland	--	--	(4)	--	(4)	(4)	22
Taiwan	(4)	--	3	(4)	(4)	4	266
Thailand	--	--	--	--	--	--	4
Turkey	--	--	--	--	--	--	18
United Arab Emirates	--	--	--	--	(4)	(4)	2
United Kingdom	1	--	2	22	4	29	578
Venezuela	--	--	2	--	(4)	2	4
Other	--	--	--	(4)	(4)	1	2
Total	1	--	43	120	96	260	2,750
Total, year to date	37	125	366	1,170	1,060	2,750	XX

XX Not applicable. -- Zero.

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

²Tungsten content estimated from reported gross weight.

³Includes unwrought tungsten, including bars and rods obtained simply by sintering, wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

⁴Less than 1/2 unit.

Note: Estimated exports of waste and scrap in October 2004 totaled 19 metric tons, tungsten content, to give a year-to-date estimated total of 422 metric tons, tungsten content.

Source: U.S. Census Bureau.