

Mineral Industry Surveys

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TUNGSTEN IN MARCH 2004

During the quarter ending March 31, 2004, U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from metal powder, was 7% higher than production during the quarter ending December 31, 2003, and 47% lower than production during the quarter ending March 31, 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 the quarter ending March 31, 2004, was 12% higher than that consumed during the quarter ending December 31, 2003, and about the same as that consumed during the quarter ending March 31, 2003. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for March 2004 will be published in a subsequent 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 April 1-30, 2004, are as follows:

Low—\$46/metric ton unit WO₃ (\$42/short ton unit WO₃)
High—\$56/metric ton unit WO₃ (\$51/short ton unit WO₃)

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS¹

(Metric tons, tungsten content)

Period	Concentrate				Reported scrap consumption	Intermediate products			
	Reported consumption	Imports for consumption	Stocks, end of period			Net production ⁴	Reported consumption ⁵	Stocks, end of period	
			Industry ²	U.S. Government ³				Industry ⁶	U.S. Government ³
2003:									
March	W	474	W	29,800	475 ^r	1,120	818 ^r	779	913
April	W	377	W	29,800	398 ^r	1,110	891 ^r	785	894
May	W	679	W	29,600	311 ^r	1,120	941 ^r	746	808
June	W	365	W	29,600	292 ^r	575	745 ^r	722	784
July	W	463	W	29,600	302 ^r	523	775 ^r	655	759
August	W	427	W	29,600	331 ^r	516	739 ^r	637	759
September	W	530	W	29,500	252 ^r	567	753 ^r	661	767
October	W	223	W	29,500	314 ^r	536 ^r	755 ^r	780 ^r	767
November	W	244	W	29,400	311 ^r	476 ^r	679 ^r	813 ^r	767
December	W	402	W	29,400	265 ^r	509 ^r	697 ^r	806 ^r	765
January-December	W	4,690	XX	XX	4,010 ^r	9,030 ^r	9,400 ^r	XX	XX
2004:									
January	W	328	W	28,900	318 ^r	535 ^r	788 ^r	834 ^r	757
February	W	92	W	28,800	220 ^r	560 ^r	797 ^r	769 ^r	743
March	W	NA	W	28,800	203	534	803	737	736
Total	W	NA	XX	XX	741	1,630	2,390	XX	XX

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

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

² Reported by consumers.

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

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

⁵ Includes estimates and scrap.

⁶ Data 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:			
March	W	851	73
April	W	W	44
May	W	724	38
June	W	710	59
July	W	W	45
August	W	W	44 ^r
September	W	839	42
October	W	1,010 ^r	W
November	W	933 ^r	W
December	W	W	W
January-December ³	W	6,590	XX
2004:			
January	W	790 ^r	W
February	W	650 ^r	W
March	W	W	W
Total ³	W	1,440	XX

^r Revised. W Withheld to avoid disclosing company proprietary data.

XX Not applicable.

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

² Producers and consumers.

³ Does 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 ^r	February ^r	March	Year to date	2003 ^r	February ^r	March
Metal powder	5,350	240	213	670	544	516	477
Tungsten carbide powder (made from metal powder)	3,680	320	321	958	263	253	260
Total	9,030	560	534	1,630	807	769	737

^rRevised.

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		
	February	March	Year to date
Steels	22 ^r	22	66
Superalloys	W	W	W
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	440 ^r	438	1,320
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	335 ^r	343	1,000
Total	797 ^r	803	2,390

^rRevised. 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:						
March	23 ^r	W	444 ^r	W	6	818 ^r
April	24 ^r	W	440 ^r	W	6	891 ^r
May	24 ^r	W	448 ^r	W	6	941 ^r
June	22 ^r	W	434 ^r	W	6	745 ^r
July	21 ^r	W	441 ^r	W	6	775 ^r
August	23 ^r	W	438 ^r	W	6	739 ^r
September	25 ^r	W	447 ^r	W	6	753 ^r
October	23 ^r	W	444 ^r	W	6	755 ^r
November	22 ^r	W	436 ^r	W	6	679 ^r
December	22 ^r	W	445 ^r	W	6	697 ^r
January-December	275	W	5,300	W	72	9,400
2004:						
January	21 ^r	W	452 ^r	W	6	788 ^r
February	21 ^r	W	450 ^r	W	6	797 ^r
March	22	W	444	W	6	803
Total	64	W	1,350	W	18	2,390
Stocks:						
2003:						
March	24 ^r	30 ^r	290 ^r	33 ^r	9	386 ^r
April	19 ^r	34 ^r	275 ^r	28 ^r	9	364 ^r
May	33 ^r	35 ^r	289 ^r	27 ^r	9	393 ^r
June	27 ^r	34 ^r	325 ^r	28 ^r	9	422 ^r
July	25 ^r	31 ^r	328 ^r	34 ^r	9	427 ^r
August	32 ^r	33 ^r	334 ^r	31 ^r	9	438 ^r
September	28 ^r	30 ^r	276 ^r	25 ^r	9	368 ^r
October	25 ^r	30 ^r	331 ^r	21 ^r	9	417 ^r
November	33 ^r	30 ^r	347 ^r	28 ^r	9	447 ^r
December	31 ^r	33 ^r	301 ^r	24 ^r	9	398 ^r
2004:						
January	30 ^r	33 ^r	312 ^r	25 ^r	9	409 ^r
February	29 ^r	31 ^r	307 ^r	23 ^r	9	399 ^r
March	27	31	308	26	9	401

^rRevised. 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:								
January	328	387	31	88	144	64	1,040	1,040
February:								
Austria	--	--	--	--	(3)	2	2	5
Belgium	--	--	--	(3)	--	--	(3)	(3)
Bolivia	52	--	--	--	--	--	52	88
Canada	26	--	--	--	79	--	106	249
China	--	10	15	90	52	87	254	834
Czech Republic	--	--	--	--	1	1	2	3
France	--	--	--	--	4	(3)	4	4
Germany	--	27	--	25	2	3	58	111
Hong Kong	--	--	--	--	--	(3)	(3)	1
Hungary	--	--	--	--	--	(3)	(3)	1
India	--	--	--	--	--	(3)	(3)	(3)
Israel	--	--	--	12	36	1	49	76
Japan	--	--	--	5	(3)	1	6	12
Kenya	--	--	--	--	--	--	--	26
Korea, Republic of	--	--	--	13	1	(3)	14	19
Mexico	--	--	--	--	--	--	--	(3)
Netherlands	--	--	--	--	--	(3)	(3)	(3)
Portugal	--	--	--	--	--	--	--	68
Russia	--	--	--	--	--	1	1	2
Rwanda	13	--	--	--	--	--	13	92
Thailand	--	--	--	--	--	--	--	10
Other	--	--	--	--	--	(3)	(3)	(3)
Total	92	37	15	146	176	96	562	1,600
Total, year to date	419	424	46	234	321	160	1,600	XX

-- 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 February 2004 totaled 63 metric tons, tungsten content, to give a year-to-date total of 78 metric tons, tungsten content.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY¹

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates ²	Ammonium tungstates	Metal powder ²	Tungsten carbide powder	Other ³	Total	Year to date
2003	20	99	1,130	1,700	1,440	4,390	XX
2004:							
January	(4)	18	45	84	89	237	237
February:							
Australia	--	--	1	1	(4)	2	3
Belgium	--	--	--	(4)	(4)	(4)	1
Brazil	--	--	(4)	(4)	(4)	1	5
Canada	--	--	3	9	4	15	37
Chile	--	--	(4)	--	--	(4)	(4)
China	(4)	--	(4)	--	(4)	1	2
Columbia	--	--	--	--	(4)	(4)	1
Czech Republic	--	--	--	--	1	1	4
Finland	--	--	--	(4)	--	(4)	(4)
France	--	--	1	22	6	29	50
Georgia	--	--	--	--	(4)	(4)	(4)
Germany	--	18	24	15	7	63	133
Hong Kong	--	--	--	--	1	1	3
Hungary	--	--	--	--	7	7	22
India	--	--	(4)	1	1	2	3
Ireland	--	--	--	1	--	1	2
Israel	--	--	8	--	--	8	9
Italy	--	--	2	(4)	14	17	20
Japan	--	--	1	2	5	7	18
Kenya	--	--	--	--	(4)	(4)	(4)
Korea, Republic of	--	--	1	3	(4)	4	8
Luxembourg	--	--	--	4	--	4	6
Mexico	(4)	--	(4)	(4)	73	73	87
Netherlands	--	--	--	--	5	5	12
Peru	--	--	--	--	--	--	(4)
Philippines	--	--	--	--	--	--	(4)
Poland	--	--	--	--	(4)	(4)	(4)
Singapore	--	--	1	(4)	(4)	1	2
Slovakia	--	--	--	--	(4)	(4)	(4)
Spain	--	--	(4)	4	1	6	8
Sweden	--	--	(4)	--	(4)	(4)	(4)
Switzerland	--	--	2	--	(4)	2	11
Taiwan	--	--	4	(4)	23	27	48
Turkey	--	--	(4)	--	--	(4)	(4)
United Arab Emirates	--	--	--	(4)	--	(4)	(4)
United Kingdom	--	--	1	58	9	69	87
Venezuela	--	--	(4)	--	--	(4)	(4)
Other	--	--	(4)	(4)	(4)	(4)	1
Total	(4)	18	51	121	160	349	586
Total, year to date	1	36	96	205	249	586	XX

-- 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 February 2004 totaled 45 metric tons, tungsten content, to give a year-to-date total of 177 metric tons, tungsten content.

Source: U.S. Census Bureau.