



Mineral Industry Surveys

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TUNGSTEN IN MARCH 2003

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from metal powder, was 27% higher during January through March 2003 than net production during the same period in 2002, 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 in January through March 2003 was 26% higher than that consumed during the same period in 2002. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for March 2003 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, 2003, are as follows:

Low—\$40/metric ton unit WO₃ (\$36/short ton unit WO₃)
High—\$50/metric ton unit WO₃ (\$45/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
2002:									
March	W	212	W	NA	260 ^r	750	676 ^r	640	NA
April	W	292	W	NA	411 ^r	743	667 ^r	667	NA
May	W	292	W	NA	382 ^r	1,040	855 ^r	650	NA
June	W	439	W	31,200	327 ^r	1,080	824 ^r	662	1,100
July	W	362	W	30,400	334 ^r	931	847 ^r	654	1,020
August	W	418	W	30,500	218 ^r	1,110	854 ^r	737	987
September	W	341	W	30,100	408 ^r	1,110	858 ^r	750	981
October	W	341	W	30,100	362 ^r	1,120	862 ^r	765	975
November	W	509	W	30,100	326 ^r	1,080	874 ^r	752	948
December	W	600	W	30,100	340 ^r	1,140	847 ^r	749	947
January-December	W	4,090	XX	XX	4,030 ^r	11,700	9,530 ^r	XX	XX
2003:									
January	W	250	W	29,800	225 ^r	974 ^r	857 ^r	762 ^r	927
February	W	253	W	29,800	222 ^r	996 ^r	860 ^r	772	927
March	W	NA	W	29,800	227	991	851	754	913
Total	W	NA	XX	XX	674	2,960	2,570	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
2002:			
March	W	653	W
April	W	830	W
May	W	798	W
June	W	893	103
July	W	740	212
August	W	794	97
September	W	828	102
October	W	782	109
November	W	W	86
December	W	W	77
Total	W	W	XX
2003:			
January	W	779 ^r	W
February	W	754 ^r	66 ^r
March	W	W	58
Total ³	W	1,530	XX

^rRevised. 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		
	2002	2003		Year to date	2002	2003	
		February	March			February	March
Metal powder	7,720	756	754	2,240	441	464	452
Tungsten carbide powder (made from metal powder)	3,960	240 ^r	237	720	308	308	302
Total	11,700	996 ^r	991	2,960	749	772	754

^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	2003		
	February	March	Year to date
Steels	22 ^r	22	65
Superalloys	26 ^r	24	80
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	402 ^r	400	1,210
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	409 ^r	406	1,220
Total	860 ^r	851	2,570

^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. 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
2002	4,090	2,400	480	642	901	1,180	9,690	XX
2003:								
January	250	220	29	32	102	57	691	691
February:								
Austria	--	--	--	--	(3)	2	2	3
Belgium	--	--	--	(3)	--	1	1	2
Bolivia	36	--	--	--	--	--	36	36
Canada	181	--	--	19	38	--	239	435
China	22	92	15	17	34	82	261	586
Czech Republic	--	--	--	--	--	--	--	(3)
France	--	--	--	--	(3)	(3)	(3)	1
Germany	--	19	--	6	(3)	3	28	53
Hong Kong	--	--	--	--	--	(3)	(3)	1
Hungary	--	--	--	--	--	(3)	(3)	(3)
India	--	--	--	--	--	(3)	(3)	(3)
Ireland	--	--	--	--	--	--	--	1
Israel	--	--	--	7	37	3	47	80
Italy	--	--	--	--	--	(3)	(3)	(3)
Japan	--	--	--	1	(3)	3	4	17
Korea, Republic of	--	--	--	2	1	(3)	3	12
Luxembourg	--	--	--	--	--	--	--	2
Mongolia	10	--	--	--	--	--	10	10
Netherlands	--	--	--	--	--	(3)	(3)	(3)
Peru	3	--	--	--	--	--	3	12
Portugal	--	--	--	--	--	--	--	48
Russia	--	--	--	--	--	(3)	(3)	(3)
Rwanda	--	--	--	--	--	--	--	24
Singapore	--	--	--	--	--	--	--	1
Spain	--	--	--	--	--	--	--	(3)
Sweden	--	--	--	--	--	(3)	(3)	(3)
Switzerland	--	--	--	--	--	(3)	(3)	(3)
Taiwan	--	--	15	--	--	(3)	15	15
United Kingdom	--	--	--	21	--	(3)	21	21
Total	253	111	30	74	111	95	672	1,360
Total, year to date	503	330	59	106	213	151	1,360	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 February 2003 totaled 118 metric tons, tungsten content, to give a year-to-date total of 203 metric tons, tungsten content.

Source: U.S. Census Bureau.

TABLE 6
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	Total year to date
2002	94	69	496	1,250	1,050	2,960	XX
2003:							
January	1	--	23	179	78	281	281
February:							
Australia	--	--	(4)	(4)	--	(4)	1
Belgium	--	--	--	(4)	(4)	(4)	2
Brazil	--	--	1	--	(4)	1	1
Canada	--	--	3	4	11	18	34
Chile	--	--	1	1	(4)	1	1
China	--	--	(4)	--	2	2	5
Colombia	--	--	--	(4)	--	(4)	(4)
Czech Republic	--	--	--	--	1	1	1
Egypt	--	--	--	--	--	--	1
France	1	--	2	2	16	21	36
Germany	(4)	--	22	192	12	225	330
Hong Kong	--	--	--	--	--	--	2
Hungary	--	--	--	--	--	--	(4)
India	--	--	--	(4)	2	2	8
Indonesia	--	--	--	(4)	--	(4)	(4)
Ireland	--	--	--	1	4	5	5
Israel	--	--	19	--	11	31	32
Italy	(4)	--	5	1	(4)	7	14
Japan	--	--	2	3	2	6	12
Korea, Republic of	--	--	--	2	(4)	2	5
Luxembourg	--	--	(4)	(4)	--	(4)	1
Malaysia	--	--	--	--	5	5	5
Mexico	(4)	--	8	(4)	20	28	52
Netherlands	--	--	--	--	(4)	(4)	(4)
New Zealand	--	--	--	--	(4)	(4)	(4)
Philippines	--	--	--	--	--	--	1
Poland	--	--	--	--	1	1	1
Singapore	(4)	--	1	(4)	2	4	5
Slovakia	--	--	--	--	4	4	4
South Africa	--	--	--	10	--	10	20
Spain	--	1	(4)	(4)	2	3	6
Sweden	--	--	(4)	7	(4)	7	13
Switzerland	--	--	--	--	(4)	(4)	(4)
Taiwan	--	--	3	--	15	18	27
United Kingdom	--	--	3	26	4	33	90
Other	--	--	--	(4)	(4)	(4)	2
Total	1	1	70	248	116	436	717
Total, year to date	2	1	92	428	194	717	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 February 2003 totaled 16 metric tons, tungsten content, to give a year-to-date total of 41 metric tons, tungsten content.

Source: U.S. Census Bureau.