

Mineral Industry Surveys

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TUNGSTEN IN DECEMBER 2000

On the basis of preliminary data, U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from hydrogen-reduced metal powder, was 11% higher during 2000 than net production during 1999, 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 2000 was 3% higher than that during 1999. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for December 2000 will be published in a subsequent issue.

Note

All data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

Update

On March 2, the Defense National Stockpile Center (DNSC), U.S. Department of Defense, announced that it had awarded a multi-year contract for tungsten ores and concentrates to Comsup Commodities, Inc., of Fort Lee, NJ. Comsup was awarded approximately 1,810 metric tons (4 million pounds) of tungsten contained in ores and concentrates at a provisional value of

approximately \$14.8 million for fiscal year 2001 (October 1, 2000, through September 30, 2001). In addition, Comsup received an option for an additional 7,260 tons (16 million pounds) over the next 4 years. The award exhausted the amount of tungsten ores and concentrates available for sale under the fiscal year 2001 Annual Materials Plan (Defense National Stockpile Center, 2001). Further information on DNSC's tungsten sales program is available from Richard Talbott, contracting officer, at (703) 767-5497.

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 (WO_3) content of 65%. The prices for January 4-31, 2001, are as follows:

Low—\$55/metric ton unit WO_3 (\$50/short ton unit WO_3)
High—\$73/metric ton unit WO_3 (\$66/short ton unit WO_3)

Reference Cited

Defense National Stockpile Center, 2001, Stockpile awards tungsten ores & concentrates: Fort Belvoir, VA, Defense National Stockpile Center news release, March 2, 1 p.

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

Period	Concentrate				Intermediate products				
	Reported consumption	Imports for consumption	Stocks, end of period		Reported scrap consumption	Net production 4/	Reported consumption 5/	Stocks, end of period	
			Industry 2/	U.S. Government 3/				Industry 6/	U.S. Government 3/
1999:									
December	W	66	W	34,600	316	720	722	1,070	2,700
January-December 7/	2,100	2,870	XX	XX	5,220	8,500	8,320	XX	XX
2000:									
January	W	267	W	34,600	482	765	749	1,040	2,700
February	W	56	W	34,600	452 r/	775	690	1,100	2,650
March	W	209	W	34,600	473 r/	905	754	1,140	2,600
April	W	277	W	34,600	396	848	746	1,250	2,480
May	W	336	W	33,900	361	835	728	1,340	2,320
June	W	169	W	33,900	418	823	701	1,410	2,320
July	W	196	W	33,900	426	777	745	1,300	2,290
August	W	136	W	33,900	444	687	665	1,270	2,280
September	W	97	W	33,500	394	781	746	1,230	2,250
October	W	342	W	33,500	436	734	720 r/	1,200	2,180
November	W	97	W	33,500	432	776	684 r/	1,240	2,180
December	W	NA	W	33,400	402	720	669	1,260	2,110
Total	W	NA	XX	XX	5,120	9,430	8,600	XX	XX

r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in total. 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, tungsten carbide powder, chemicals, and other products.

5/ Includes estimates and scrap.

6/ Reported by producers.

7/ Does not include withheld data.

TABLE 2
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF
AMMONIUM PARATUNGSTATE, BY MONTH 1/

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period 2/
1999:			
December	500	490	376
January-December	7,330	7,490	XX
2000:			
January	552	641	402
February	575	695	237
March	740	729	W
April	W	726	123
May	W	671	W
June	W	W	68
July	W	W	W
August	W	944	212
September	508	694	W
October	W	871	146
November	W	W	109
December	W	787	W
Total 3/	2,380	6,760	XX

W Withheld to avoid disclosing company proprietary data; not included in "Total."
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 PRODUCTS 1/

(Metric tons, tungsten content)

Product	Net production 2/				Stocks at end of period		
	2000				2000		
	1999	November	December	Year to date	1999	November	December
Metal powder	4,540	373	368	4,980	626	579	611
Tungsten carbide powder (made from metal powder)	3,960	403	352	4,450	441	656	644
Cast and crystalline carbide powder; other	W	W	W	W	W	W	W
Chemicals	W	W	W	W	W	W	W
Total 3/	8,500	776	720	9,430	1,070	1,240	1,260

W Withheld to avoid disclosing company proprietary data; not included in "Total."

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

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

3/ Does not include withheld data.

TABLE 4
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE IN 2000 1/ 2/ 3/

(Metric tons, tungsten content)

End use	November	December	Year to date
Steels	38	40	494
Superalloys	28	23	347
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	477	483	5,840
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	141 r/	123	1,920
Total	684 r/	669	8,600

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

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

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

3/ Includes estimates.

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

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

TABLE 5
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS 1/ 2/ 3/

(Metric tons, tungsten content)

Period	Ferro-tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials 4/	Total
Consumption:						
1999:						
December	43	146	495	28	10	722
January-December	473	1,500	5,930	317	103	8,320
2000:						
January	41	182	486	31	8	749
February	42	120	489	31	9	690
March	52	152	507	34	8	754
April	41	178	481	35	11	746
May	41	145	495	38	9	728
June	37	126	496	32	10	701
July	36	W	483	28	W	745
August	37	106	485	29	8	665
September	36	W	498	32	W	746
October	36	164 r/	476	36	8	720 r/
November	36	129	476	34	8	684 r/
December	40	109	482	30	8	669
January-December	476	1,770	5,850	391	105	8,600
Stocks:						
1999:						
December	33	15	475	22	12	557
2000:						
January	33	18	413	24	12	499
February	27	14	415	29	11	497
March	38	16	413	33	14	514
April	37	16	418	35	11	517
May	29	17	418	31	13	508
June	52	17	415	27	16	526
July	48	13	409	28	11	509
August	44	14	420	30	11	520
September	41	14 r/	412	40	11	518 r/
October	49	16	414	39	11	530
November	44	23 r/	405	41	11	524 r/
December	39	18	406	42	11	517

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in total.

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

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

3/ Includes estimates.

4/ Includes tungsten chemicals.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferrotungsten	Metal powder	Tungsten carbide powder	Other 2/	Total	Total year to date
1999	2,870	1,920	669	310	790	3,100	9,670	XX
2000:								
September	97	108	15	8	71	98	398	6,650
October	342	236	15	79	109	161	942	7,590
November:								
Australia	--	--	--	--	--	--	--	36
Austria	--	--	--	--	2	4	6	58
Belgium	--	--	--	(3/)	--	(3/)	(3/)	4
Bolivia	35	--	--	--	--	--	35	401
Brazil	--	--	--	--	--	--	--	(3/)
Canada	--	--	--	--	48	--	48	497
China	46	18	13	28	10	168	283	4,120
Estonia	--	--	--	--	--	--	--	8
France	--	--	--	--	1	(3/)	1	9
Germany	--	17	--	4	13	6	40	383
Hong Kong	--	31	--	--	--	--	31	72
Hungary	--	--	--	--	--	--	--	6
India	--	--	--	--	--	(3/)	(3/)	(3/)
Ireland	--	--	--	--	--	--	--	(3/)
Israel	--	--	--	4	11	1	16	146
Italy	--	--	--	--	--	--	--	1
Japan	--	--	--	1	--	1	2	45
Kazakhstan	--	--	--	--	--	--	--	31
Korea, Republic of	--	--	--	6	1	(3/)	7	21
Liechtenstein	--	--	--	--	--	--	--	(3/)
Luxembourg	--	--	--	--	(3/)	--	(3/)	13
Mexico	--	--	--	--	--	(3/)	(3/)	(3/)
Mongolia	--	--	--	--	--	--	--	29
Netherlands	--	--	--	--	--	(3/)	(3/)	10
Netherlands Antilles	--	--	--	--	--	--	--	(3/)
New Zealand	--	--	--	--	--	--	--	7
Peru	--	--	--	--	--	--	--	107
Poland	--	--	--	--	--	--	--	(3/)
Portugal	10	--	--	--	--	--	10	462
Russia	--	53	--	--	2	90	145	1,450
Rwanda	--	--	--	--	--	--	--	87
Singapore	--	--	--	--	(3/)	--	(3/)	1
South Africa	--	--	--	--	--	--	--	1
Spain	--	--	--	--	--	--	--	(3/)
Sweden	--	--	--	--	--	(3/)	(3/)	(3/)
Switzerland	--	--	--	--	--	(3/)	(3/)	3
Taiwan	--	--	--	--	--	--	--	(3/)
Thailand	--	--	--	--	--	(3/)	(3/)	12
Uganda	5	--	--	--	--	--	5	5
United Kingdom	--	--	--	--	--	(3/)	(3/)	190
Total	97	119	13	43	88	272	631	8,230
Total, year to date	2,180	1,840	470	517	912	2,300	8,230	XX

XX Not applicable. -- Zero.

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

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

3/ Less than 1/2 unit.

Note: Imports of waste and scrap in November 2000 totaled 57 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
1999	26	103	711	701	498	2,040	XX
2000:							
September	2	7	43	75	50	177	1,330
October	15	20	30	155	46	265	1,590
November:							
Australia	--	--	(4/)	1	(4/)	1	8
Austria	--	--	(4/)	--	--	(4/)	7
Barbados	--	--	--	--	--	--	(4/)
Belgium	--	--	--	--	3	3	15
Bolivia	--	--	--	--	--	--	(4/)
Brazil	--	--	1	(4/)	1	2	23
Canada	--	--	4	12	3	19	274
Chile	--	--	--	(4/)	--	(4/)	1
China	--	--	--	--	(4/)	(4/)	9
Czech Republic	--	--	--	--	--	--	25
Denmark	--	--	--	--	--	--	14
Egypt	--	--	--	--	--	--	6
France	--	--	1	(4/)	1	2	33
Germany	--	--	29	19	20	68	500
Hong Kong	--	--	(4/)	--	(4/)	(4/)	3
Hungary	--	--	--	--	1	1	27
India	--	--	(4/)	--	1	1	20
Indonesia	--	--	--	--	1	1	8
Ireland	--	--	--	--	--	--	2
Israel	--	--	7	--	(4/)	7	25
Italy	--	--	1	3	(4/)	4	79
Japan	3	--	2	2	3	10	61
Korea, Republic of	2	--	--	--	(4/)	2	12
Luxembourg	--	--	--	--	--	--	1
Malaysia	--	--	--	--	--	--	3
Mexico	--	--	(4/)	(4/)	3	3	57
Netherlands	--	--	--	--	1	1	52
New Zealand	--	--	--	--	(4/)	(4/)	(4/)
Philippines	--	--	--	--	(4/)	(4/)	1
Russia	--	--	--	--	--	--	8
Saudi Arabia	--	--	--	--	--	--	5
Singapore	--	--	--	(4/)	(4/)	(4/)	8
South Africa	--	--	--	1	(4/)	1	19
Spain	--	(4/)	(4/)	--	3	3	15
Sri Lanka	--	--	--	--	--	--	(4/)
Sweden	--	--	--	14	(4/)	14	134
Switzerland	--	--	(4/)	--	--	(4/)	1
Taiwan	--	--	11	--	(4/)	11	28
Turkey	--	--	--	--	--	--	3
United Arab Emirates	--	--	--	--	--	--	1
United Kingdom	--	--	6	48	1	56	311
Venezuela	--	--	--	--	(4/)	(4/)	2
Other	--	--	(4/)	(4/)	2	2	4
Total	5	(4/)	63	100	44	213	1,800
Total, year to date	64	51	435	823	431	1,800	XX

XX Not applicable. -- Zero.

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

2/ Tungsten content estimated from reported gross weight.

3/ Includes wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

4/ Less than 1/2 unit.

Note: Estimated exports of waste and scrap in November 2000 totaled 95 metric tons, tungsten content.

Source: U.S. Census Bureau.