

Mineral Industry Surveys

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TUNGSTEN IN OCTOBER 2000

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from hydrogen-reduced metal powder, was 12% higher during January through October 2000 than net production during the same period in 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 January through October 2000 was 7% higher than that during the same period in 1999. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for October 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

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 November 1 to 30, 2000, are as follows:

Low—\$42/metric ton unit WO_3 (\$38/short ton unit WO_3)
High—\$55/metric ton unit WO_3 (\$50/short ton unit WO_3)

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

Period	Concentrate				Reported scrap consumption	Intermediate products			
	Reported consump- tion	Imports for consumption	Stocks, end of period			Net production 4/	Reported consump- tion 5/	Stocks, end of period	
			Industry 2/	U.S. Gov- ernment 3/				Industry 6/	U.S. Gov- ernment 3/
1999:									
October	W	133	W	34,600	490	854	741	1,190	2,700
November	W	71	W	34,600	398	600	661	1,070	2,700
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	444	775	690	1,100	2,650
March	W	209	W	34,600	462	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 r/	763	1,340 r/	2,320
June	W	169	W	33,900	418	823 r/	757	1,410 r/	2,320
July	W	196	W	33,900	426 r/	777 r/	730	1,300 r/	2,290
August	W	136	W	33,900	444 r/	687 r/	734	1,270 r/	2,280
September	W	97	W	33,500	394 r/	781 r/	750	1,230 r/	2,250
October	W	NA	W	33,500	413	806	736	1,130	2,180
Total	W	NA	XX	XX	4,240	8,000	7,410	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:			
October	670	717	432
November	499	604	363
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 r/	212
September	508	694 r/	W
October	508	682	W
Total 3/	2,880	5,780	XX

r/ Revised. 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	September	October	Year to date	1999	September	October
Metal powder	4,540	397 r/	436	4,300	626	558 r/	547
Tungsten carbide powder (made from metal powder)	3,960	384 r/	370	3,700	441	598 r/	579
Cast and crystalline carbide powder; other	W	W	W	W	W	W	W
Chemicals	W	W	W	W	W	74 r/	W
Total 3/	8,500	781 r/	806	8,000	1,070	1,230 r/	1,130

r/ Revised. 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	September	October	Year to date
Steels	38	37	415
Superalloys	27	30	296
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	498	477	4,880
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	187	192	1,820
Total	750	736	7,410

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:						
October	41	172	498	21	8	741
November	39	87	499	26	11	661
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	180	495	38	9	763
June	37	182	496	32	10	757
July	36	174	483	28	8	730
August	37	175	485	29	8	734
September	36	175	498	32	8	750
October	36	180	476	36	8	736
January-October	400	1,700	4,900	327	88	7,410
Stocks:						
1999:						
October	27	15	498	32	11	582
November	25	17	494	26	13	575
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	12	412	40	11	516
October	49	14	414	39	11	528

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:								
July	196	119	86	11	82	196	691	5,460
August	136	291	43	64	60	203	796	6,250
September:								
Australia	--	--	--	--	--	--	--	(3/)
Austria	--	--	--	--	5	4	9	42
Belgium	--	--	--	--	--	(3/)	(3/)	4
Bolivia	25	--	--	--	--	--	25	341
Brazil	--	--	--	--	--	--	--	(3/)
Canada	--	--	--	--	39	--	39	392
China	--	90	15	1	4	54	165	3,470
Estonia	--	--	--	--	--	--	--	8
France	--	--	--	--	--	(3/)	(3/)	6
Germany	--	18	--	3	7	9	36	308
Hong Kong	--	--	--	--	--	(3/)	(3/)	9
Hungary	--	--	--	--	--	(3/)	(3/)	6
India	--	--	--	--	--	--	--	(3/)
Ireland	--	--	--	--	--	--	--	(3/)
Israel	--	--	--	2	11	(3/)	14	123
Italy	--	--	--	--	--	--	--	1
Japan	--	--	--	2	1	2	5	34
Kazakhstan	9	--	--	--	--	--	9	31
Korea, Republic of	--	--	--	(3/)	3	(3/)	3	10
Luxembourg	--	--	--	--	--	--	--	12
Mexico	--	--	--	--	--	(3/)	(3/)	(3/)
Mongolia	--	--	--	--	--	--	--	14
Netherlands	--	--	--	--	--	(3/)	(3/)	10
Netherlands Antilles	--	--	--	--	--	--	--	(3/)
New Zealand	--	--	--	--	--	--	--	7
Peru	--	--	--	--	--	--	--	98
Poland	--	--	--	--	--	(3/)	(3/)	(3/)
Portugal	20	--	--	--	--	--	20	229
Russia	17	--	--	--	--	28	44	1,230
Rwanda	14	--	--	--	--	--	14	73
Singapore	--	--	--	--	--	(3/)	(3/)	1
South Africa	--	--	--	--	--	--	--	1
Spain	--	--	--	--	--	--	--	(3/)
Sweden	--	--	--	--	--	(3/)	(3/)	(3/)
Switzerland	--	--	--	--	--	(3/)	(3/)	3
Taiwan	--	--	--	--	--	(3/)	(3/)	(3/)
Thailand	12	--	--	--	--	(3/)	12	12
United Kingdom	--	--	--	--	(3/)	1	1	169
Total	97	108	15	8	71	98	398	6,650
Total, year to date	1,740	1,490	442	395	715	1,870	6,650	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 September 2000 totaled 42 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:							
July	6	1	54	62	35	158	991
August:	1	--	41	79	37	157	1,150
September:							
Australia	--	--	--	--	--	--	6
Austria	--	--	--	--	--	--	1
Barbados	--	--	--	--	--	--	(4/)
Belgium	--	--	--	(4/)	4	4	11
Bolivia	--	--	--	--	--	--	(4/)
Brazil	--	--	2	(4/)	(4/)	2	18
Canada	--	--	6	7	6	19	229
Chile	--	--	--	--	--	--	(4/)
China	--	--	1	--	(4/)	1	5
Czech Republic	--	6	--	--	--	6	6
Denmark	--	--	--	(4/)	--	(4/)	14
Egypt	--	--	--	--	--	--	6
France	--	1	(4/)	--	1	2	25
Germany	--	--	15	8	21	44	373
Hong Kong	--	--	--	--	--	--	3
Hungary	--	--	--	--	2	2	22
India	--	--	(4/)	--	3	3	15
Indonesia	--	--	(4/)	--	2	2	8
Ireland	--	--	--	(4/)	--	(4/)	2
Israel	--	--	(4/)	15	(4/)	16	18
Italy	(4/)	--	(4/)	5	1	7	72
Japan	--	--	6	(4/)	3	10	46
Korea, Republic of	2	--	1	(4/)	(4/)	3	7
Luxembourg	--	--	--	--	--	--	1
Malaysia	--	--	--	--	--	--	3
Mexico	--	(4/)	--	(4/)	3	4	49
Netherlands	--	--	--	(4/)	--	(4/)	45
New Zealand	--	--	--	--	--	--	(4/)
Philippines	--	--	--	--	--	--	(4/)
Saudi Arabia	--	--	--	--	--	--	5
Singapore	--	--	1	(4/)	(4/)	1	7
South Africa	--	--	(4/)	--	(4/)	(4/)	18
Spain	--	--	--	--	1	1	8
Sri Lanka	--	--	--	--	--	--	(4/)
Sweden	--	--	--	--	(4/)	(4/)	119
Switzerland	--	--	--	--	(4/)	(4/)	1
Taiwan	--	--	--	--	(4/)	(4/)	16
Turkey	--	--	(4/)	--	--	(4/)	3
United Arab Emirates	--	--	(4/)	--	--	(4/)	1
United Kingdom	--	--	9	38	1	49	160
Venezuela	--	--	(4/)	(4/)	--	(4/)	2
Other	--	--	(4/)	--	(4/)	(4/)	(4/)
Total	2	7	43	75	50	177	1,330
Total, year to date	44	31	341	568	341	1,330	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 September 2000 totaled 59 metric tons, tungsten content.

Source: U.S. Census Bureau.