

Mineral Industry Surveys

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TUNGSTEN IN JULY 2023

U.S. reported consumption of tungsten concentrate, net production of intermediate tungsten products, including metal powder and tungsten carbide powder, and industry stocks of tungsten materials were withheld to avoid disclosing company proprietary data. U.S. Government National Defense Stockpile inventory statistics are no longer available.

During January through July 2023, the amount of tungsten contained in U.S. imports of materials listed in table 2 was 19% less than that imported during the same period in 2022. The amount of tungsten contained in U.S. exports of materials listed in table 3 was 75% more during January through July 2023 than that exported during the same period in 2022.

Prices

The following tungsten price comparisons are U.S. Geological Survey calculations based on Argus Metals International prices. The July 2023 monthly average price for

tungsten concentrate, ex works China, was slightly lower than that in June 2023 and essentially unchanged from that in July 2022. The July 2023 monthly average price for ammonium paratungstate, European Union market, was essentially unchanged from that in June 2023 and 7% lower than that in July 2022 (fig. 1).

Industry News

In July, Group 6 Metals Ltd. (Australia) announced that it had made its first shipment of tungsten concentrate from its wholly-owned Dolphin Mine near the town of Grassy on the southeast coast of King Island, Tasmania, Australia. Group 6 Metals started concentrate production in May and from late June to early July, the company processed more than 10,000 metric tons (t) of low- to medium-grade ore to produce approximately 10 t of saleable tungsten concentrate, which was shipped in mid-July. Based on preliminary assays, the concentrate had an

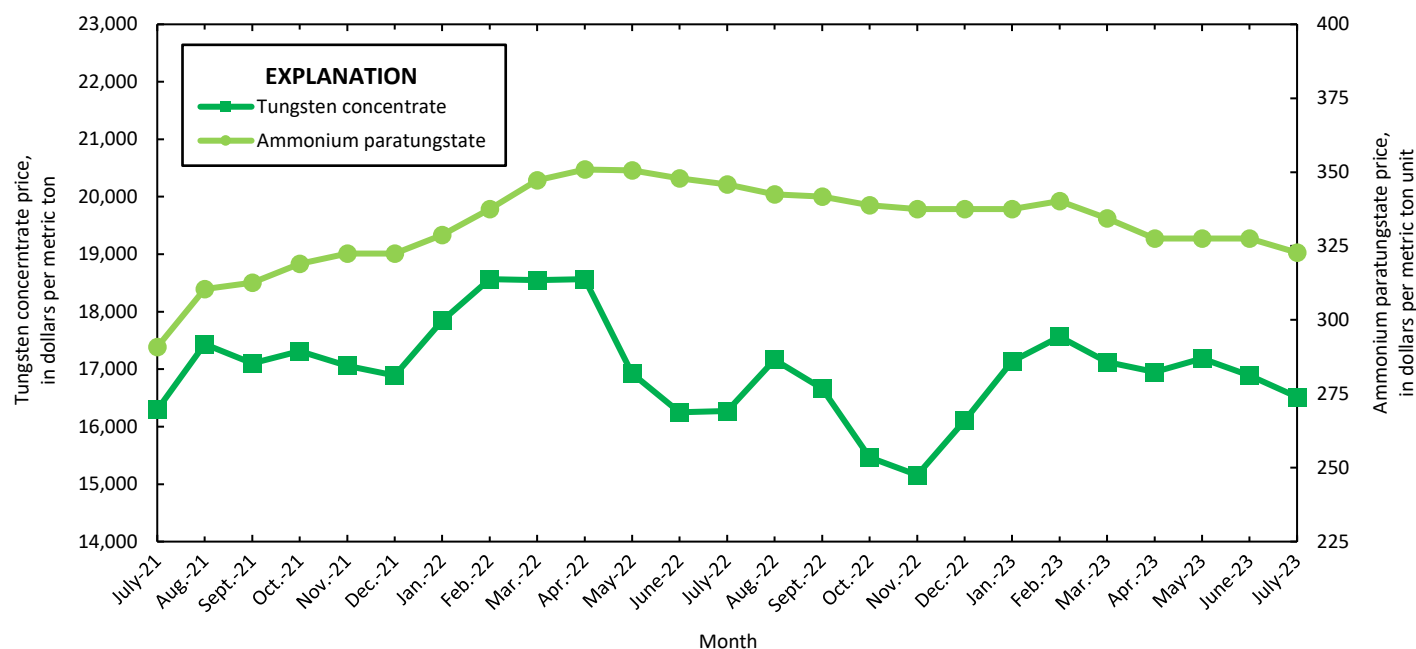


Figure 1. Monthly average prices for tungsten concentrate and ammonium paratungstate for July 2021 through July 2023. Source: Argus Metals International.

average grade of 55% tungsten trioxide (WO₃) and a maximum grade of 68% WO₃. Group 6 Metals was ramping up to nameplate capacity of processing 400,000 metric tons per year (t/yr) of ore. The company planned to begin processing run-of-mine ore in early August, which was expected to improve the performance of the beneficiation plant by increasing the grade of ore processed (Group 6 Metals Ltd., 2023a; 2023b, p. 2; 2023c).

The Dolphin Mine was forecast to produce approximately 2,100 t/yr of tungsten in concentrate over a 13 year mine life. Mining was planned to be in three phases. Phase 1 production (years 0 to 6) would be from an open pit operation yielding an average of approximately 1,500 t/yr of tungsten in concentrate. Phase 2 production (years 6 to 11) would access high-grade underground ore and yield an average of approximately 2,500 t/yr of tungsten in concentrate and phase 3 production (years 11 to 13) would be a high-grade, low stripping ratio open pit closing operation that would yield an average of approximately 2,300 t/yr of tungsten in concentrate. Group 6 Metals had 4-year offtake agreements with Wolfram Bergbau und Hütten AG (Austria) and Traxys Group (Luxembourg) for approximately 59% of its average annual forecast production during the first 4 years of operation (Group 6 Metals Ltd., 2023b, p. 1–2, 10).

References Cited

- Group 6 Metals Ltd., 2023a, First shipment of tungsten concentrate dispatched from Dolphin: Sydney, New South Wales, Australia, Group 6 Metals Ltd. ASX announcement, July 19, 4 p. (Accessed September 20, 2023, at <https://wcsecure.weblink.com.au/pdf/G6M/02688173.pdf>.)
- Group 6 Metals Ltd., 2023b, Production underway at the Dolphin tungsten project: Sydney, New South Wales, Australia, Group 6 Metals Ltd. investor presentation, June 14–15, 16 p. (Accessed September 20, 2023, at <https://wcsecure.weblink.com.au/pdf/G6M/02675855.pdf>.)
- Group 6 Metals Ltd., 2023c, Quarterly activities and cash flow report to 30 June 2023: Sydney, New South Wales, Australia, Group 6 Metals Ltd., July 31, 8 p. (Accessed September 20, 2023, at <https://wcsecure.weblink.com.au/pdf/G6M/02692413.pdf>.)

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TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS¹

(Metric tons, tungsten content)

Period	Concentrate			Intermediate products	
	Consumption	Imports for consumption	Stocks, end of period ^{2, 3}	Net production ⁴	Stocks, end of period ⁵
2022:					
July	W	224	W	W	W
August	W	134	W	W	W
September	W	245	W	W	W
October	W	202	W	W	W
November	W	190	W	W	W
December	W	239	W	W	W
January–December	W	2,130	W	W	W
2023:					
January	W	153	W	W	W
February	W	99	W	W	W
March	W	120	W	W	W
April	W	119	W	W	W
May	W	91	W	W	W
June	W	91	W	W	W
July	W	112	W	W	W
January–July	W	785	W	W	W

W Withheld to avoid disclosing company proprietary data.

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

²Consumer stocks.

³U.S. Government National Defense Stockpile inventory statistics are no longer available.

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

⁵Producer stocks of tungsten metal powder and tungsten carbide powder.

TABLE 2
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY OR LOCALITY¹

(Metric tons, tungsten content)

Period and country or locality of origin	Ores and concentrates	Ammonium tungstates	Ferro-tungsten	Metal powder	Tungsten carbide powder	Other ²	Total	Total, year to date
2022:								
January–July	1,120	601	14	1,040	1,180 ^r	1,900 ^r	5,860 ^r	XX
January–December	2,130	1,200	52	1,990	2,010	3,340	10,700	XX
2023:								
May	91	80	4	112	168	190	646	3,370
June	91	104	8	83	142	145	573	3,940
July:								
Austria	--	--	--	2	40	4	46	313
Bolivia	70	--	--	--	--	--	70	375
Canada	--	--	--	33	23	9	65	506
China	10	146	--	33	49	72	310	1,790
France	--	--	--	--	--	1	1	15
Germany	--	71	--	4	--	20	95	365
India	--	(3)	--	--	--	1	1	54
Israel	--	--	--	22	--	(3)	22	63
Japan	--	--	--	--	(3)	8	9	71
Korea, Republic of	--	--	--	11	--	(3)	11	76
Mexico	--	--	--	--	--	--	--	5
Mongolia	--	--	--	--	--	--	--	19
Portugal	23	--	--	--	--	--	23	183
Russia	--	--	--	--	--	--	--	49
Spain	--	--	--	--	--	--	--	53
Switzerland	--	--	--	--	--	1	1	9
Taiwan	--	--	--	--	--	22	22	177
Thailand	10	--	--	--	--	--	10	58
United Kingdom	--	--	--	--	--	(3)	(3)	5
Vietnam	--	--	--	--	--	92	92	524
Other	--	--	--	(3)	--	2	2	15
Total	112	218	--	105	112	232	779	4,720
January–July	785	711	18	805	916	1,490	4,720	XX

^rRevised. 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

³Less than ½ unit.

Note: Imports of waste and scrap in July 2023 totaled 320 metric tons, tungsten content, to give a January–July total of 2,310 metric tons, tungsten content.

Source: U.S. Census Bureau.

TABLE 3
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY OR LOCALITY¹

(Metric tons, tungsten content)

Period and country or locality of destination	Ores and concentrates ²	Ammonium tungstates	Metal powder ²	Tungsten carbide powder	Other ³	Total	Total, year to date
2022:							
January–July	394	7	444	300 ^r	309	1,450	XX
January–December	614	8	787	512	463	2,380	XX
2023:							
May	319	1	82	40	46	488	1,590
June	288	--	72	37	38	435	2,020
July:							
Australia	--	--	--	4	(4)	5	36
Austria	--	--	--	--	--	--	30
Belgium	--	--	--	1	--	1	39
Brazil	--	--	1	1	(4)	2	10
Canada	--	--	55	5	3	63	515
China	--	1	(4)	(4)	5	7	55
Costa Rica	--	--	--	1	3	4	28
Czechia	--	--	--	1	--	1	15
Denmark	--	--	--	--	--	--	30
France	--	--	1	--	--	1	24
Germany	--	--	1	7	1	8	78
India	--	--	1	(4)	(4)	1	44
Indonesia	--	--	--	2	(4)	2	5
Israel	--	--	(4)	1	(4)	1	8
Japan	--	--	(4)	3	(4)	3	40
Korea, Republic of	--	6	1	1	(4)	8	15
Malaysia	--	--	--	1	--	1	5
Mexico	--	--	1	--	8	9	96
Philippines	--	--	--	(4)	2	2	7
Saudi Arabia	--	--	1	2	(4)	3	23
Singapore	--	--	(4)	(4)	(4)	1	5
South Africa	--	--	1	--	(4)	1	6
Taiwan	--	--	--	--	55	55	165
United Kingdom	--	--	2	1	2	5	18
Vietnam	341	--	--	--	--	341	1,220
Other	--	--	2	3	2	6	30
Total	341	7	66	31	83	529	2,550
January–July	1,220	63	476	293	501	2,550	XX

^rRevised. 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 ½ unit.

Note: Exports of waste and scrap in July 2023 totaled 49 metric tons, tungsten content, to give a January–July total of 621 metric tons, tungsten content.

Source: U.S. Census Bureau.