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MINERAL INDUSTRY SURVEYS

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
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Annual, Preliminary

TUNGSTEN IN 1975

In 1975, domestic production of tungsten ore and concentrate, as measured by mine shipments, decreased 11% compared with that of 1974 to 7.0 million pounds of contained tungsten valued at $35 million, according to the Bureau of Mines, U.S. Department of the Interior. Reported concentrate consumption fell 10% to 14.7 million pounds of tungsten. During the year, 10.8 million pounds of concentrate were "toll" converted to ammonium paratungstate (APT) and shipped to intermediate processors. APT was produced by four processors and consumed by eight users.

Imports of tungsten concentrate for consumption fell 34% and totaled 7.3 million pounds of contained tungsten. These imports were valued at $35.9 million (about $78.50 per short ton unit of tungsten trioxide (WO_3) including the U.S. duty). The tariff applicable to Market Economy Countries was $3.93/stu and the statutory duty applicable to most Centrally Controlled Economy Countries was $7.93/stu. The major sources of imported concentrates were: Canada (27%), Bolivia and Peru (11% each); Thailand and Rep. of Korea (9% each); Mexico (6%); Australia (5%); and the People's Republic of China, Portugal, and Burma (4% each).

Exports of tungsten concentrate in 1975, from material purchased from the U.S. Government stockpile, increased 21% and totaled 1.4 million pounds of contained tungsten. Of this amount, 49% was shipped to the Netherlands, 45% to West Germany, and 6% to France.

While minor intermittent concentrate production and/or shipments were reported from 35 mines in six Western States (Arizona, California, Colorado, Idaho, Nevada, and Utah), two major mines continued to account for 95% of the 1975 domestic tungsten production. Operating almost continuously, these two mines produced tungsten as a coproduct or byproduct of molybdenum. These operations were the Pine Creek mine and mill of the Metals Division, Union Carbide Corp., northwest of Bishop, California and the Climax mine and mill of the Climax Molybdenum Co., a division of American Metal Climax, Inc. (AMAX), near Leadville, Colorado.

Mine development and mill construction was conducted by Union Carbide Corp. (UCC) in Southern Nevada near Alamo to reopen the Tempiute tungsten property. When in full scale operation by mid-1976, about 2 million pounds of tungsten will be produced annually. After being processed to low grade concentrate (10% to 15% WO_3), this material will be transported to UCC's Pine Creek facility to be further processed to APT.

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Annual consumption of tungsten products fell 45% to 11.2 million pounds of tungsten during 1975. Major end uses were as follows: Tungsten carbide cutting and wear resistant materials (including welding and hard facing rods and materials), 68%; tungsten metal mill products, 15%; tool steels, 10%; alloy, stainless, and heat resistant steels, 5%; superalloys, chemicals, ceramics, and other uses, 2%.

The European price of tungsten ore and concentrate in 1975 as quoted in the Metal Bulletin (London) and reported in Metals Week remained relatively stable above the average price reported in 1974. The price ranged from a low of 36.75 pounds sterling (£) per metric ton unit to a high of 45.50 £/mtu (about $73.30/short ton unit to $94.73/stu depending upon the prevailing rate of exchange). Throughout the year, the average price of tungsten concentrate was about $84/stu of WO_3.

The General Services Administration (GSA) sold nearly 2.5 million pounds of excess stockpiled tungsten concentrate during the year. These sales were made on the basis of monthly sealed bids for export (51%) and for domestic use (49%). In addition, almost 0.4 million pounds of excess concentrate were awarded by GSA for use in a defense contract.

In February, Etibank's Uludag tungsten mine and mill being developed near Bursa, Turkey suffered severe fire damage. Production of scheelite concentrate originally scheduled to begin in 1976 will probably be delayed by about 18 months.

The Primary Tungsten Association (PTA), a group representing some of the world's major tungsten producing companies, was formed in April with headquarters established in London.

At its meeting in July, the United Nations Conference on Trade and Developments (UNCTAD) Committee on Tungsten considered a program of minimum and maximum prices for tungsten introduced by a group of tungsten producing nations. This proposal, originally developed by the PTA, was patterned after the agreement of the International Tin Council (ITC). However, unlike the ITC agreement, the proposal had no provision for buffer stocks. Since it would be impractical to enforce, most consuming nations opposed the proposal.

A meeting of the Working Group of the UNCTAD Committee on Tungsten is tentatively scheduled for early 1976 in Geneva at which time other proposals to stabilize tungsten market prices may be considered.

Studies by the Bureau of Mines were conducted in an attempt to develop extractive metallurgical techniques which could economically recover tungsten values from extremely low-grade brines, processing sludges, and scrap.