俄乌冲突对钨制品市场与价格的影响

IMPACTS OF RUSSIA-UKRAINE CONFLICT ON TUNGSTEN MARKET & PRICE

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中国厦门 2022.03.23
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作者简介

厦门中钨在线科技有限公司，简称“中钨在线”，是中国第一家钨、钼、稀土行业的电子商务公司，1997 年 9 月以我国第一家顶级钨制品网站 www.chinatungsten.com 为基础在厦门设立。中钨在线以其在钨钼制品领域几十年积累的信息数据和专业经验为基础的设计、制造，卓越的商业信誉和优质服务闻名全球业界，使其成为钨钼稀土，特别是钨化学品、金属钨、硬质合金、高比重合金、钼及钼合金领域的最佳综合应用解决方案提供商。

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BRIEF INTRODUCTION TO THE AUTHOR

As the 1st E-commerce company of Tungsten (W), Molybdenum (Mo), Rare Earth (RE) in China, China Tungsten Online Manu. & Sales (CTOMS) was founded in 1997 based on China's the 1st and top tungsten website www.chinatungsten.com. As its specialized design, professional manufacturing, excellent service and powerful information database, CTOMS is not only the most authoritative information source of Chinese and English information of W Mo and RE products globally, but also the best comprehensive application solution provider of W, Mo and RE, both chemical materials and machined products, such as tungsten oxide, metal, cemented carbide and heavy alloys.

CTOMS has been created more than 1 million web pages and WeChat information message of W, Mo and RE news, price and market research, analysis. The web news.chinatungsten.com, www.ctia.com.cn are the world's top index websites of tungsten which have received 1 billion visits from 1997.

The major business of CTOMS is to complete product design, R & D with customers and provide customers with processing and integration services. In the past 2 decades, it has provided more than 100,000 different types of W, Mo & RE products to more than 10,000 customers all over the world. Years experience and technology accumulation have laid a foundation for promoting the flexible and intelligent manufacturing of customized products.

The professional research articles and reports of CTOMS are written by Dr. Hanns, Miss Sunny Zheng, professional analyst and its marketing team. Dr. Hanns is an expert of the main market and technical research of CTOMS has been engaged in e-commerce and international trade of tungsten and molybdenum products, production and manufacturing of cemented carbide and high specific gravity tungsten alloy since the early 1990s. He is a well-known expert in e-commerce, tungsten product design, processing and Market Research of tungsten and molybdenum products in the industry with more than 30 years of experience. Miss Sunny has been committed to the research of tungsten market, creating and promoting CTOMS social media form many years. She has strong professional delicacy and sensitivity to tungsten products market and price.

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PART VI OF X

Thoughts on China's Tungsten Futures under the Background of Russia-Ukraine Conflict

In recent years, China's tungsten products industry and relevant futures industry have continuously put forward and explored the possibility suggestions and feasibility studies of tungsten products futures in various ways, but there is no convincing professional research report or feasible implementation scheme of tungsten products futures.

As early as 2007, Ganzhou City made relevant suggestions to attract bulk goods into the park for trading in combination with the planning and construction of Ganzhou comprehensive logistics park at that time, and integrate the functions of "spot trading, futures listing, futures delivery, warehousing and exhibition, packaging and processing" of rare earth, tungsten and navel orange into the planning of the comprehensive logistics park. There has been no substantive progress since this suggestion.

Shanghai Futures Exchange (SHFE) has been studying the possibility of futures listing of rare earth, tungsten and molybdenum and other rare metal varieties since 2013. It is hoped that the listing of rare earth related futures varieties can help China's rare earth enterprises avoid risks, arrange production and lock profits, promote the development of the industry, help to form a more transparent and market-oriented price and promote the price discovery of rare earth related varieties.

From March 24 to 25, 2021, relevant leaders of SHFE visited Jiangxi Ganzhou rare earth group Co., Ltd. and local rare metal production enterprises, and said that SHFE would establish a quotation zone on SHFE standard warehouse receipt trading platform to quote rare earth varieties, so as to promote the strategic cooperative relationship between SHFE and Ganzhou municipal government and Ganzhou rare earth group, and jointly promote the construction of multi-level bulk commodity market system, Enhance the price influence of rare earth and rare metal varieties.

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SHANGHAI FUTURES EXCHANGE (SHFE)

On May 28, 2021, Song Liping, the chairman of the board of supervisors of SHFE, said in her speech at the 18th Shanghai derivatives market forum that in the next step, the exchange will implement the decision-making and deployment of the CPC Central Committee and the State Council, improve its political position, adhere to the awareness of the overall situation, work together to promote the stable operation of the futures market, improve quality and efficiency, and strive to build a system that matches the development level of the real economy and the needs of risk management A multi-level non-ferrous metal derivatives market system with strong international competitiveness. The basic working ideas are: (1) Optimize the rule system and earnestly maintain the openness, fairness and justice of the market; (2) Continue the supply of sequential products, orderly promote the R & D and listing of alumina, tungsten, magnesium, aluminum alloy, cobalt, rare earth and other varieties, and promote the construction of a comprehensive derivatives market system with the on-site derivatives market as the core; (3) Adhere to the internationalization direction, study the new internationalization mode of non-ferrous metal futures varieties, and promote high-quality development with high-level opening-up.

On October 18, 2021, China (Shanghai) tungsten raw material industry development high-end forum was successfully held in Shanghai. The forum is hosted by China Tungsten Industry Association (CTIA), co-sponsored by China Tungsten High Tech Materials Co., Ltd., Jiangxi Tungsten Industry Holding Group Co., Ltd. and Xiamen tungsten industry Co., Ltd., and jointly organized by Smelting Branch, Cemented Carbide Branch and Economic and Trade Research Branch of CTIA. The theme of the forum is to build a communication platform for tungsten industry and promote upstream and downstream cooperation of tungsten products, it will help improve the ecology of the tungsten industry chain and build a solid industrial foundation, help the high-quality development of the tungsten industry, and promote the tungsten industry from a large tungsten industry to a powerful tungsten industry. During the forum, a closed-door discussion on tungsten products futures was held, and representatives of relevant parties discussed the variety selection, problems, advantages and disadvantages of tungsten products futures.

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On October 18, 2021, "2021 China (Shanghai) Tungsten Raw Material Industry Development High-end Forum" was held in Shanghai. The meeting was presided over by Kuang Bing, deputy general manager of Jiangxi Tungsten Industry Holding Group Co., Ltd, Chang Guowu, deputy director of the Raw Material Industry Department of the Ministry of Industry and Information Technology, Huang Boyun, academician of the Chinese Academy of Engineering and former president of Central South University, Wang Jian, vice president of China Nonferrous Metals Industry Association, Li Hui, deputy general manager of Shanghai Futures Exchange, Che Changbo, Secretary General of China Mining Federation, and Zeiler, Secretary General of the International Tungsten Industry Association (ITIA), delivered speeches respectively. Ding Xuequan, President of China Tungsten Industry Association (CTIA), delivered a welcome speech. China ranks first in tungsten resource reserves in the world, and the members of CTIA cover almost all tungsten products enterprises. Therefore, the forum hosted by China Tungsten association has a great influence and indicator role in the world. China Nonferrous Metals News, China Nonferrous Metals Magazine, China Tungsten Industry Magazine, Cemented Carbide Magazine, Rare Metals and Cemented Carbide Magazine, Antaike, China Tungsten Online, Shanghai Nonferrous Metals and other supporting media sent representatives to the meeting and reported on the meeting.

From this point of view, the listing of futures varieties such as tungsten products and rare earths seems to be closer!

The conflict between Russia and Ukraine has brought great impact and variables to the world economy, which has not yet fully recovered due to the epidemic, brought great changes to the World Geopolitics, and may completely change the current situation of world political pattern and military power; After Russia proposed to withdraw from the WTO, we have seen that within a few years, the United States and Russia, the world's two major powers and Military Giants, have withdrawn from a global trade organization such as the WTO. Therefore, we can predict that the future world economy, trade and investment will be deeply affected by the chaotic political and military changes, and it may be difficult for us to think and talk about the economy, Especially for China's strategic minerals and metals with advantageous positions such as tungsten, molybdenum and rare earths, at a

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time when Europe and the United States continue to impose various sanctions and restrictions on China, how to manage and protect China's strategic resources and sustainable development and utilization will become a topic for the industry and the government. Therefore, whether to futures tungsten products is also one of the issues we must seriously and seriously consider.



In 2012, Russia entered the WTO after 18 years of negotiations, but now it wants to withdraw voluntarily, which shows the serious consequences of the sanctions imposed by the United States and Europe.

If the conflict between Russia and Ukraine brings challenges to our monetary policy, then money is a financial means and one of our retractable tools; If we say oil, natural gas and other energy sources, we should pay close attention to and ensure the diversification of sources; If food is very important to our country, it involves the rice bowls of all living beings; Tungsten products are in an advantageous position and have an indispensable and non-renewable strategic position. We need to examine and deal with them carefully from a strategic perspective in terms of macro policies and management systems related to mining, smelting, fine processing, export, reserves, futures, options and indexation. If we observe the recent game between Russia's export of advantageous resources such as oil, natural gas, coal, grain, chemical fertilizer, metal titanium and metal palladium and European and American sanctions, we should understand the importance of China's advantageous resources such as tungsten products and rare earths.

NOW, we strongly suggest that at a time when the global epidemic is unstable, the conflict between Russia and Ukraine is unresolved, European and American sanctions continue, Sino-US relations are deadlocked, and cross-strait reunification is unfinished, it is not appropriate to futures China's dominant strategic metals such as tungsten, molybdenum and rare earth. In this regard, we hope to discuss the

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technical aspects, market factors and related risks of tungsten products futures, and understand the possible spillover and exclusion of tungsten products futures.

IN ANY CASE, THE FUTURES OF TUNGSTEN WILL DETERMINE THE FUTURE OF TUNGSTEN !



Wolframite

1. Metal Futures & Non-ferrous Metal Futures

1.1 Futures and Commodity Futures

Commodity futures is a kind of futures contract in which the subject matter is physical goods. It is a standardized agreement between the buyer and the seller to buy and sell a certain quantity of physical goods at the price agreed at the time of signing the contract on a certain agreed date in the future. The focus of futures is "futures" rather than "goods". Unlike spot trading, futures emphasize future settlement; Similarly, futures is not easy to be "goods". Its subject matter can be some kind of commodity, some kind of securities, bonds or future earnings, which can be specified by standardized cooperation. Therefore, futures can be commodity futures or financial futures. Investors of futures invest or speculate in the futures market and buy and sell futures through standardized contracts, but they do not necessarily refer to professionals or practitioners of each commodity or ticket. For example, investors invest in gold futures forward contracts, but investors may not be gold operators or financial circles. They may only invest in profits through the futures market, Because the futures market is a zero-sum game, which is a speculative market that can be short and long at the same time. The profit of one (or several) investor must be the loss of another (or several) investor, which is quite different from the market logic of stocks.

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China's futures originated in Shanghai in the early 20th century. What many people may not know is that Kuomintang President Chiang Kai Shek and Chen Lifu's father once became one of the founders of SHFE in the name of collecting funds for the national revolution. After the founding of new China, China's futures market was closed. In 1988, after China's reform and opening up, China began to try futures trading. Then, before 2001, China standardized and adjusted the blind expansion and savage growth after 1992, which made China's futures market enter a benign stage of development. After the rectification, China's futures exchanges now include SHFE, Dalian futures exchange, Zhengzhou Futures Exchange and China Financial Futures Exchange.



How many people's dreams and nightmares used to be

At present, the futures approved for trading in China mainly include commodity futures and financial futures. Commodity futures are divided into three categories: metal commodities (copper, aluminum, tin, lead, zinc, nickel, gold, silver and deformed steel), energy commodities (crude oil, PTA, fuel oil, asphalt and natural rubber), and agricultural products (soybean, soybean oil, soybean meal, wheat, corn, cotton, rapeseed oil and palm oil); Financial futures mainly include stock index futures (CSI 300, CSI 500 and SSE 50), treasury bond futures (2-year treasury bonds, 5-year treasury bonds and 10-year Treasury bonds), interest rate futures (short-term interest rate and long-term interest rate futures) and foreign exchange futures (also known as currency futures).

1.2. Metal Futures and Non-ferrous Metal Futures

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The commodities specified in the futures contract standards of the futures exchange become futures varieties that can be listed in the futures exchange after being approved by the state regulatory authority. Standardization is the main feature of futures contract commodities. No matter what kind of commodity, its quantity, quality, grade, delivery, trading unit (unit of measurement), margin, time, delivery place and other terms can use fixed and set standardization. As futures commodities, the only variable is price.

After ore processing, metals have stable physical and chemical properties and are easy to become standardized products. Therefore, metals are one of the more mature futures varieties in the world-famous futures markets such as the London Metal Exchange, the New York Mercantile Exchange and the Tokyo industrial products exchange. In particular, the trading price of futures contracts on the London Metal Exchange is recognized as the pricing standard for non-ferrous metal trading all over the world. Among the four futures exchanges in China, SHFE was established earlier and there are many kinds of metal futures. Among them, the trading of copper futures is growing rapidly, and the trading volume ranks second in the world after the London Stock Exchange (LME).



Trading hall of Shanghai Futures Exchange（北大光华 EMBA 图）

Metals are generally divided into non-ferrous metals and ferrous metals (in fact, they are divided into ferrous metals and non-ferrous metals in Britain and China); Therefore, metal futures are divided into non-ferrous metal futures and ferrous metal futures. Ferrous metal futures mainly refer to the futures varieties of metal products based on iron, chromium and manganese; Gold, silver, platinum and palladium are called precious metal futures because of their high value. The quality, content, purity, grade and specification of non-ferrous metals such as copper, aluminum, zinc, tin, nickel and aluminum are easy to be divided and standardized. The market usage, circulation and trading volume are large, the storage and transportation are relatively simple, and the price is easily affected by supply and market

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demand. They are ideal futures trading varieties. There are futures varieties of copper in major futures exchanges in the world. Due to the huge output and trading volume, Copper is not only the first established metal futures trading variety with a history of more than 100 years, but also the leading product in metal futures. Copper is the main futures trading variety. In a large manufacturing country like China, copper futures are the most important current metal.



Shanghai copper daily K trend

According to the statistics of the previous period exchange in 2015, the total trading volume of all non-ferrous metal futures in the previous period reached 220 million hands unilaterally, with a unilateral trading amount of 27.4 trillion RMB Yuan. In 2015, the physical delivery volume of all non-ferrous metals in the previous period reached 1.302 million mts, including 355,000 mts of Copper, 69,4000 mts of Aluminum, 192,000 mts of Zinc, 51,000 mts of Lead, 18,000 mts ofNickel and 2,000 tons of Tin.

1.3 Guangzhou Futures Exchange and Commodity Index Futures

On April 19, 2021, Guangzhou futures exchange was inaugurated and established. It is the fifth Futures Exchange approved by the State Council and the CSRC. The purpose of establishing one belt, one road, is to implement the decision-making plan of the Central Committee of the CPC and the State Council, improve the multi-level capital market system, serve the important measures of the construction of Guangdong, Hongkong and Macau, and the "one belt and one road" construction. The Guangzhou stage will implement the new development concept, serve the real economy and serve the green development, adhere to the market, rule of law and internationalization, and take the lead in product, system and technological innovation, and actively and steadily push forward the construction of the futures market. Better serve China's ecological civilization construction and high-quality economic development.

Commodity index futures refers to the futures varieties with commodity index as the

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subject traded in the futures exchange. It is a new derivative and an on-site derivative instrument for index investment. Most of its commodity index compilation is based on futures price rather than spot price; Commodity index futures have a high degree of homogeneity and standardization. They have the characteristics of both commodity futures and financial futures. It is generally believed in the industry that as a recently established futures exchange, the first variety of Guangzhou futures exchange is probably commodity index futures with innovative nature.

This is also an important measure to make up for the gap that there is no commodity index futures in China's four futures exchanges, and to improve China's commodity futures, the two largest commodity index futures of S & P Goldman Sachs Commodity Index and Bloomberg Commodity Index Futures.



Five futures exchanges in China by the end of 2021

1.4 Basic information of futures exchanges and futures varieties in China

Five futures exchanges in China

Exchange	Futures	Option Stock	index
Shanghai Futures Exchange	copper, aluminum, lead, zinc, nickel, tin, gold, silver, rebar, wire rod, hot rolled coil, stainless steel; Energy and chemical industry: crude oil, fuel oil, asphalt, natural rubber and pulp	Copper, Zinc, aluminum, gold, rubber	
Dalian Commodity & future Exchange	corn, corn starch, yellow soybean No. 1, yellow soybean No. 2, soybean meal, soybean oil, palm oil, fiberboard, plywood and eggs; Industrial products: polyethylene, polyvinyl chloride, polypropylene, coke, coking coal, iron ore, ethylene glycol.	Soybean meal, corn	
Zhengzhou Commodity & future	sugar, cotton, common wheat, strong wheat, early indica rice, late indica rice, japonica rice, rapeseed meal, rapeseed,	Sugar, cotton	

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Exchange	rapeseed oil, cotton yarn, apple and red jujube; Non agricultural products: power coal, PTA, methanol, glass, ferrosilicon, manganese silicon.		
Guangzhou Commodity & future Exchange	Carbon emission rights, electric power, industrial silicon, polycrystalline silicon, and unlisted metal futures other than copper, aluminum, zinc, lead, nickel, tin, gold and silver listed in the previous period may be included in the reserve varieties of Guangzhou futures exchange		Commodity index futures Foreign exchange power index
China Financial Futures Exchange	CSI 300, CSI 500, SSE 50, 2-year treasury bonds, 5-year treasury bonds and 10-year Treasury bonds		

2. Futures of Tungsten Products

Compared with other futures products in the world, China's non-ferrous metal products that have not been futures are mainly non-ferrous metal products such as tungsten, molybdenum and rare earth. At present, the higher voice is the futures of tungsten and molybdenum products. It is reported that the Institute with more contacts with non-ferrous metals and tungsten industry associations and industry circles and deep research on this is not an ambitious and equal rice long-term Institute at the beginning of its establishment.



On April 19, 2021, Guangzhou futures exchange was inaugurated

2.1 Characteristics and futures difficulty of tungsten products

2.1.1 tungsten products and their production process

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Tungsten is a kind of insoluble non-ferrous metal. As mentioned above, tungsten has excellent properties such as high hardness, high density, high melting point, high temperature resistance, corrosion resistance, electrical and thermal conductivity. All kinds of products are important raw materials after processing and play an important role in modern industry. Therefore, it is called the "tooth" of industry and is widely used in mining, metallurgy, machinery, construction, transportation, electronics, chemical industry, light industry Textile, military industry, aviation, aerospace, its technology, new energy and other fields.

The basic processing technology of tungsten products is generally divided into several steps: tungsten ore mining beneficiation and smelting smelting reduction product processing; The products of tungsten products are divided into tungsten oxide according to the product characteristics, such as tungsten raw ore, tungsten concentrate, yellow tungsten oxide (yto), blue tungsten (BTO), ammonium paratungstate (APT), ammonium metatungstate (AMT), tungstic acid, metal powder, such as tungsten powder and tungsten carbide powder, high specific gravity tungsten alloy, cemented carbide, metal tungsten products, such as tungsten bar, tungsten plate, tungsten wire, tungsten electrode, tungsten heater, tungsten iron, and two-phase alloys, such as tungsten molybdenum, tungsten copper Tungsten gold, tungsten silver, etc. The industrial chain of tungsten products is widely used. From the perspective of the use of tungsten products, it involves almost all aspects of the national economy and the people's livelihood. This paper will not start here, but China Tungsten online will update its own tungsten products catalogue every year. It is believed that the 2022 edition of China Tungsten intelligent manufacturing tungsten molybdenum products catalogue, which is planned to be completed in the first half of 2022, will be launched soon.



Production process flow chart of tungsten products

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2.1.2 characteristics and futures difficulty of tungsten products

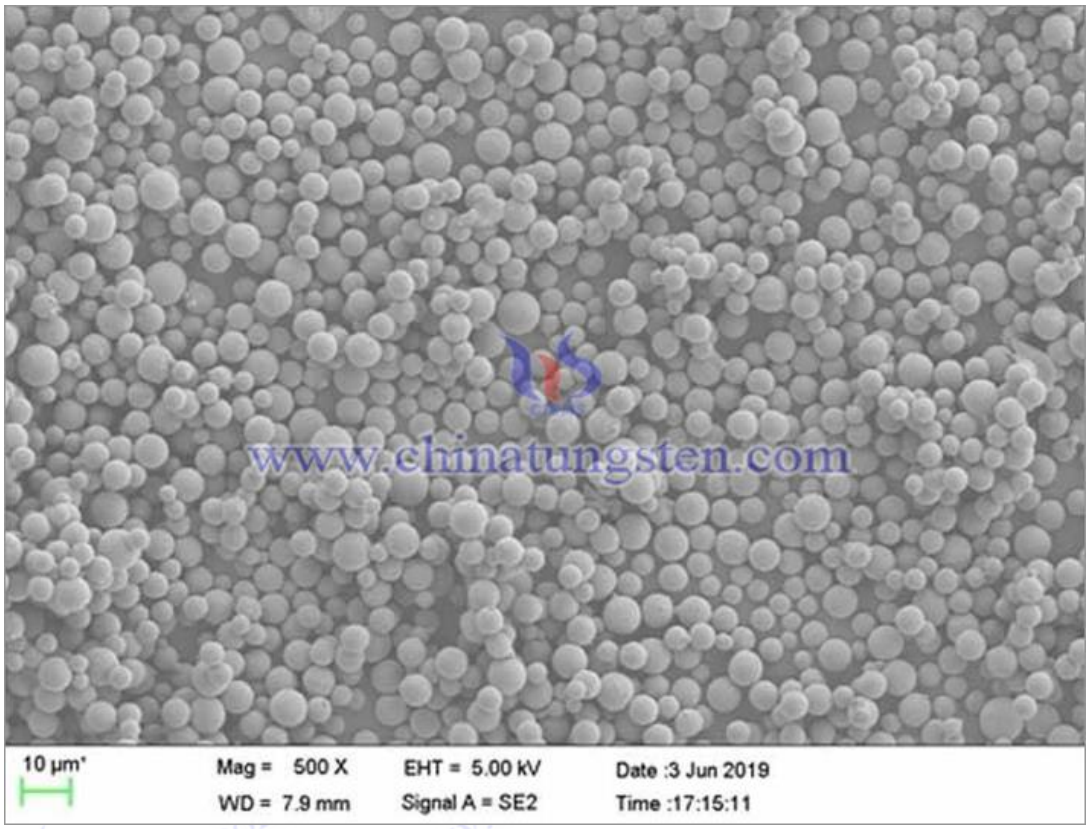
First of all, tungsten products are small metal minerals with small output, concentrated origin and concentrated producers.

The annual output of tungsten products in the world is very small. Over the years, the annual output of tungsten products in China accounts for about 80% of the world on average. The scale of all related products in the tungsten industry chain is relatively small. Taking the tungsten concentrate with the largest output as the futures variety as an example, the annual output of China's products is about 120000 standard tons. We price it at an average price of 120000 yuan per ton, which is actually only about 15 billion yuan. If we take the 5% margin as an example, a simple arithmetic calculation shows that only 800 million yuan can pry the futures market of tungsten concentrate. In this way, there may be a lot of speculation, leveraging the tungsten products industry with small capital, because of repeated malicious speculation against the futures products in the tungsten products industry chain, so we will soon see the "Tungsten Witch" (Witch) after the "Demon Nickel" (Demon).

Secondly, the standardization of tungsten products is very difficult.

In addition to the problems of output and trading volume, there are also several problems here: 1) many primary tungsten raw materials with low technical content such as tungsten concentrate will not be directly traded in the futures market, because miners will first ensure the consumption and use of their back-end smelting industrial chain, and the rest can rarely enter the market for trading; 2) The tungsten concentrates produced by scattered miners in the market are very different, the degree of standardization is very low, and it is difficult to futures; 3) With the lower and lower grade of tungsten concentrate mining, the personalization degree of tungsten concentrate grade and impurity content produced in different plant areas is higher and higher, especially the concentrate of black-and-white tungsten ore production line is more different. Therefore, most of the current tungsten concentrates are based on the measured grade and the test results of long-term cooperation, so it is difficult to carry out the possibility of long-term and standardized pricing basis similar to the futures trading basis; 4) What's more, the vast majority of tungsten products in China have relevant technical standards and testing standards, most of which are formulated in the last century, and some also come from "Ministerial" standards. Therefore, the requirements for technical indicators of many standards are very low. In the actual production and trading process, most of them use the standards of their own enterprises, which are often much higher than the existing national standards.

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Electron micrograph of special spherical tungsten powder
(www.tungsten-powder.com)

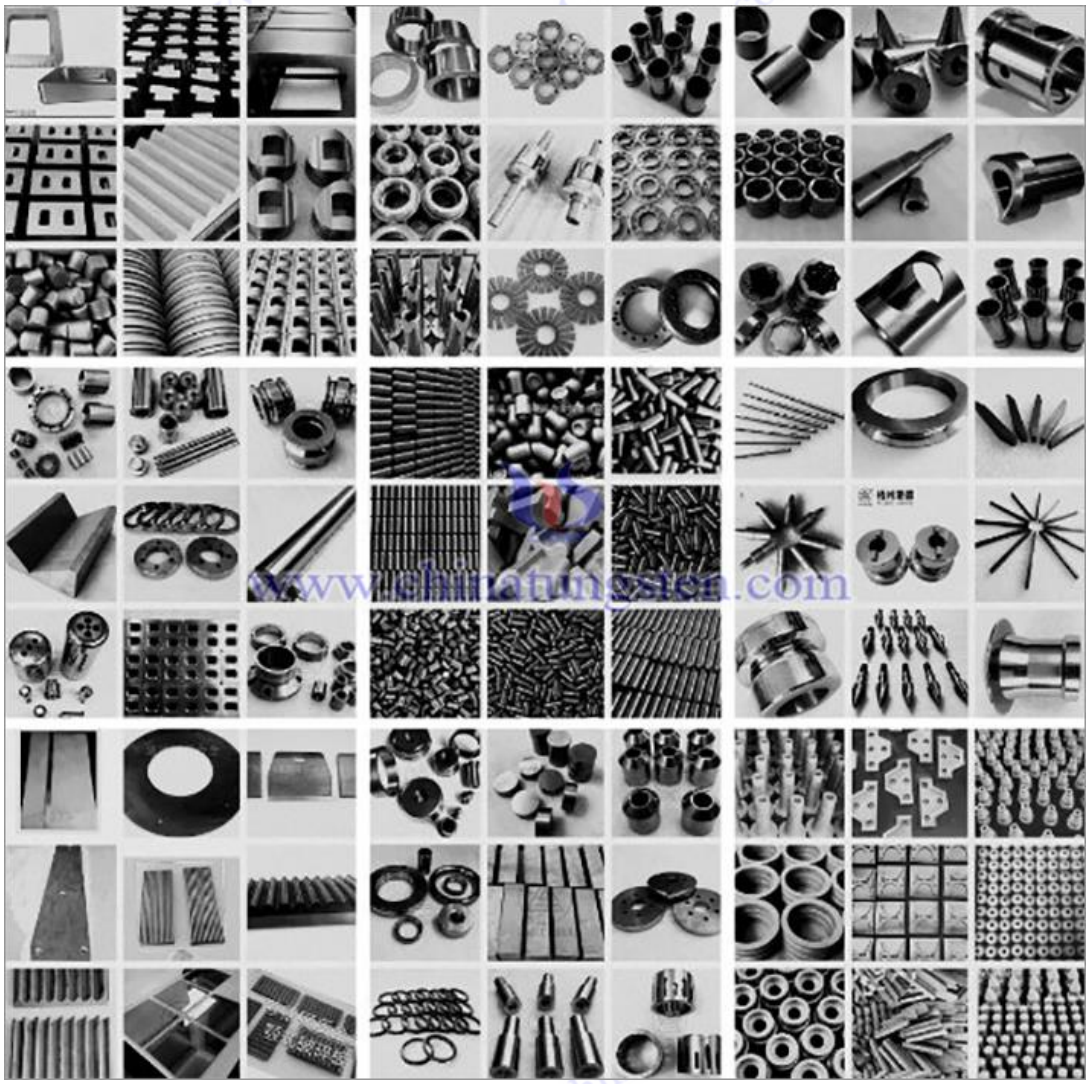
If we take another kind of products with high output, that is, from the production process of tungsten products described in this paper, the intermediate products of tungsten with high degree of standardization and commercialization in the production process, that is, tungsten chemicals such as tungstic acid, ammonium tungstate and tungsten oxide. However, even if these tungsten products seem to have a unified standard, the actual product quality is also quite different. The particle size, particle size distribution, crystal form, main content (purity), impurity content and physicochemical properties of these chemicals mainly containing tungsten trioxide are also very different. The cost varies greatly due to different raw materials and processes, and the subsequent uses are also very different.

The existing tungsten products manufacturers are basically enterprises with a long industrial chain, and most of the products they produce may be materials for their own subsequent processes. As we all know, the standardization degree of back-end products in the tungsten products industrial chain is getting lower and lower, the quality difference is huge, and the technical content and price are also very different, This is also the reason why many manufacturers of back-end tungsten products at home and abroad prefer to produce their own raw materials to control the quality. Therefore, the high proportion tungsten alloy products and cemented carbide products at the back end of tungsten products can hardly become futures varieties. With the increase of technical content, even the products produced under the same standard have great differences in technology,

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performance, cost and price; Moreover, in most cases, high-end tungsten products are not only selling products, but providing overall solutions. They may need to cooperate with customers in design, processing and whole process participation in the use process, provide complete software and hardware solutions, and even their after-sales services, including recycling the waste and scrap after use.

China Tungsten online has been committed to customizing all kinds of tungsten products for customers for many years. The most proud thing is that we have customized all kinds of tungsten chemicals with different grades, different tungsten oxide content and different particle size, especially nano particle size, well controlled impurity content, low harmful impurity content and combined with the characteristics of subsequent customers for more than ten years, In order to ensure that most of the raw materials and auxiliary materials required by our customers can be used in the process of removing impurities and RF coating, we can only ensure that our products can be used in the process of removing impurities and other special needs of our customers.



All kinds of special-shaped parts of tungsten products that are difficult to be standardized are designed and produced by China Tungsten Online. (www.tungsten-carbide.com)

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2.2 Participants in Tungsten Futures

People who know the tungsten products industry should know that if tungsten products are used as futures, there will be an excessive concentration of participants in tungsten products futures trading. In the global tungsten products industry, there are only a few giants. Internationally, there are enterprises such as Sandvik in Sweden, iska in Israel, prancee in Austria, Kenner in the United States, Tokyo tungsten and new metals and Daijie in Japan, while in China, there are only Xiamen tungsten industry, China Tungsten High Tech, Zhangyuan tungsten industry, Jiang tungsten group, Luoyang molybdenum industry, Guangsheng nonferrous metals Several leading enterprises such as Haisheng tungsten industry and hundreds of small-scale cemented carbide downstream processing enterprises. If our requirements for the qualification of participants are too high, only a few may be qualified to become registered suppliers, which is bound to give a greater advantageous position to several leading enterprises that are already over concentrated and basically in a monopoly position in the tungsten products industry, which is not conducive to the moderate competition and sound development of the industry.

The reality we must pay attention to is that if we identify tungsten products and futures as primary ores such as tungsten concentrate, such tungsten products futures can only be futures for many tungsten products manufacturers, because they cannot deliver in kind due to lack of processing capacity, and oxide products such as ammonium paratungstate (APT) and tungsten trioxide (yellow tungsten) also have similar problems, Because there are hundreds of domestic back-end processing enterprises such as cemented carbide, few manufacturers can reduce tungsten powder and make tungsten carbide powder by themselves. At the same time, we also note that with the continuous progress of production technology and the continuous expansion of the back-end use of tungsten products, many back-end users have increasingly refined and personalized requirements for front-end products. Each batch of products need to be inspected before they can enter the production link. In the actual work, many customers of China Tungsten online have the requirements of mailing reports on the particle size, crystal form, sulfur content and chlorine content of tungsten chemicals. In other words, there will be more and more demand that cannot be met through the currency of the futures market, that is, for suppliers and users,

Therefore, in such a relatively closed and small market space, the futures of tungsten products is difficult to realize its functions such as value discovery and cash hedging, which weakens the necessity and urgency of futures in the tungsten products industry.

If there is too much speculation in tungsten products futures, and if speculators in tungsten products futures market occupy an absolute dominant position relying on their capital advantages, they will not give play to the positive function of tungsten products futures market, but may have a great impact on tungsten products industry and related financial markets, and even interfere with the healthy and orderly development of China's economy,

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at least tungsten industry. In the history of China's nonferrous metals industry, the "demon nickel" incident and the Zhuzhou Smelter incident are all bloody lessons we have learned. Through this event, it is not difficult to find that the bloody nature of capital chasing profits and most participants in the futures market are speculators, or most market participants have a strong speculative psychology in the process of trading. If the speculative component in the futures market of tungsten products is too heavy, as a futures transaction, it provides a place and means to avoid price risk for the spot market, uses the futures and spot markets for hedging transactions, avoids the cost rise or profit decline caused by the great change of commodity price, advances the fixed production cost and / or sales price, keeps the established profit or profit offset, and greatly reduces the function of avoiding risk, The result of the game between tungsten products enterprises and professional speculators may often hurt the tungsten products industry.

More importantly, operators of tungsten products need special qualifications. China has many qualification requirements for the mining and operation of tungsten products, and only a few enterprises can apply for the export license of tungsten products. Therefore, if tungsten products are futures, the qualification of operators and market makers is also a problem.



Tungstic Acid of China Tungsten Online (www.tungsten-oxide.com)

According to the current provisions of SHFE on the registration and administration of non-ferrous metal delivery commodities (revised in October 2019), we take lead-zinc products as an example to investigate some basic requirements on commodity registration:

"(1) the enterprise applying for registration shall be a manufacturer of relevant commodities at home and abroad, with considerable popularity and reputation. (2) the annual production capacity (including a single brand) of the enterprise applying for registration reaches the specified level [tentatively determined as: 50000 tons of copper,

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100000 tons of aluminum, 50000 tons of zinc, 50000 tons of lead, 5000 tons of nickel and 4000 tons of tin] , the product quality meets the current national or international standards, the production process meets the national industrial policies, the environmental protection meets the standards, and the continuous and stable production is at least 1 year. (3) The commodities applied for registration shall have legal sources and occupy a considerable share in the spot market. (4) Other conditions required by the exchange. "

According to the above requirements, by comparing the output requirements of tin products, combined with the industrial characteristics of tungsten products and the requirements and specifications of laws and regulations at home and abroad, we can see that there are not many tungsten products enterprises in China that meet the first requirements of the previous period. For the requirements of foreign countries, the provisions of the previous period are:

"(1) Commodity quality inspection: the commodities applying for registration shall be stored in two inspection batches in the delivery warehouse or recognized place designated by the exchange, and the production time shall be more than one month apart; The varieties of copper, aluminum, zinc and lead are 200 tons of commodities in each batch, and the inspection quantity of nickel and tin in each batch shall be determined by the exchange according to the actual situation. The designated quality inspection agency shall inspect the appearance quality, packaging, weight and chemical composition of the goods in stock. If the manufacturer fails to pass the initial inspection applies for quality inspection again, it shall provide the products whose production time is more than 3 months after the initial inspection date. The commodity quality inspection shall be based on the product quality standards specified in the relevant variety contract, and the designated quality inspection institution shall issue the inspection report. (2) Product trial: refer to the product trial requirements of domestic commodities. (3) On site inspection: determined by the exchange according to the actual situation. If the on-site inspection is determined, it shall be carried out with reference to the on-site inspection requirements of domestic commodities. "

After knowing the requirements of non-ferrous metal products in the previous period, we can't help but doubt whether tungsten products can be futures. Should we define whether Chinese enterprises comply with the regulations according to the relevant provisions of the United States law and the OECD on responsibility for mineral metals? In other words, should we take the initiative to regulate the business behavior of Chinese enterprises according to American law? However, in any case, please believe that our reference to this content twice in this article is by no means the first time to discuss the rationality, ethics and legitimacy of relevant foreign laws and regulations and LME's responsible procurement!

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Tungsten Trioxide of China Tungsten Online (www.tungsten.com.cn)

3. Possible Risks & Inspiration of tungsten Industry after the Russia-Ukraine Conflict

3.1 Sensitivity of Tungsten

As we mentioned earlier, tungsten has become an important raw material in the military industry due to its beneficial performance, and it is also the main component or part of many weapons and ammunition. Therefore, tungsten products are highly sensitive. In our daily trade, it has been a management regulation for many years that many countries or regions cannot export certain products.

In the current conflict between Russia and Ukraine, Russia is sanctioned by western countries and China and Russia have close relations, China's tungsten products industry may be particularly sensitive. Especially in the case of limited import and export revenue and expenditure of Russia, we should pay close attention to the changes of information and management system in all aspects to avoid injury to our industries and enterprises. It is precisely because of its sensitivity that we will not discuss it here.

At present, many enterprises in China have to spend a certain amount of financial and human resources to adapt to the so-called extraterritorial jurisdiction generated by some powerful countries with their own laws or through the laws designated by some international organizations. The purpose of adopting the so-called non market factor certification for China's tungsten products with absolute resource advantages is by no means the reason for those coronation speeches or the development of the industry, It is to rationally understand the resources, processing technology and path, market location and trade logic of China's tungsten products industry, so as to thoroughly grasp the details of our advantageous industry, and then use various means to control and kidnap our

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enterprises and even the industry in the name of morality, human rights, democracy and law. Such examples are vivid in the textile and garment industry.

3.2. Inspiration from Russia's Sanctions after the Russia-Ukraine Conflict

3.2.1 reduce monetary reserves and increase the reserves of tungsten, molybdenum and rare earth materials

In view of the current situation and results of Russia's sanctions, we feel that China should adjust its national reserves in time. On the one hand, it should be more diversified, and on the other hand, it should increase the procurement and reserves of energy and key strategic materials, especially the reserves of materials with resource advantages such as tungsten, molybdenum and rare earth. In this way, on the one hand, we can reduce the freezing or seizure of a large number of foreign exchanges such as US dollars and euros, which are similar to the sanctions imposed on Russia. On the other hand, we can also enhance our strategic reserves through the increase of daily reserves, and protect our Tungsten Molybdenum rare earth industry when the price is low. Therefore, we should take the reality of Russia being sanctioned after the conflict between Russia and Ukraine as a warning, plan ahead and try our best to avoid repeating Russia's mistakes in special periods such as national reunification in the future.

In addition, we can also issue special bonds to purchase China's dominant tungsten, molybdenum and rare earth resources and increase reserves, which can not only reduce the sanctions pressure of international hostile forces on China, when possible, conflicts break out, but also ensure that resources are owned and used by China. Of course, it can also reduce the possibility and adverse factors of others and other countries controlling China's resources.



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3.2.2 Shall We Consider & Decide the futures of tungsten Carefully?

As stated at the beginning of this article, the author of this article is only the author's opinion, which does not represent the author's company, nor any person or unit other than myself. As an old tungsten practitioner, I do not think tungsten products are suitable for futures. It is suggested that China's relevant institutions and industry organizations should not promote the futures of tungsten products for the time being, nor support Chinese enterprises to participate in the futures of tungsten products in the international market, China's administrative departments should not permit and facilitate the export of futures tungsten products.

If we must turn tungsten products into futures, we should also launch the futures law as soon as possible. It is reported that China is expected to officially publish the futures and derivatives law (i.e. the Futures Law) in 2022, so as to regulate the futures market with 70 market making varieties and the total amount of funds in the futures market exceeding 1.2 trillion yuan; At the same time, we also call for the formulation of the overseas futures trading law to regulate the overseas futures trading behavior of domestic investors; Timely introduce the futures market maker system and build a unified futures market settlement system.

At the same time, futures are an innovation for the traditional production and operation of tungsten products. The development of tungsten products is inseparable from technological and institutional innovation. As the forerunner of e-commerce and the only e-commerce of tungsten, molybdenum and rare earth in China's tungsten industry, China Tungsten online calls on China's tungsten products industry to explore and try more innovative development in production and operation while studying the futures of tungsten products, combined with the characteristics of collaborative design, flexible customization, intelligent manufacturing and e-commerce of tungsten products.

3.2.3 Potential Risks of Tungsten in the Russia-Ukraine Conflict

The latest change in the conflict between Russia and Ukraine is that Russia has used extremely advanced hypersonic weapons to show its determination to safeguard its own interests and win the war. With the increasing sanctions of European and American countries, Russia has cancelled all the aforementioned or agreed arrangements for post-war relations with Japan and returned Japan Russia relations to the armistice after World War II. If such a situation cannot be well controlled and allowed to develop, we cannot just think that the words of the president of Ukraine that "the world may enter the Third World War" are groundless and nonsense!

If the war between Russia and Ukraine expands, our tungsten products industry may be easier to get more attention, and its political risks will also increase sharply. It is difficult for us to predict many uncertain political factors, such as the benign development of China US

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relations, the future of China EU relations and investment agreements, the right-wing cooperation between Japan and South Korea, and the variables of the Taiwan Strait crisis, when the conflict between Russia and Ukraine worsens.

What's more, we also pay attention to the unpredictable risks brought by other so-called conflicts to the tungsten industry……

This may be the biggest uncertainty faced by China's tungsten products industry under the background of the Russia-Ukraine Conflict. Before concluding part VI of this article, allow me to reiterate once again:

BE CAREFUL, THE FUTURES OF TUNGSTEN WILL DETERMINE THE FUTURE OF TUNGSTEN !

(PART VI of This Article Is Finished, and PART VII TO X Parts Are to Be Continued)

SUMMARY

Based on the experience of tungsten products market in the past decades and the current situation of the conflict between Russia and Ukraine, the author believes that the price of tungsten products will continue to rise in 2022, but the main factor is not traditional market factors; Therefore, in the first part, we focus on the Russian Ukrainian conflict and the military use and importance of tungsten products. In the second, third and fourth parts, we focus on the global resource distribution of tungsten products, especially the overview of Russian tungsten resources and the relationship between China's tungsten products industry and Russia. In the fifth part, we analyze the energy, bulk metals Factors such as the sharp rise in grain prices, the cost pressure on China's tungsten market caused by the over issuance of the US dollar and the interest rate generated by the Federal Reserve, and the possibility of a strong RMB. In the sixth part of this paper, we discuss the particularity, feasibility, legal conflict and risk of tungsten products futures in China; Since it is related to Russia, finally, we will also describe and briefly analyze some news about the new development of tungsten products in life, such as the so-called sky-high price Russian tungsten gold bars and other suspected fraud from time to time in recent decades.

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