

CHAPTER 02

BUSINESS SCOPE

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Clients

MISSION

At MolyMet we have a vocation for service, always attentive to the needs of our clients, miners and industrialists. Thus, we have become an articulator between the world of production and demand, taking charge of molybdenum concentrates of various qualities from the copper industry, which we deliver to the market as first-class finished products that meet all necessary standards.

Gonzalo Bascañán Obach

Vice President of Commerce and Market Development

MOLYBDENUM

Molybdenum is a chemical element in the group of “refractory metals” found in nature in the form of a mineral called molybdenite. Its name comes from the Greek molybdos, which means “like lead” due to its dark gray color. **Molybdenite** is mainly associated with other sulphided minerals such as pyrite and chalcopyrite and for this reason its main source is as a by-product of copper minerals.

Although it is believed that molybdenum was already known in ancient times, it was only during the First World War that its use in steel alloys was developed as a replacement for the tungsten that was then scarce, thus beginning its commercial use. Today high strength steels are the main application of molybdenum.

Molybdenum is essential for life. It is present in small concentrations in plants and animals and is necessary for its development, as well as for the functioning of the human body.

PROPERTIES

- Molybdenum is a transition metal with an atomic number 42 on the periodic table.
- It has one of the highest melting temperatures of any element (2,623 ° C).
- It is also one of the metals with the lowest coefficient of thermal expansion of 5.04x10-6 (1 / K).
- Its great resistance to corrosion allows it to keep its composition stable at room temperature and up to 400 ° C. This resistance can even increase when forming alloys with tungsten and chromium.
- It has good resistance in non-oxidative, acidic media containing non-oxidizing mineral acids, and is relatively inert to media containing hydrogen sulfide.



WHAT IS MOLYBDENUM USED FOR?

Molybdenum is considered a material of great strategic importance for the global economy due to its diverse applications in the steel, electronics, chemical and petrochemical industries, among others. Its high temperature resistance makes it very useful in temperature resistant superalloys, in applications in industrial furnaces and electrical contactors. Its high resistance to corrosion is of great importance in structural steels subjected to corrosive environments, such as port structures, offshore platforms, ships and bridges. Pure molybdenum is also used as an electrode in glass casting; As a support sheet for LCD screens and photocells, and as a support for incandescent filaments in special luminaires.

Its chemical properties are of interest in catalysts, solid lubricants, pigments and agricultural and food supplements.

Other uses of molybdenum are still being discovered today. The most recent include prosthetics and medical implants, surgical tools, innovations in the aerospace industry, water treatment, and laser application.

RHENIUM

Rhenium (chemical symbol Re) is one of the least abundant metals in the Earth’s crust. It is not found in its pure state in nature, but mainly mixed with minerals such as molybdenite. It was the penultimate stable element to be discovered, only being chemically isolated in 1908. Rhenium is also a refractory metal, along with molybdenum, tungsten, niobium and tantalum.

PROPERTIES

- Highly hard and heat resistant, rhenium has the third highest melting temperature of all elements (3,186 ° C).
- It also has the highest boiling point (5,596 ° C).
- It is one of the elements with the highest density (21.03g / cm³).
- It has extraordinary resistance to corrosion.
- It is a good conductor of electricity and heat.
- Its high elasticity coefficient allows it to remain stable and rigid in high stress conditions.
- It is capable of forming compounds in a wide range of oxidation states, from -3 to +7.

WHAT IS RHENIUM USED FOR?

Rhenium is essential in super alloys subjected to extreme conditions. Most of the rhenium produced in the world is destined to the development of nickel superalloys for the aeronautical industry, which are used in the manufacture of turbine blades for aircraft engines and industrial gas turbines.

Rhenium is also used in the petroleum industry, specifically in platinum-rhenium catalysts, making it possible to produce high-octane, lead-free gasoline.

Rhenium improves the ductility of refractory metals so it is used in tungsten-rhenium and molybdenum-rhenium alloys for some applications of these elements, such as thermocouples, electrical contacts, filaments and X-ray sources.

Due to its high resistance to corrosion and good biocompatibility, rhenium has begun to be used in medical implants.



Sustainability guides our daily work

At Molymet we believe that achieving the development and projection of our company into the future is only possible through responsible actions aimed at protecting the environment. This is why our commitment is to create sustainable economic value.

Based on an Environmental Management System, we have developed measures that guarantee care for the environment, respect current legislation proactively, reduce the environmental impact of our operations and promote initiatives that add value to the communities around us.

We know that every action counts. Therefore, we invite you to learn in the following infographic the step by step of our work in Molymet to process molybdenum and transform it into a product of crucial importance for modern industries.

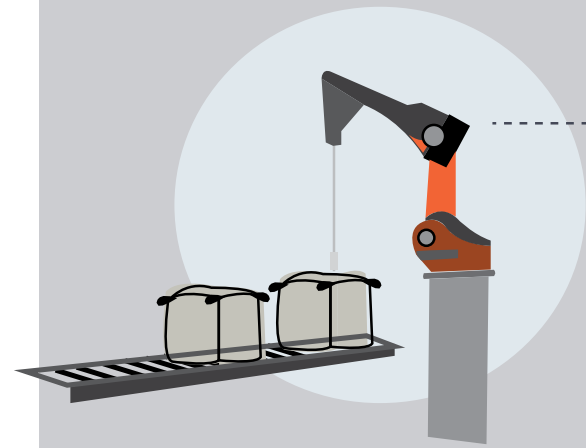
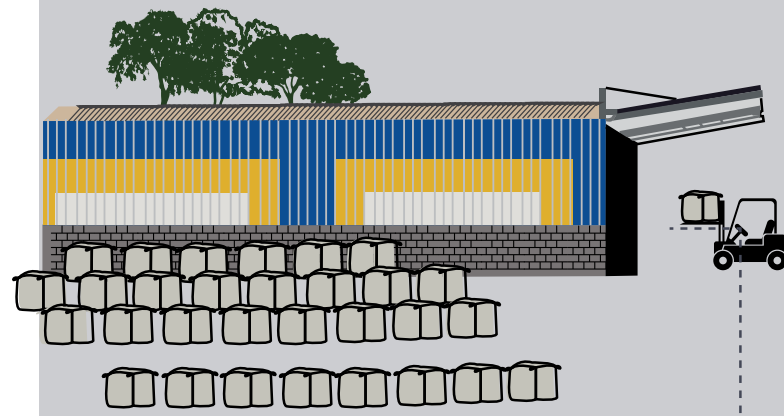
MOLYBDENUM PROCESSES

BY-PRODUCTS

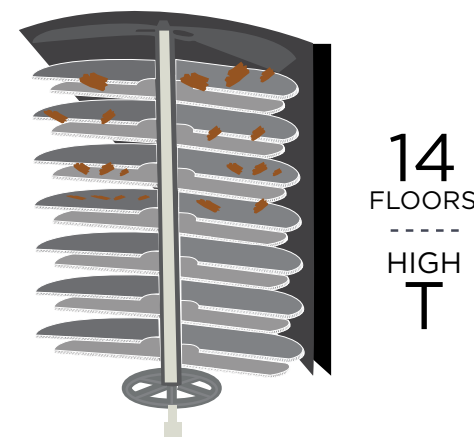
PURE PRODUCTS

TECHNICAL PRODUCTS

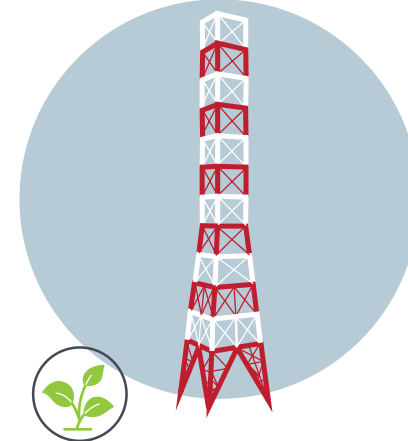
RECEPTION OF RAW MATERIALS



ROASTING



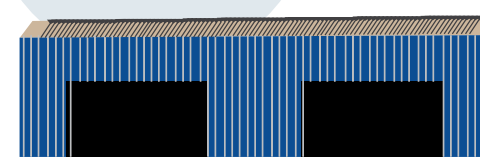
GAS TREATMENT



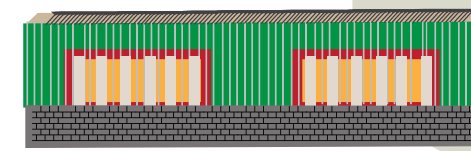
TECHNICAL OXIDE CONTAINER



LEACHING

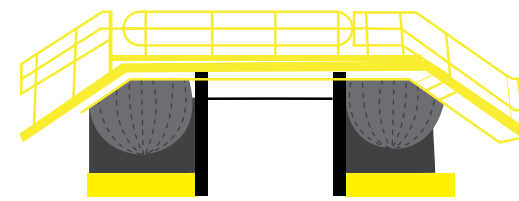


FERROMOLYBDENUM

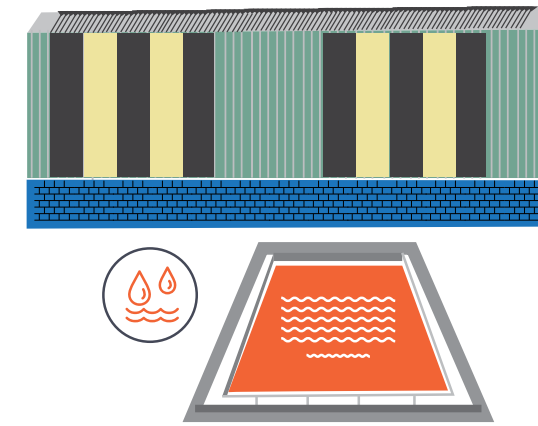
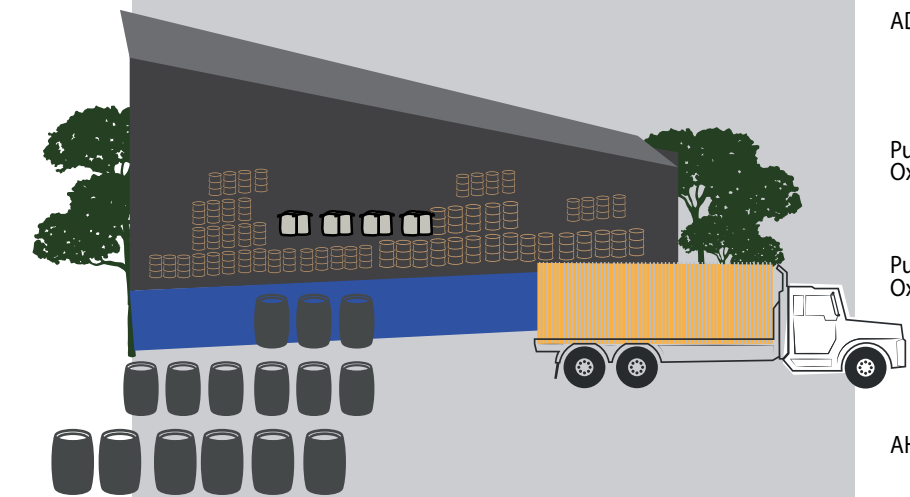
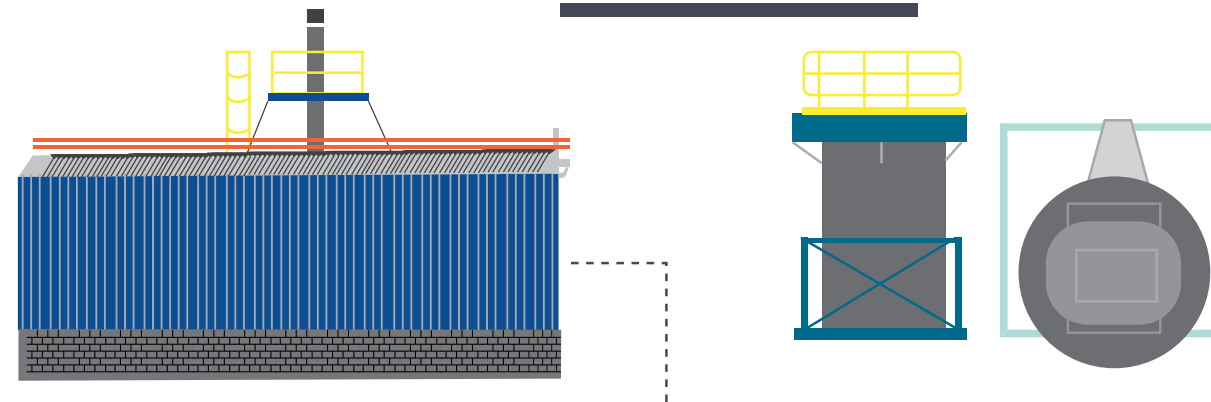


PRODUCT DISPATCH

ACC PLANT

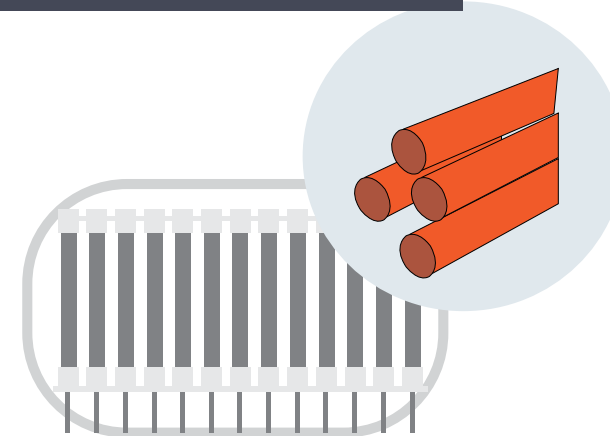


PURE PRODUCTS

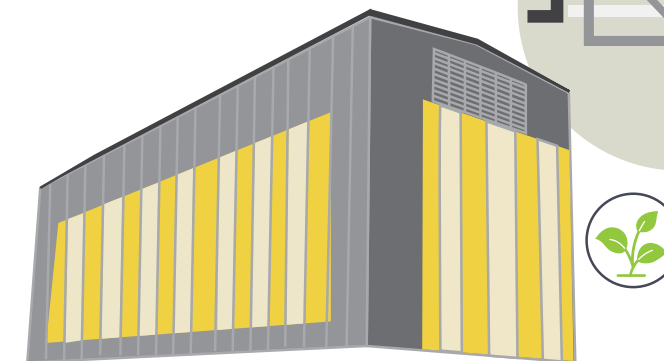


SOLVENT EXTRACTION MO | CU | RE

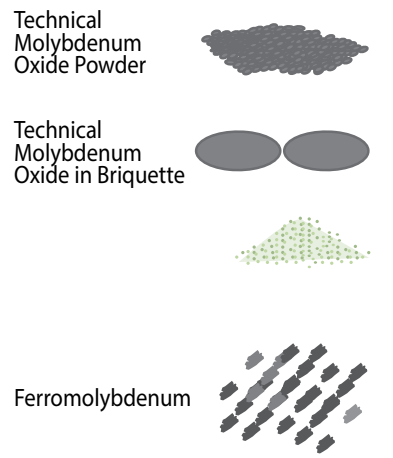
COPPER ELECTROWINNING



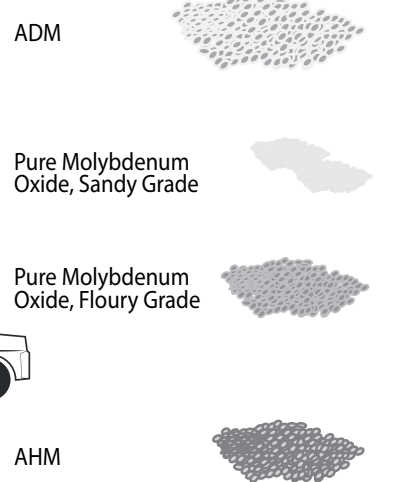
LIQUOR TREATMENT



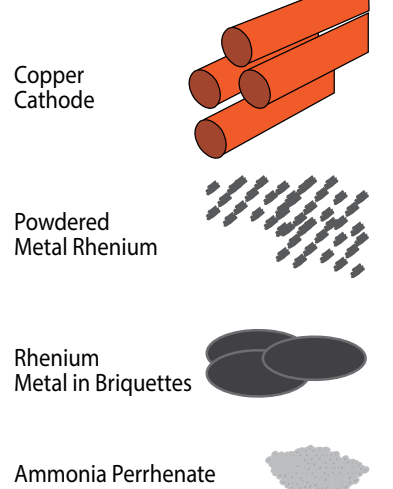
FINAL PRODUCTS



FINAL PRODUCTS



FINAL PRODUCTS



HISTORIC OVERVIEW



1936



Carburo y Metalurgia S.A. was created by Antonio Gianoli and George Mustakis.

1975

The company acquired its current name as a result of the division of the company Carburo y Metalurgia S.A., entering the industry of production and sales of molybdenum oxide, ferromolybdenum and by-products.

2003

In Europe Molymet acquires 100% of Sadaci's shares, increasing its roasting capacity by 30%.

2009

Successful placement of bonds in Mexico for approximately US \$ 52 million, being the first Chilean company to issue in that country.

2010

That year, Molymet acquired 50% of the Luoyang Hi-Tech Molybdenum & Tungsten Material Co. Ltd. company in China, for the production of molybdenum metal parts.

2016

Expansion of the Belgian subsidiary, Sadaci, ends, increasing the group's oxidation capacity and reaching 207 MMlb Mo.

2018

Successful placement of bonds in Colombia for approximately US \$ 69 million, being the first foreign issuer of corporate bonds in the Colombian real sector.

2019

The MolymetNos gas cleaning system modernization project is approved, with an investment of US \$ 50 million.



The sons of the founders, Ciro Gianoli and Constantino Mustakis, begin to develop the idea of giving value to molybdenum produced in Chile. For this they installed the first roasting oven of what would later be Molymet.



1964

The internationalization of the company begins thanks to the purchase of a plant in Mexico, which gives rise to MolyMex.



1994

Molymet acquires Chemiemetall (Germany), where mainly molybdenum metal is made.



2001

Complejo Industrial Molynor S.A. is born in Mejillones, constituting the company's second industrial operation in Chile.



2008

2017



Construction of the chemical plant project begins in the Sadaci subsidiary (Belgium). With a planned investment of US \$ 44 million, this contemplates the production of products with higher added value and greater flexibility in the processing of molybdenum concentrates.

2014



The Molymet corporate building is inaugurated, which was conceptualized, designed and built under the guidelines and principles of "Green Building". The work materializes and incorporates all the technological elements necessary for effective energy control and low environmental impact. The building achieved Platinum status in LEED certification (Leadership in Energy & Environmental Design), the most demanding in the industry and the first in Chile and South America.

HISTORICAL INFORMATION



HISTORICAL INFORMATION OF THE COMPANY

The Company's origins date back to 1936, when Messrs. Antonio Gianoli and George Mustakis founded Carburo y Metalurgia S.A. in the city of Los Andes.

In 1975, from the division of Carburo y Metalurgia S.A. and by the hand of Ciro Gianoli and Constantino Mustakis, sons of the founders, Molibdenos y Metales S.A. was born, whose business is the production and sale of molybdenum oxide, ferromolybdenum and by-products.

Molymet began operations outside Chile in 1994, when it acquired Molymex S.A. de CV in Cumpas, Mexico. In 2000 it formed Molymet Corporation in Baltimore, USA and in 2001 it acquired Chemiemetall in Leipzig, Germany. Two years later it completed the purchase of Sadaci in Ghent, Belgium, and in 2005 it established Molymet Services Ltd in the United Kingdom.

In this process of globalization and growth, in 2008 Molynor was born in Mejillones. In 2009, the subsidiaries Eastern Special Metals Hong Kong Ltd and Molymet Beijing Trading Co. were created to carry out investment and trade plans in Asia.

In 2009, the successful placement of bonds in the Mexican market for approximately US \$ 52 million. This operation makes Molymet the first Chilean company to issue bonds in Mexico.

In 2010 the company Molymet Trading S.A. was created. That same year Molymet acquired 50% of Luoyang Hi Tech Molybdenum & Tungsten Material Co Ltd, a company that was sold in 2019. During the following two years, and continuing with the investment plan, the commercial office Molymet do Brasil Representações e Serviços Ltda in Sao Paulo.

In 2018, the first bond placement was carried out in Colombia for approximately US \$ 69 million. In addition to being successful, this operation represents the first placement of corporate bonds of a foreign company in the real sector in Colombia.

In 2016 the Molymet Corporation offices move to Miami, Florida and the China offices are permanently established in Beijing. The following year, Molymet Perú Trading Company was established in Lima, Peru.

Throughout its history, Molymet has established itself as the largest molybdenum and rhenium processor in the world, reaching 35% of the world's molybdenum processing capacity and 70% rhenium.

Committed to the environment, in 2019 the MolymetNos gas system modernization project is approved with an investment of US \$ 50 million and whose objective is to voluntarily reduce SO₂ emissions from this production unit.

■ Company Purpose

The purpose of the company is:

- A. Manufacture by itself or on behalf of third parties of molybdenum oxide, ferromolybdenum, ammonium perrhenate and any other alloy or industrial product derived from minerals that contain molybdenum, or that are present next to it in its natural state or as a by-product of other previous industrial processes, being able to install or operate energy or industrial establishments of any kind, as well as elaborate, acquire or dispose of products, materials, substances, by-products and merchandise and derivatives of all kinds that are related to the company purpose.
- B. The acquisition, sale, import, export, commission, consignment, representation, distribution and commercialization, by itself or by third parties, wholesale or retail, of national or foreign origin, of all types of personal property, especially equipment technicians, machinery, products, supplies, accessories and spare parts for them and all kinds of products, raw materials or supplies that require the manufacture, sale and / or distribution of alloys containing molybdenum and its derivatives.
- C. The research and development of metallurgical projects, the design, construction, repair, maintenance and commercialization of metallurgical plants and associated products.
- D. The treatment of minerals and gases and industrial waste of all kinds, generation of steam, oxygen and other gases, and chemical analysis services.
- E. The provision of services or advice related to the aforementioned objects and the provision of services, consulting and advice in legal, financial, economic, commercial, market development, logistics, computer, data processing, accounting, tax, auditing, supply and management of personnel, corporate strategy and marketing, and business administration.
- F. The realization of investments in Chile or abroad in all kinds of tangible or intangible, movable or immovable property, such as bonds, class of titles or transferable securities, with the power to manage said investments and any class of titles.
- G. Incorporate or integrate as an associate or in another way, directly or with third parties, companies of persons or capital, or legal entities of any kind or nature, both in Chile and abroad.

■ Acquisition and Sale of Assets

(a) Sale of the stake in the Chinese company Luoyang Hi-Tech Metals Co, Ltd.

On December 27, 2018, the subsidiary Eastern Special Metals Hong Kong Ltd entered into a sale and purchase agreement with China Molybdenum Co, Ltd, to transfer ownership of 100% of its shareholding in Luoyang Hi-Tech Metals Co, Ltd. This sale was approved unanimously by the Board of Directors of Molibdenos y Metales S.A.. The operation materialized on May 14, 2019, for an amount of US \$ 17.36 million.

(b) Acquisition of 33% of the shares of Compañía Auxiliar de Electricidad del Maipo S.A.

On June 13, 2019, Carbomet Energía S.A., CESA, a subsidiary of Molymet, completed the acquisition of 33% of the shares of Compañía Auxiliar de Electricidad del Maipo S.A., CAEMSA., of which it owned 66.67%; therefore, it became the owner of 100% of the latter company, for a total of 2,500 million pesos, equivalent to approximately US \$ 3.7 million. As a consequence of the foregoing, CESA acquired all the assets and liabilities of CAEMSA. The resources to finance said operation came from bank financing.

Evolution of the Company in Terms of Assets, Obligations, Income and Results:

	IFRS					
	2014	2015	2016	2017	2018	2019
	MUS\$	MUS\$	MUS\$	MUS\$	MUS\$	MUS\$
Total consolidated assets	1.414.728	1.337.449	1.476.214	1.440.214	1.361.105	1.319.183
Total consolidated financial debt	692.673	623.421	627.795	464.045	319.938	279.011
Total consolidated debt	922.447	820.101	878.774	802.531	660.093	584.745
Consolidated operating income	1.103.488	714.079	699.860	857.028	1.192.261	1.170.148
Result for the consolidated year	(506.969)	51.024	139.656	78.874	97.948	63.209

INDUSTRIAL SECTOR

■ Nature of Products

The products and services marketed by the Molymet Group have as main origin the transformation of molybdenum concentrate (molybdenite) into value-added products, mainly used in the stainless steel industry, catalysts, superalloys, fertilizers, tools, aerospace industry (parts and parts), chemical-pharmaceutical and others. Molybdenum concentrate as raw material originates mainly from copper mining as a by-product.

■ Competition

The main competitors for molybdenum roasting capacity in the western market are Freeport-McMoRan Inc and Thompson Creek Metals Company Inc, both based in the United States of America, and Molybdenum Processing Society Limited, (Molyb), a subsidiary of Codelco located in Mejillones, Chile. The Molymet Group achieves approximately 50% market share of the western market in molybdenite conversion.

■ Regulatory Framework

Molibdenos y Metales S.A. and its subsidiaries carry out their business, commercial, productive, financial operations and, in general, all activities associated with their industry under the principle of strict and faithful compliance with current legal regulations that are applicable to them.

The activities of Molibdenos y Metales S.A., in addition to complying with the common national regulatory framework, that is, the Political Constitution of the Republic, civil, labor, health and administrative regulations in general, are specifically regulated in two main areas. The first corresponds to the regulations that regulate open corporations and issuers of public offering securities, and the second area refers to specific and sectorial environmental regulations that regulate its industrial activity.

Regarding the company regulations and issuers of public offering securities, Molibdenos y Metales S.A. is governed, in addition to the general regulations applicable to corporations, by the special regulations contemplated in Law 18.046 on Corporations for open corporations, by the provisions of Law 18,045 on the Securities Market, as applicable, the regulations of the Commission for the Financial Market and by the relevant and also applicable regulations of the Mexican securities authorities (National Commission of the Stock Market) as well as those of Colombia (Financial Superintendence), given that the company has securities, particularly bonds, issued and in force in both countries as a foreign issuer.

From an environmental and industrial point of view, the operation and specifically the environmental and sectorial obligations of Molibdenos y Metales S.A. are regulated in detail in various Environmental Qualification Resolutions (numbers 204/1999, 674/2001, 512/2002, 539/2003, 285/2004, 435/2005, 983/2008 and 1025/2008) and whose supervision is the responsibility of the Environment Superintendence ("SMA"). Additionally, the company must comply with various sectorial permits whose compliance is verified by the various authorities in the sectorial field.

Another aspect to highlight is that society has voluntarily decided to implement a Crime Prevention Model based on compliance with Law 20.393 on Criminal Liability of Legal Persons, so its full activity is subject to compliance with said model of prevention which is certified periodically.



ACTIVITIES AND BUSINESSES

■ Produced Goods

From the processing of molybdenum concentrate, Molymet and its relevant subsidiaries obtain as final products, according to the requirements of the different clients, molybdenum oxide in its technical and pure grades, ferromolybdenum, molybdenum salts, molybdenum metal, molybdenum dioxide, rhenium metallic, ammonium perrhenate and perrenic acid. As by-products of environmental control processes, it produces sulfuric acid, copper cement and copper cathodes.

The commercial activity of Molymet and its relevant subsidiaries is carried out, on the one hand, through the provision of roasting and leaching services for which a grinding service fee is charged, and, on the other hand, by purchasing molybdenum concentrates and selling the products obtained abroad.

The products of Molymet and its relevant subsidiaries are mainly marketed in the European, Asian and North American markets, being used in sectors such as the steel, chemical, aerospace and electronic industries. Molymet, with more than 40 years of experience, leads the world production of rhenium and has the capacity to process approximately 35% of the total molybdenum on the market.

In order to expand commercial activities, in 2017 a Market Development area was created to favor the search and analysis of new business opportunities. Following the skills and network of contacts of Molymet and its subsidiaries together with a collaborative work environment, this new area aims to channel and allocate resources only to those opportunities that prove to be a benefit to Molymet and strengthen its position as a leader worldwide.

During 2019 the monthly average price fluctuated between 8.94 and 12.40 US \$ / lbMo, being the annual average of 11.35 US \$ / lbMo. The daily minimum and maximum prices were 8.20 and 12.80 US \$ / lbMo respectively. When comparing these values with those of 2018, with monthly averages between 11.57 and 12.80 US \$ / lbMo, an annual average of 11.94 US \$ / lbMo and minimum and maximum prices of 10.50 and 13.10 US \$ / lbMo, it can be seen that the annual average price experienced a fall of 0.59 US \$ / lb Mo (-4.9%) between 2018 and 2019.

The molybdenum price fluctuation that occurred during 2019 was mainly due to a drop in demand. Notwithstanding the foregoing, the floods in northern Chile and southern Peru experienced at the beginning of the year generated a lack of liquidity in finished products that kept prices very in line with those seen during 2018 in the first nine months of the year. In the 2018-2019 period, according to data from the International Molybdenum Association (IMOA) and Molymet estimates, world demand would have been 583 and 560 million lbs Mo per year, respectively

equivalent to a fall of the order of 4%. The main sectors that contributed to this negative trend were: automotive and chemical / petrochemical.

Regarding supply, according to IMOA data and Molymet estimates, world productions for 2018 and 2019 were 571.5 and 563 million lbs Mo per year, respectively. This was mainly due to lower production from secondary molybdenum mining in Chile and Peru. Regarding primary production, this did not undergo significant changes, remaining at the levels reported during the past year.

The first and second quarters of 2019 showed a drop in world molybdenum consumption equivalent to 7% and 1% respectively, compared to the same quarters of 2018. For the third and fourth quarters of 2019, declines in consumption are expected of about 3%.

■ Suppliers

The Molymet Group obtains the raw material for the conversion process for two main lines of business; purchases and grinding. Purchases are made from suppliers related to copper mining, among which there are three main suppliers, each representing 10% or more of the supply; In the milling, the raw material is received for transformation into finished products, without becoming the property of the Molymet Group. In this particular segment, it has two main clients, representing 30% or more of the turnover.

The molybdenum concentrates that the company processes come mainly from multi-year contracts with national and foreign copper companies whose by-product is molybdenum concentrate. Among the main suppliers of this raw material are Codelco, through its Chuquicamata, Salvador, Andina and El Teniente divisions, Minera Los Pelambres, Southern Copper Corporation (SCC), Mexicana de Cobre S.A. de CV, Anglo American Sur S.A., Minera Las Bambas S.A., BHP Billiton, Kennecott Molybdenum Company, Highland Valley Copper, Anglo American Chile Inversiones and Sierra Gorda SCM.

■ Clients

Molybdenum is an important raw material for industries such as steel, construction, superalloys and chemical products, among others, which is why sales revenues from molybdenum and rhenium products correspond almost 100% to exports to clients located on all continents. Additionally, intermediary companies and other mining companies that market this product are also customers, with which Molymet and / or one of its subsidiaries has a milling or processing contract.

Regarding the relative importance of customers in sales revenue, the largest customer concentrates a percentage of 7%, while the second customer reaches 5% of turnover.

Regarding the commercialization of the products generated from its own purchases, the Molymet Group has a worldwide presence through commercial offices in the US, Brazil, England and China, achieving a coverage of the global demand for molybdenum products of about 15%.

In the moleinda segment, where the raw material is received for transformation into finished products without becoming the property of Molymet, the company has two main clients that represent approximately 30% or more of the turnover.

Among the main clients of the year 2019 there are: Plansee SE, Seah M&S Corp, Jinzhou New China Dragon and MP Diffusion, among others.

■ Main Brands

Molibdenos y Metales S.A. owns a portfolio of trademarks associated with its various production subsidiaries. These brands are designed under a global concept that includes the symbol and logo (mixed brand) with the corporate colors: orange, green, blue and charcoal gray.

Here is a brief overview of each of these brands:

MOLYMET: The mixed brand Molymet was registered in the National Institute of Intellectual Property of Chile (INAPI) in 2004 to distinguish the industrial and commercial establishment and in 2005 to designate products and services. In subsequent years the corresponding registration renewals have been made and the registration has been extended to other countries. Today it is registered in Japan, Korea, China, the United States, Canada, Mexico, Brazil, Chile, Peru and the European Union.

MOLYNOR: The mixed brand Molynor was registered with INAPI in 2009 to designate products and services and in 2017 it was expanded to also designate the industrial establishment. It is currently registered in multiple countries, including: Japan, Korea, China, Mexico, the European Union, Peru and Chile. During 2019 confirmation of the renewal of the brand was received in Chile and Japan and the renewal was requested in Mexico.

MOLYMEX: The mixed brand Molymex was registered in 2004 with the Mexican Institute of Intellectual Property (IMPI) and was renewed in 2014.

CHEMIEMETALL: From 2009 to 2018 the Chemiemetall brand was registered in Germany as a mixed brand with its own design. In 2019, the mixed brand Chemiemetall was registered using the corporate symbol and logo designs, thus unifying with the other Molybdenum and Metal brands.

SADACI: The word mark Sadaci was registered in the European Union in 2011 for a legal period of 10 years.

GEONUTS: In addition to corporate brands, the subsidiary Inmobiliaria San Bernardo S.A. owns the mixed brand Geonuts, which has its own symbol, logo and colors. Through this brand walnuts are sold in the international market, being registered in the United States, Chile, China, South Korea and the European Union.

■ Patents

Starting in 2017, Molymet began an application process for invention patents in order to protect and enhance different developments carried out by the company.

On March 3, 2017, PCT application WO2017 / 035675 A1, Method for Removing Arsenic from Material Containing the Same, was published, a process by which arsenic can be removed from mineral concentrates and other materials of interest and stabilize the arsenic residue to deposit it in a safe way. During 2018, the registration process began in national phases in different countries, including Chile, Peru, Mexico, Canada, the United States, China, Australia, Bulgaria and Namibia. The patent was granted in Namibia and is pending in the other countries.

On November 30, 2017, PCT application WO2017 / 202909 A1, Roasting Furnace, Use Thereof and Method for the Processing of Ores or Concentrates, was published and its owner is the subsidiary SADACI. This patent refers to modifications to the roasting ovens and operating methods developed by the company. During 2018 the registration application started in national phases and has already been granted in Belgium. In addition, it is pending in the United States, Mexico, Canada, Chile, Peru, South Korea, Thailand, China and the European Union.

On December 14, 2018, the Chilean invention patent application CL 201803101 was published, Process for the Selective Removal of Copper Compounds and Other Impurities with respect to Molybdenum and Rhenium from Molybdenite Concentrates. On June 19, 2019 this application was filed in Australia under the number 2019204300.

PROPERTIES AND FACILITIES

MOLIBDENOS Y METALES S.A.

a) MolyMetNos

It is located in the town of Nos, borough of San Bernardo, south of Santiago (Metropolitan Region), covering a total area of 42.9 hectares, free of encumbrances, prohibitions and mortgages in guarantee of third party obligations.

In its MolyMetNos industrial complex it has production plants for roasting and pressure oxidation; pure molybdenum product plant; ferromolybdenum plant and plants for the conditioning of concentrates and technical oxide. It also has facilities to recover metals and water from liquid and solid waste and finally eliminate liquid waste: solvent extraction plant; copper cathode plant; copper cement plant; rhenium recovery plant, and metal recovery plant from ferromolybdenum slag. Likewise, it also has facilities for capturing and treating dust and process gases: inertial and electrostatic dusting systems, and gas washing plants and sulfuric acid plants. In addition, the industrial complex has various support facilities, such as a laboratory, computer systems, workshop and maintenance offices, warehouses, cafeteria, among others.

b) Corporate MolyMet

CORPORATE HEADQUARTERS, PARQUE AND CASONA LAS LILAS

MolyMet has a self-sustaining corporate building. The building is located on a land of approximately 5 hectares, thus promoting biodiversity. It also has a remodeled old house. Both buildings are located in the town of Nos, in Santiago de Chile.

The mentioned building, which has 5,215 square meters built (four floors), was inaugurated in 2011, after an investment of almost MMUS 15. Its structure is made of reinforced concrete, with collaborating steel beams and tensioners. Here all the work is carried out at the corporate level for all the subsidiaries of the Corporate Vice Presidencies of Administration and Finance, Commercial, Engineering and Information.

The corporate building is LEED Platinum certified, which was obtained based on the following compliance points, among others:

Energy:

Savings of up to 41% in energy, thus reducing greenhouse gas emissions. 100% of the energy needed to run the building, for a two-year term, was purchased in non-conventional renewable energy bonds.

Water:

Savings of up to 32% in the consumption of drinking water, compared to a building with similar characteristics, but not sustainable. 100% of the building's sewage is reused in industrial processes associated with the MolyMet production plant in Nos. 100% of the water used for irrigation comes from the Maipo agricultural canal network, and drinking water is not used for this purpose.

Waste:

75% of the waste from the construction site was recycled. 15% of the materials used in the construction of the building are recycled material and 22% of the materials correspond to regional inputs, that is, produced less than 800 km from the building.

Lighting and Air Conditioning:

100% of the rooms for daily use (offices, dining rooms, living areas) have access to natural light and exterior views. 100% of the indoor air is filtered and injected into the interior, thus reducing air recirculation, the presence of dust, fumes, pollen or other polluting agents that affect the quality of life of users. 100% of the roofs have vegetation, improving the thermal performance of the building and compensating for its impact on the environment.

Casona Las Lilas, meanwhile, dates from 1880 and has 1,600 square meters built. The original construction material is adobe and its remodeling, which cost more than US \$ 15 million, included a reinforcement of all its structures to transform it into an earthquake-resistant building. Currently, the Executive Presidency, the Board of Directors, the Vice President of Corporate Compliance and Risk, the Corporate Vice President of Human Resources, the Vice President of Corporate and Legal Affairs and the Vice President of Operations America are located in this large house.

The park, of more than 5 hectares, is made up of the old park and the new park. The old one, which also dates from the very beginning of the Casona contains native tree species that represent a green lung for the borough. The new park dates from 2012.

CARBOMET INDUSTRIAL S.A.

Carbomet Industrial S.A. has within its assets a warehouse of approximately 1,168 square meters, located in San Bernardo, Metropolitan Region, with specific characteristics for the storage of ferrosilicon and calcium carbide. The warehouse has a long-term lease with MolyMet.

The company owns land with a total surface of approximately 15,381 square meters, free of encumbrances, prohibitions and mortgages in guarantee of third-party obligations, under a lease, and are used to a greater extent for the storage of material and in lower proportion for use by contractors.

Likewise, it owns warehouses for document storage in an area of 287 square meters, and a cafeteria of 200 square meters for use by contractors, under a lease agreement with MolyMet.

On the other hand, Carbomet Industrial S.A. has a lease agreement with Carbomet Energía S.A., a subsidiary of the parent company MolyMet. Said contract consists of the leasing of administrative offices and warehousing, together with plant and facilities, which covers an area of 1,211 square meters for the fulfillment of its operations.

It should be noted that all these properties are located at 3499 Portales avenue, San Bernardo, Metropolitan Region.

Carbomet Industrial S.A. to date does not have land reserved for the future development of projects.

Carbomet Industrial S.A. owns the facilities that are leased to MolyMet.

CARBOMET ENERGÍA S.A.

Carbomet Energía owns the land and facilities free of encumbrances, prohibitions and mortgages in guarantee of third party obligations and operates the following electricity generation and transmission facilities:

Los Bajos Power Plant:

Its powerhouse is located in the Puente Alto borough, on the north bank of the Maipo River. The designed flow of the plant is 18 m³ / s of water, whose collection is carried out in the Puntilla power plant, plus irrigation water from multiple irrigators of the "Sociedad del Canal de Maipo", which are collected directly from the Maipo river through an intake and led by a 6-kilometer adduction channel. Carbomet Energía S.A. has permanent water rights for 24 m³ / s corresponding to the non-consumptive type, which is why the water, after being used in the plant's turbine, is returned to the Maipo river channel.

The facilities are made up of a Leffel brand generating unit that works with a net drop of 40.2 meters reaching a nominal power of 5.6 MW; It is a Francis horizontal axis turbine, commissioned in 1944.

The energy generated is transmitted to the injection point to the National Electric System (SEN), through a connection with the Puente Alto electrical distributor in the aforementioned borough. The Los Bajos Power Plant and the transmission line to inject the energy into the electrical system are located on proprietary and third-party land, which were taxed via concession (DS No. 4350, July 1944) and their corresponding easements.

Central Auxiliar del Maipo:

Its powerhouse is located in the San Bernardo borough on the north bank of the Maipo river. With a design flow of 24 m³ / s and a net drop of 27 meters, the Auxiliary Power Plant has a nominal installed power of 5.1 MW. The facilities are made up of three Francis horizontal axis units, two of them with double discharge and put into service in 1962, and a third with simple discharge, in 1985. The point of collection of non-consumptive water rights is in the Los Bajos power plant discharge point, being led through a 3.5 kilometer adduction channel and, after the turbines, returned to the river.

The energy generated is transmitted to the SEN injection point through a connection with the distributor (CGED) in the town of Nos, through a 12,000 volt area line of a length of 7.5 kilometers. The plant is located on its own land and the transmission line is located on third party land with their respective established easements.

INMOBILIARIA SAN BERNARDO S.A.

The company owns a total of 133 hectares, free of encumbrances, prohibitions and mortgages in guarantee of third party obligations. Of these, 123 are for agricultural cultivation, with plantations of walnuts of the Serr variety (48 ha) and Chandler (75 ha), in different stages of production according to their planting dates.

The company has duly regularized water rights in the respective Real Estate Conservator, which, under normal conditions of water availability in the Maipo river basin, satisfy the irrigation needs of the plantations.

In addition, there are processing facilities for the deboning, drying, parting, selection and automated classification of the walnut, which is then packaged by manual means to be subsequently marketed.

COMPLEJO INDUSTRIAL MOLYNOR S.A. MOLYMEX S.A. DE C.V

Complejo Industrial Molynor S.A. is located in the Mejillones Port Complex (CPM), 65 km from the city of Antofagasta, in Region II. The Industrial Port Complex of the borough of Mejillones is located in an exclusive and large industrial area. The property where Complejo Industrial Molynor S.A. is located has an area of 30 hectares, owned by the Complejo Industrial Molynor S.A., free of encumbrances, prohibitions and mortgages in guarantee of third-party obligations and has a two-lane paved road in front of the land (Via Longitudinal). At the regional level, it has two easy-access asphalt tracks, the main one being Route 1, which connects to Route 5 (Panamericana Highway), through Route B-400 (35 km).

Additionally, Molynor has the necessary service facilities for the operation of the main processes: seawater adduction and reverse osmosis plant, compressed air, cooling towers, chemical laboratory, sampling station, an uninterrupted backup system of electrical energy, plus a backup diesel generation park.

These facilities use 15 of a total of 30 hectares of land, with nine years of operation to date.

Complejo Industrial Molynor S.A. has a maritime concession located in the bay of Mejillones, Antofagasta Region, with an area of 3,754.97 square meters since November 21, 2011. The concession land has the objective of capturing sea water, which is fed in the reverse osmosis process for the generation of industrial water, and in turn receive the return of generated brine.

Molymex in Mexico has its industrial plant located at kilometer 29 of the Moctezuma-Nacoziari Cumpas highway, Sonora, on land of approximately 40.8 hectares, and buildings that cover 692 square meters of offices and 11.1 hectares of plants, warehouses and laboratory, which are also their property, free of encumbrances, prohibitions and mortgages in guarantee of third party obligations, in addition to their administrative offices in Hermosillo, Sonora.

Molymex has facilities for the recovery of metals from liquid and solid industrial waste, and for the neutralization of liquid waste: solvent extraction plant; and neutralization plant. Likewise, it also has facilities for the capture and treatment of dust and process gases: inertial and electrostatic dusting systems; gas washing plant and a sulfuric acid plant. Furthermore, Molymex has sampling facilities and a complete chemical analysis laboratory.

CM CHEMIEMETALL GMBH

The company is located within the Chemiepark Bitterfeld-Wolfen industrial park and has a plot of 2.7 hectares, of which 9,000 square meters are built: industrial plant, offices, warehouses and laboratory, all free of liens, prohibitions and collateral mortgages of third party obligations.

SADACI N.V.

Sadaci NV in Belgium is located on a land spanning 26.1 hectares owned by the company, in the industrial district of the port of Ghent, and has 49,645 square meters of: industrial plant, offices, warehouses and laboratory, also free of charges, prohibitions and mortgages to guarantee third-party obligations.

Within its facilities, Sadaci has a roasting plant, a briquette plant, a ferromolybdenum plant, sampling facilities and a modern chemical analysis laboratory. It also has a plant under construction for the production of pure oxide. It also has a gas treatment plant and a sulfuric acid plant.



RISK FACTORS

Factors Related to Molymet

(i) Molymet is subject to various laws and regulations

Molymet's businesses are subject to regulation by the countries in which they operate. Changes to such regulations could cause Molymet to modify its business objectives in the event that existing practices become more regulated, costs increase or are simply prohibited. Molymet's businesses and the sectors in which it operates are sometimes being reviewed or investigated by regulators, which can lead to coercive actions, fines and infractions, or the imposition of damages and claims derived from litigation.

(ii) The business largely depends on a single production plant.

The Nos plant in Chile is the main production facility. At the end of 2019, Nos facilities represented 41.55% of Molymet's total processing capacity in terms of volume. Although the properties are insured in terms that can be considered prudent, any significant damage or accident or other type of impact on production in said facilities would affect the productive capacity, financial condition and operational results of Molymet.

(iii) Implementation of a growth strategy

Molymet's implementation of a growth strategy, including possible acquisitions, could involve the investment of significant amounts of its resources and / or have an adverse effect on its business activities.

(iv) Dependence on key personnel

By virtue of the type of business it develops, Molymet depends to some extent on key officials whose characteristics are extremely important. The absence of such key personnel could have an adverse effect on Molymet's business and results.

(v) Commercial responsibility

Due to its activities, Molymet is subject to potential demands from customers in relation to the quality of its products. If successful, such lawsuits could result in the imposition of compensation obligations against Molymet and in favor of the affected clients. Molymet has Product Liability insurance which covers this responsibility.

(vi) Contractual obligations (covenants) derived from financing operations of Molymet

Molymet has financing that contains obligations to do and not to do for Molymet, among which can be found the presentation of financial information, the fulfillment of certain financial reasons, restrictions on contracting additional debt and granting guarantees.

In order to obtain the various financing, Molymet uses the financial markets, both local and international, for which reason it obtains and assumes obligations to do and not to do similar to those previously described. Notwithstanding this, it cannot be guaranteed that when resorting to financing in the financial markets, it will continue to acquire commitments similar or of the same nature to those described in the previous paragraph or to those normally required in terms of existing debt.

(vii) Operations with related parties

During the ordinary course of its business, Molymet conducts operations with related parties. In the event that any of these counterparties defaults on their obligations under said operations, this could have an adverse effect on Molymet's financial situation.

(viii) Cyber attacks

If there are cyber attacks and / or other violations of Molymet's networks and information technology systems, that security controls cannot stop, for any reason (including for being next-generation attacks that circumvent these controls) , could directly affect Molymet's operation by compromising operating systems and causing financial and reputational damage, which could have an adverse effect on your business. However, Molymet has multiple layers of security against virus, malware or hacking attacks, such as centralized endpoint protection systems, navigation protection, device control, antispam, among others. The multiple security systems allow, in turn, to generate early alerts to react against indicators of commitment and, in turn, activate incident response plans. In parallel, independent and periodic intrusion tests are carried out to identify vulnerabilities and subsequently execute mitigation plans on the findings.

Factors Related to the industry in which Molymet Develops its Business

(i) Molymet faces the competition in each of their markets

Molymet competes in each geographic market and in each of its business lines with other molybdenum processors around the world. Its main competitors include Codelco in Chile, Thompson Creek in Canada, Freeport McMoran and Thompson Creek in the US, and Freeport McMoran in Europe. Additionally, there are other processors in China and other parts of Asia from which Molymet expects to face increased competition. However, Molymet achieves great competitiveness thanks to the efficiency of its processes, its personalized products and its proximity, both with regard to the suppliers of concentrates, as well as the customers of its products.

However, Molymet may face competition from some of its large copper producers. Some of these producers are also engaged in molybdenum processing and process part of their concentrate production in addition to contracting for these services from Molymet. There is no assurance that these producers will not decide in the future to process a larger portion of their own molybdenum concentrate internally. Similarly, some of our large mining sector customers that currently do not have molybdenum processing capacity may develop that capacity in the future and stop contracting such services with Molymet. If any of these circumstances occurs, it could have an adverse effect on the demand for Molymet's services, on its financial and business condition and its results of operations. Such competition could result in the inability of Molymet to access the necessary raw material, to hire or maintain trained employees, or to obtain the necessary capital to finance its operations.

(ii) Molymet is not involved in any mining activity to obtain molybdenum concentrate

Molymet does not carry out mining activities to obtain molybdenum concentrate. Its business focuses on third-party molybdenum concentrate processing, so it depends on the stable supply of molybdenum concentrate. The supply of molybdenum is mainly achieved through purchases made from suppliers through medium and long-term contracts and through transactions in the spot market. Molymet has maintained stable and long-term relationships with its main suppliers of molybdenum concentrate, in order to ensure enough raw materials to satisfy customer demand at all times. However, there is no assurance that such relationships will continue to exist in the future. There is no assurance that the supply of molybdenum concentrate will always be available on the spot market at favorable prices, or that Molymet will have the possibility to renew its long-term contracts on favorable terms.

(iii) Dependence on certain suppliers

Molymet seeks to strengthen its long-term relationships with existing molybdenum concentrate suppliers and diversify its sources of molybdenum concentrate by developing new relationships with other suppliers in Chile, Mexico, Peru and the US, as well as entering into long-term supply contracts. deadline to ensure access to your raw materials. Notwithstanding the foregoing, Molymet's activities currently depend to some extent on some of its suppliers, that is, Mexicana de Cobre, Kennecott and Codelco, for example.

It is impossible to ensure that relations with any of its suppliers, including those previously mentioned, will remain in force.

(iv) The business may be affected by changes in the prices of molybdenum, rhenium and copper

Molymet's earnings and financial performance are affected by market prices for molybdenum, and to a lesser extent for rhenium and copper, each of which can fluctuate widely. Historically, molybdenum prices have been subject to large fluctuations, while also being affected by numerous factors outside of Molymet's control. This risk is inherent in the nature of Molymet's business and has been managed by its administration by minimizing the impact of the change in the international price of molybdenum on the physical position of Molymet's property. However, if the price of molybdenum were to increase substantially, the need to finance the purchase of molybdenum concentrate for its own-sale business would also increase and, therefore, financial expenses would increase. On the other hand, if the molybdenum price decreased substantially, sales and results of operations would probably be affected, but it would generate a significant cash flow, which would increase Molymet's liquidity.

(v) Molymet depends on a constant demand for molybdenum, rhenium and copper, and any decrease in said demand could adversely affect it.

Molymet's business is entirely dependent on continued global demand for molybdenum. The main markets for molybdenum are the engineering, construction, transportation, mining, petrochemical, and energy and oil and gas industries. These industries, as well as others that make use of molybdenum, are cyclical in nature and highly sensitive to general economic conditions. Molybdenum demand is affected by numerous factors outside Molymet's reach, including stability of interest rates and exchange rates and general levels of industrial production. As a result of the slowdown in the US, European, Asian or Latin American economies, the demand for high-quality steel and Molymet's molybdenum products could be reduced, which could adversely affect its results of operations and cash flows.

The demand for molybdenum is reflected not only in the needs of cyclical industries, but also in the current absence of cost-viable molybdenum substitutes. However, there are potential substitutes for strengthening steel alloys and other applications, such as vanadium, boron, chromium, and columbium. Future advances in science, technology and industrial metallurgical processes could lead to increased use of substitute metals and lower demand for molybdenum.

(vi) Dependence on the steel industry

Molymet's businesses depend to a large extent on the production and demand of the steel industry, since most of the molybdenum products and by-products it develops are used precisely in that industry. Thus, a decrease in demand for molybdenum by the steel industry could have a significant adverse effect on Molymet's results.

(vii) In order to remain competitive, Molymet must develop and apply cutting-edge technologies

The nature of the molybdenum business requires significant financial investment and human resources to develop and apply cutting-edge technology. Molymet's historical success has been largely achieved through its ability to efficiently extract molybdenum from the raw material, which contains high levels of impurities, which it has achieved through the development and use of state-of-the-art technology.

(viii) Investments in assets

Since the industrial sector in which it does business requires the use of high-tech facilities, machinery and equipment, Molymet requires significant amounts of capital to finance its asset investments.

(ix) Environmental permits or authorizations

The roasting and processing of molybdenum concentrate are subject to many different environmental and other regulations in many jurisdictions. Most local regulatory authorities require permits or authorizations for the construction of molybdenum roasting facilities of the type operated by Molymet and, in some instances, such permits or authorizations are not issued by the relevant authorities. However, as of the date of this annual report, all the environmental permits or authorizations requested by Molymet have been granted.

(x) Environmental risks

Despite the fact that Molymet has so far all the permits and / or authorizations required for the construction and operation of its molybdenum roasting facilities by the legislation in force in the different jurisdictions in which it operates, the violation of said legislation in environmental and any possible liability derived from it could result in the imposition of remediation obligations or pecuniary sanctions that could compromise significant amounts of resources, as well as the prohibition of using certain facilities, which could have an adverse effect on molybdenum production capacity and ultimately be reflected in the Molymet results.

(xi) Variation in energy costs

Due to the type of industrial operations carried out by Molymet and some of its subsidiaries, certain energy products are indispensable to them. In the event of an unforeseen increase in the costs of procuring such energy products, Molymet's operations and results may be affected.

Other Factors

(i) Economic, political and social conditions in other countries could adversely affect Molymet's results.

Recently, many countries have experienced significantly volatile economic, political and social conditions, and this could continue to occur in the future. Global instability has been caused by various factors, including substantial fluctuations in economic growth, changes in inflation levels, movements in exchange rates, changes in economic and fiscal policies and regulations, as well as political, social and economic instability in general. No assurance can be given that such unstable conditions will no longer occur or that they will not have a material adverse effect on Molymet's financial position and results of operations.

(ii) The credit rating of the bonds may be subject to review.

The credit ratings granted in relation to the Bonds may be subject to revision (either downward or upward) due to different circumstances related to Molymet, Chile, Mexico or other issues that in the opinion of the rating agencies are relevant. Investors should carefully estimate any consideration indicated in the corresponding ratings.

(iii) Fluctuations in exchange rates

Fluctuations in exchange rates could affect the economic performance of the countries in which Molymet and its clients operate, and therefore their operating results and ability to pay. Also, the valuation of Molymet's liabilities and assets may vary depending on such fluctuations.

(iv) Risk associated with derivative financial instruments

When market conditions are favorable, Molymet executes transactions designed to hedge and reduce its risks related to currency fluctuations or variations in interest rates through financial derivative instruments. The risks associated with derivative financial instruments may occur due to market circumstances and the solvency of the institutions with which they are contracted.

INVESTMENT PLANS

Chemical Plant Project, Sadaci N.V., Belgium

To date, the Chemical Plant Project is under development, in the subsidiary Sadaci NV, in Belgium. This project, which complements its current roasting operations, will allow the production of higher value-added products, as well as greater flexibility in the processing of molybdenum concentrates. It is noted that the aforementioned project considers a start of commissioning during the first half of 2020; an estimated investment of US \$ 55.00 million; It will be carried out with company resources, without participating partners, and no financial effects are expected in the short term. At the end of December 2019, this project presents a physical progress of 97%.

Molybdenum Metallic Productive Capacity Increase Project, Chemiemetall GmbH, Germany

The Chemiemetall Plant Increasing Productive Capacity Project is currently underway in Germany. Said investment project contemplates, mainly, incorporating a third production line, thereby increasing its installed capacity by 56%, equivalent to 645 annual tons of additional molybdenum metal powder. The project considers an estimated total investment amount of US \$ 9.20 million. The new production line will be fully operational during the first half of 2020.

Project for the Modernization of Toasting Gas Cleaning Systems, MolymetNos, Chile

On May 29, 2019, the Board of Directors of Molymet approved the necessary investment for the modernization of certain facilities of the Molymet plant located in Nos, San Bernardo, which has been called "Modernization of Toasting Gas Cleaning Systems", in order to modernize the gas cleaning processes, making them more efficient and robust. This project contemplates an investment of approximately US \$ 50.60 million, over a period of three years, which will be financed entirely with through owned resources.

