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### **OUR VISION**

"Tsement shokhoi" SOE will be the industrial cluster hub for construction material

### **OUR MISSION**

We will be a public company fostering fair competition through products and services that meet international standards and create commonwealth.

### **OUR VALUES**

Leadership and shared development Accountable and virtuous Considerate and cordial Differentiated products Exemplary services

### **SLOGON**

Leading with commitment to growth

#### "TSEMENT SHOKHOI" SOE

KHUTUL CEMENT AND LIME PLANT WAS ESTABLISHED BY ORDER NO. 127 OF THE MINISTER OF THE CONSTRUCTION AND BUILDING MATERIALS INDUSTRY IN 1983 WITH THE STRUCTURE CONSISTING OF CEMENT, LIME, EXTRACTION MINING FACTORIES, A REPAIR AND MECHANICS UNIT AND A THERMAL STATION. IN 1984, STARTED ITS OPERATION BY BURNING IN FOUR SHIFTS IN KILN I OF THE LIME PLANT, AND ITS FIRST PRODUCT WAS SUPPLIED TO "ERDENET PLANT" SOE. IN 1986, CEMENT PRODUCTION BEGAN WHEN THE STATE COMMISSION ACCEPTED THE I AND II TECHNOLOGY LINES OF THE CEMENT PLANT.



OVER 40 YEARS, WE HAVE PRODUCED

CEMENT CLINKER LIME

MINING

HEAT

7.600.000 tons 6.900.000 tons

1.600.000 tons 15.873.021 M3

2.992.249 GCAL

#### GREETINGS FROM THE DIRECTOR



#### RESPECTED BUSINESS OWNERS AND INVESTORS

Back in 1983, our cement and lime factory was established to supply lime to "Erdenet" SOE, is on the threshold of its 40th year. Over the past 40 years, we have supplied over 7.6 million tons of cement and 1.6 million tons of lime, made a remarkable contribution to the development of Mongolian construction industry.

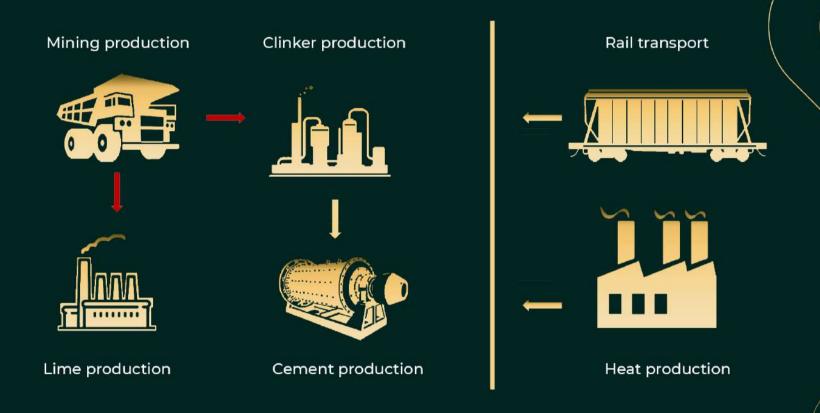
At present, "Tsement shokhoi" SOE has more than 820 employees working in cement, lime, clinker, heat, and mining production. Our VISION is to become a public company fostering fair competition through products and services that meet international standards and create commonwealth in coming years.

Therefore, we will adopt international ISO standards in our operation, increase the company's competitiveness and value, and ultimately fulfill our goal of becoming public company. We are confident that shall become a leading national company.

#### Yours sincerely:

Naranbaatar L., CEO of "Tsement shokhoi" SOE

## **MAIN ACTIVITIES**



#### MINING PRODUCTION

The mineral reserves of the deposit were first approved by the State Commission of Mineral Resources in 1980, and confirmation prospecting was carried out in the central part of the deposit by the central geological expedition in 1989, and mining exploration was carried out by Geological Exploration Expedition of Erdenet Plant in 1993-1997. An additional geological exploration works in Khutul 1 and Khutul 2 deposits carried out in 2014 and mineral reserves of the deposits were re-registered in the Mineral Resources Fund of Mongolia.

Khutul-1 and 2 limestone deposits are being mined by open-pit mining, and the clinker and lime industry are continuously supplied with limestone. The mining factory has the capacity to excavate, load and transport 1.2 - 1.5 million m3 of rock mass and to perform an average of 50,000-60,000 meters drilling and blasting per year.





#### RAILWAY TRANSPORT

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#### "KHUTUL ENERGY DULAAN" LLC

In order to provide heat and thermal energy to the cement and lime factories, local households and public organizations in Khutul city, the thermal power plant was established in 1984. Currently, total of 61 employees are working in four shifts in two main facilities such as thermal plant and the heating grid. The company has capacity to produce 42,000 Gcal of thermal energy consuming an average of 25,000 tons of coal, 2.8 million kWh electricity, 62,000 cubic meters of water.

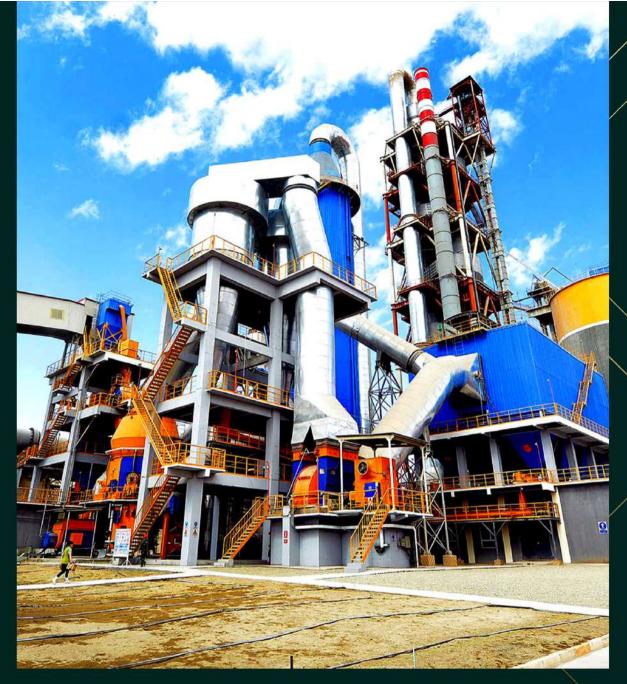


"TSEMENT SHOKHOI" SOE

### **CLINKER PRODUCTION**

October 10, 1985, The clinker factory was built using the wet method technology, began to produce clinker or semi-finished products, the main raw material

semi-finished products, the main raw material of cement. The plant has been producing clinker over 28 years, and in 2014, a plant with dry method technology and a capacity to produce 400,000 tons of clinker per year was commissioned.



"TSEMENT SHOKHOI" SOE — 07

#### LIME PRODUCTION

The lime factory was built in 1980 with the technical and economic assistance of the former Soviet Union, and started its operation on December 11, 1983 when kiln I was fired. The plant was built and put into operation with 3 vertical kilns with a capacity of 55,000 tons of lime production per year in order to meet the lime consumption of "Erdenet Plant" SOE. The lime plant produces 50,000-55,000 tons of lime per year.

MNS347:2002 Construction use lime with less than 80% activity

MNS347:2002 Construction use lime with more than 80% activity

#### **CEMENT PRODUCTION**

The operation of the Cement Factory first started in 1984 when Kiln I was fired. The cement plant operates continuously 24 hours per day in 4 shifts except for winter. At present it produces PPC-32.5, OPC-42.5, PC-42.5, PC-52.5 grade cement in accordance with MNS974:2008 classification standard of Mongolia and continuously supplied its products to the construction industry and development of the country for 40 years.



RRS 32.5-15% - Widely used in M-20 grade concrete, specially in massive concrete floors, wall castings, roads and flat surface buildings consisting of steel structures that cannot bear load.



ORS 42.5 - M-30 grade is used to manufacture high-quality concrete. Cement is used in reinforced concrete, prefabricated concrete structures, bridges and dams, castings and construction.



RS 52.5 high-grade Portland cement is widely used in heavy-load bridges, multi-link buildings and facilities, and buildings and structures to be built in cold and harsh climate regions.

The cement market capacity is 2 million tons per year, and "Tsement shokhoi" SOE supplies 25% of it.

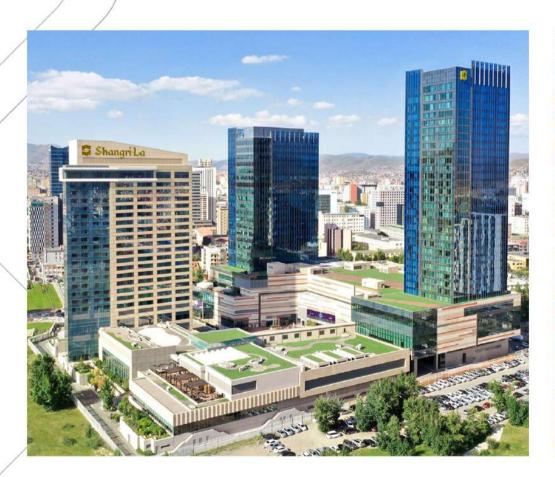
"TSEMENT SHOKHOI" SOE — 09

#### **OUR SPECIALTY IN BUSINESS**

In Mongolia, large-scale housing, road, and mining projects and programs are intensively implemented year after year, and with this, the demand for cement and lime, the main products of construction materials is increasing continously.

"Tsement shokhoi" SOE is one of two companies producing and supplying technological lime to the lime market, and as of 2022, it is supplying 90% of the technological lime to "Erdenet Plant" SOE for ore treatment and beneficiation processes.

In addition, we are producing 52.5 grade cement for high-load bearing structural products such as bridges for roads and rails, concrete tracks, drainage pipes, 42.5grade for construction industry and 32.5 grade cement required for road construction.







#### LIME PRODUCTION PROJECT WITH ROTARY KILN

Rotary kilns have been introduced into lime production since the beginning of the 20th century. Since then, advanced lime production projects are installing rotary kiln factory with preheaters. Lime production with rotary kiln has the following advantages:

- -Increase in production capacity;
- -Increase in variety of products;
- -Improved quality of products;
- -Able to burn limestone of fine fraction and any carbonated raw materials with high strength and high moisture content;
- -Reduce the content requirements for raw materials (limestone);
- -Provide the conditions for safe operations;
- -Reduce the negative impact on the environment and improve air quality.



"Tsement shokhoi" SOE is implementing to establish new lime factory with capacity to produce 100,000 tons of lime per year. Its operation based on rotary kiln technology with pre-heater. In this context, we have initiated Feasibility report for the construction of a new Lime Plant project.

#### GENERAL CONCEPT OF LIME PLANT WITH ROTARY KILN:

•Plant production capacity: 100.0 thousand tons/year

400.0 tons/day

•Raw material preparation technology; II stage crushing (limestone)

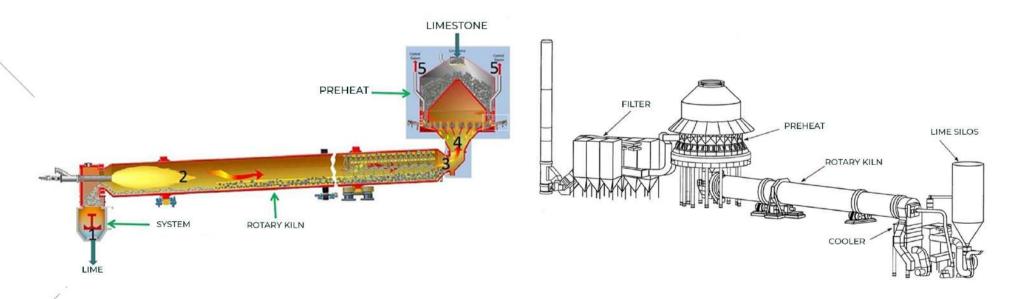
I stage grinding (coal)

•Grain size of crushed limestone: 10-40 mm

•Utilization rate of the Plant: 85%

·Lime production technology;

- ·Burning technology in rotary kiln with dry process preheater;
- ·Continuously work in four seasons of the year;
- Less negative impact on people and the environment, and resolved the issues related to fumes from the rotary kiln and dust caused by the operation of the equipment;
- ·Produce quicklime lime and powder lime;
- ·Powder lime is packed in two-ton big-bags from the silos and delivered to consumers;
- •During the construction period of the plant, provided the normal operation of the lime factory with the old vertical kiln;
- •The lime plant has a fully automated control and management.



#### **OPPORTUNITY TO COOPERATE**

LIME PLANT PROJECT – 20 MILLION USD

EXPANSION OF THE CLINKER PLANT - 100 MILLION USD

EXPANSION AND RENOVATION OF CEMENT MILL - 10 MILLION USD

EXPANSION OF CEMENT SILOS – 3 MILLION USD

ELECTRIC POWER GENERATION PROJECT USING WASTE HEAT FROM ROTARY KILN - 15 MILLION USD

THE PROJECT TO TRANSFER THE LIMESTONE OF KHOTOL-2 DEPOSIT TO

SORTING EXTRACTION TECHNOLOGY - 7 MILLION USD

OTHER BUILDING MATERIALS INDUSTRY - 10 MILLION USD

MODERNIZATION OF THE THERMAL PLANT - 25 MILLION USD

RAILWAY LOCOMOTIVES AND WAGONS – 20 MILLION USD

TOTAL OF 210 MILLION USD

## Leading with commitment to growth over 40 years



