



RAW MATERIALS



ICE "Techenergopm" LLC



Dolphin Steel Ltd.



"Techenergoprom – Georgia" LLC



"Techenergoprom-R" LLC



“TECHENERGOPROM” GROUP

offers high-quality metallurgical raw materials for steelmaking and production of ferroalloys.

Flexible conditions for cooperation and the presence of representative offices in the near and far abroad allow us to carry out the most comfortable, efficient and cost-effective transactions for our regular customers.

For the convenience of calculations and customs clearance of products, the Tehenergoprom group of companies has sales offices:

- ICE “TECHENERGOPROM LLC, Ukraine
- Dolphin Steel LTD, UK
- Tehenergoprom-R LLC, Russia
- Tehenergoprom-Georgia LLC, Georgia

This allows us to carry out foreign economic activity in the near and far abroad countries with maximum comfort for our clients.



MANGANESE ORE is the raw material for production of silicomanganese and ferromanganese, as well as iron ore sinter and pig iron.

Manganese ores are separated according to the content of manganese, iron and various impurities. The main types are:

Metallurgical ores - contain more than 35% manganese, some up to 50%. High grade ores contain more than 48% manganese.

Ferrous ores contain 15-35% manganese and a large amount of iron.

Manganese ores are essentially iron ores with 5-10% Mn content.

Metallurgical ores are most often used for the production of high-carbon ferromanganese and silicomanganese, while ferrous and manganese are mainly used in the production of sinter and cast iron.

As the quantity of high-grade ores is currently significantly reduced, the degree of processing has increased. In practice, all metallurgical ores are enriched.

In the **TECHENERGOPROM GROUP**, you can purchase manganese ore of various degrees of enrichment and manganese concentrate.

The main materials we propose are in our presentation.



MANGANESE ORE, ROMANIA

Chemical composition	
Mn	23-27%
SiO ₂	30% max.
Al ₂ O ₃	7% max.
Fe	7% max.
S	0.41%
P	0,1% max
Moisture	25%max
Fraction	0-100 mm, 90% min.





MANGANESE ORE TANZANIA

Chemical composition	
Mn	42% min
SiO ₂	20% max
Al ₂ O ₃	5% max
Fe	5% max
P	0.01% max
Moisture	5 % макс
Fraction	0 - 100mm - 90% min





MANGANESE ORE EGYPT

Chemical composition	
Mn	20-24,4%
SiO ₂	25% max
Al ₂ O ₃	5% max
Fe	6% max
P	0.01% max
Moisture	7 % max
Fraction	0 - 50mm - 80% min





MANGANESE ORE EGYPT

Chemical composition	
Mn	28-30%
Fe	11% max
SiO₂	25% max
Al₂O₃	3% max
P	0.01% max
Moisture	7 % макс
Fraction	0 - 50mm - 80% min





IRON CONCENTRATE

is the iron ore deep enrichment product used in sintering and pellet production.

The high mass fraction of iron in the concentrate increases the production efficiency of metallurgical products.

During periods of negative temperature conditions, it is dried if necessary to ensure convenient transportation and unloading.



IRON CONCENTRATE, TURKEY

Chemical composition	
Fe	63% base
Al₂O₃	1% max.
SiO₂	5% max.
S	0.85% max.
P	0.1% max.
Moister	10% max.
0-10mm	100%





IRON-CONTAINING BRIQUETTES UKRAINE

The metallurgical importance of the briquette is in the partial changeover of iron ore raw materials, the ability to prevent and eliminate blockages in the iron receiver and reduce the consumption of raw limestone in blast furnace smelting. Mass fraction of iron (Fe tot): 55-75%.

The first type includes self-healing briquettes, in which the components of the briquette are iron and carbon oxides. The basic principle of operation of briquettes of this class is the direct reduction of iron oxides with carbon, due to the numerous and highly developed contacts of these components inside the briquettes.

This type of briquettes in the steelmaking process changeovers cast iron or steel scrap and plays the role of a carburizer in blast furnace production, saving coke.

The ability to freely change the ratio of oxidizing and reducing components, as well as the fractional composition, determines the technological value and expediency of using metallurgical briquettes as a component of the metal charge when smelting iron and steel in various metallurgical units.

The second class includes briquettes based on mill scale, which have a high total iron content (ferrous oxide 50-60%), used as a washing iron-containing material, metal receivers of blast furnaces.

Briquettes can have several sizes and shapes, in the form of a cube 100x100x100mm, as well as dumplings, recommended for steelmaking.



IRON-CONTAINING BRIQUETTES UKRAINE

COMPOSITION OF BMZ TYPE IRON-CONTAINING BRIQUETTE	
Fe_{TOT}	55,3%
FeO	45,4%
CaO	6,4%
SiO₂	4,2%
Moisture, max.	5,9%
Compressive strength	10,4 MPa
Briquette dimensions	100x100x100 mm





SILIKOMANGANESE

is an alloy of iron, silicon and manganese, used in metallurgy as a deoxidizing agent for steel and for its alloying. Gives strength, wear resistance and impact resistance to iron-based alloys.



SILICOMANGANESE (ISO 5447-80), GEORGIA

	FeSiMn	FeSiMn	FeSiMn
Mn	65 % min	65 % min	60 % min
Si	15-20.0 %	16-19.9 %	25-35 %
S	0.03 % max	0.03 % max	0.03 % max
P	0.60 % max	0.35 % max	0.25 % max
C	2.5 % max	2.5 % max	0.5 % max
Фракци я	0 – 10; 10 – 50; 50 – 80; 10 – 100		





We hope that in our person your company will find a new reliable supplier of the products you need and the cooperation of our enterprises will be fruitful, long-term and mutually beneficial.



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