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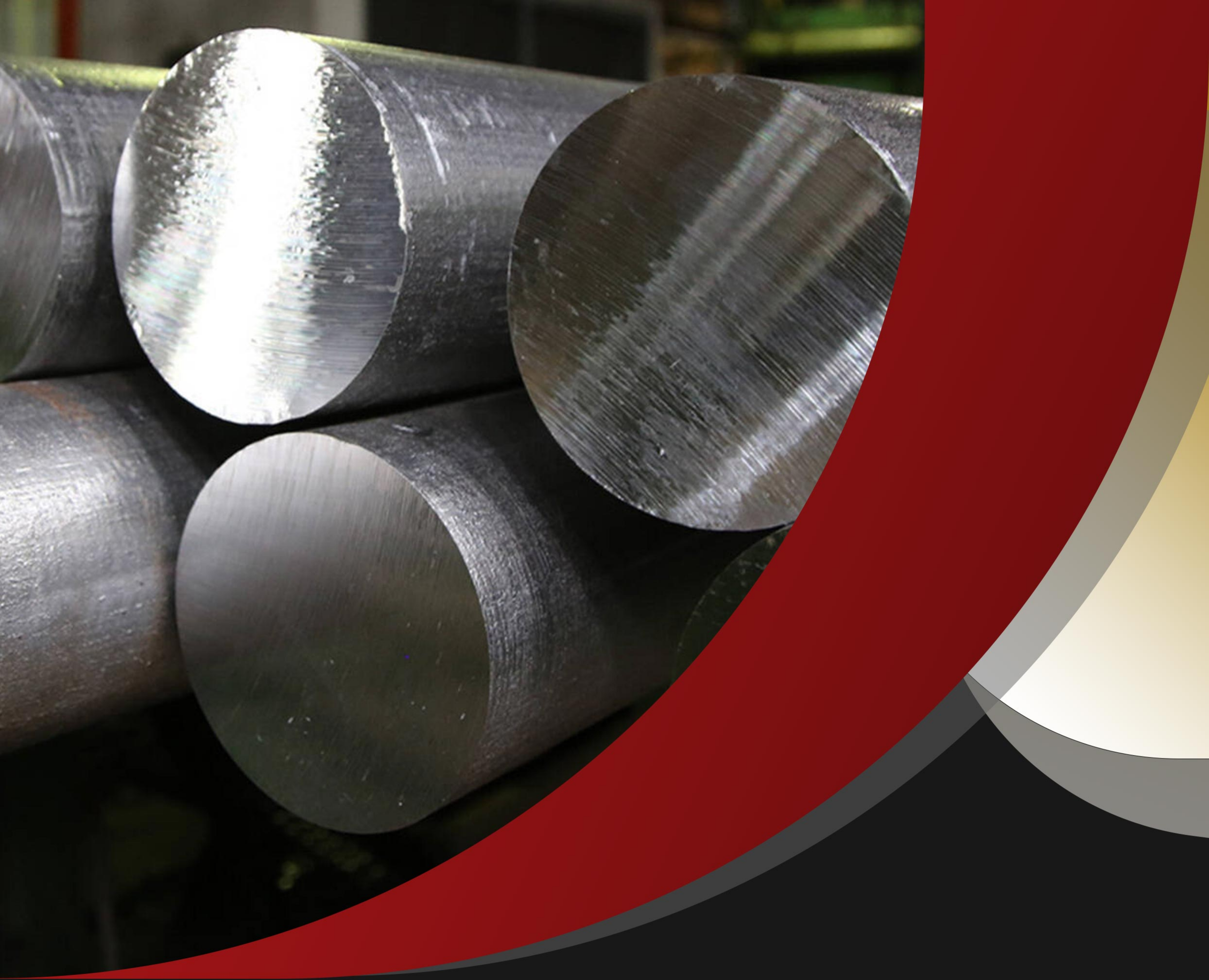




## Ariel

**Ariel Trading Company, one of the most important steel industry companies in the Middle East, has different products such as steel billets, steel slabs, rebar, steel sheets, hot briquette iron, sponge iron, etc. With the highest level of production quality and meets the needs of factories and businessmen. With large and advanced factories, the company has the ability to get a great proportion of the market and tries to become one of the major world producers by progressing in terms of quantity and quality of its products.**





## **Steel Billet**

**An ingot that is used for rolling directly from CCM production is called CCM ingot or steel billet. This product is made in two ways: blast furnace, electric arc furnace, or induction furnace. This product is longer than ingots and has a circular, or square surface, with a width of less than 15 cm and its cross-section is smaller than 230 cm, this product is mostly used to produce rebar and wire and is adequately flexible in stretching, bending and torsion.**





## Steel Slabs

**Slabs are semi-finished steel products with rectangular cross-sections and the following Dimensions (between 650 to a maximum of 2000 mm width, between 200 to 250 mm thickness, and between 4 to 12 meters length), become final products after going through production processes in different factories. Most of these products are made of carbon steel, so are stainless. Slabs are made of various alloys such as Iron, chromium, copper, manganese, nickel, silicon, and molybdenum, and their specifications are carved by standard codes usually at the end. Steel slabs are used to produce a variety of flat steel products such as sheets, plates, and coils and also in the heavier machinery industry.**

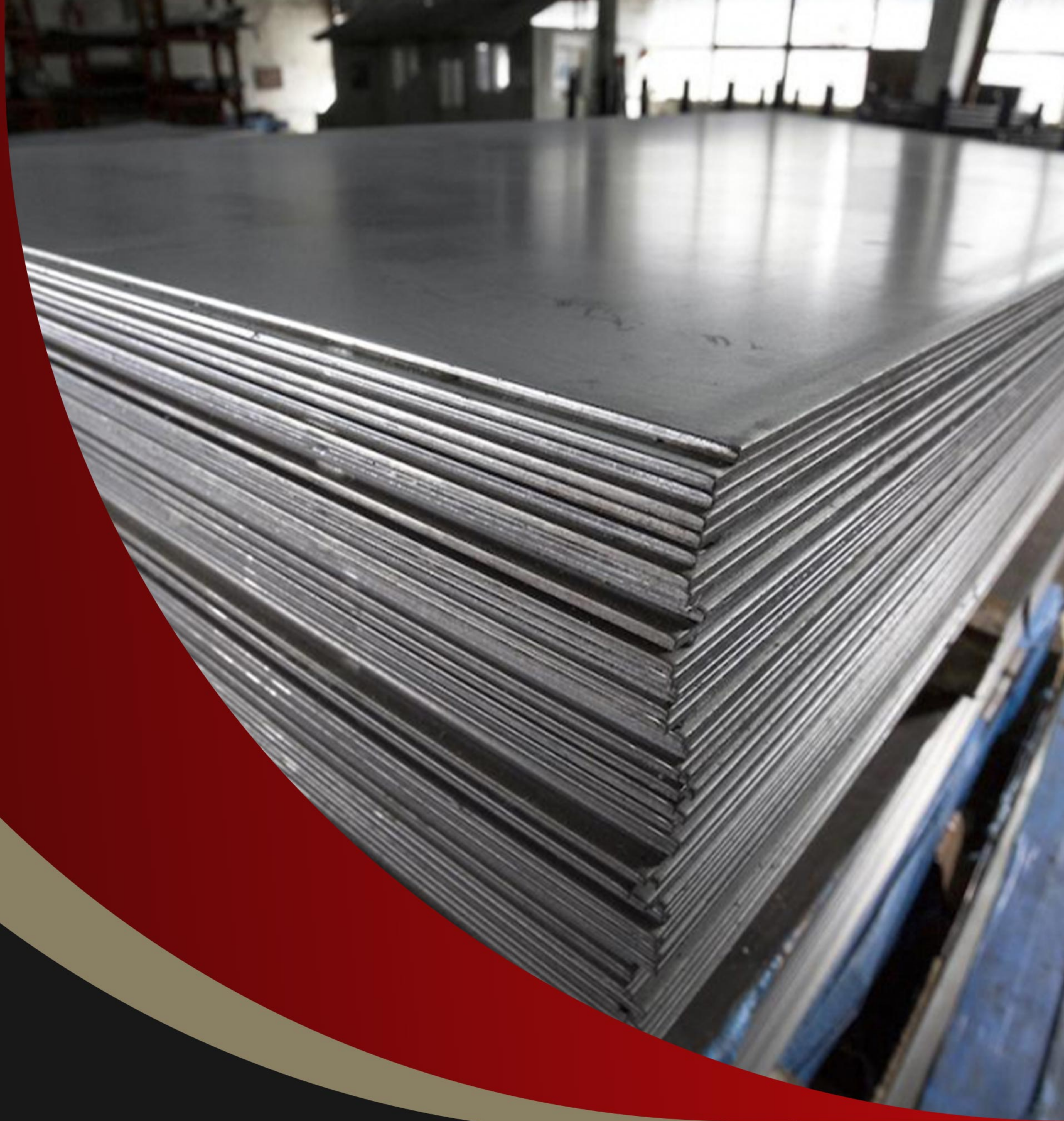




## Rebars

Rebars are produced in two types of simple and ribbed, simple rebar for things such as blacksmithing or welding, and ribbed bars are used for things such as making stirrup steel, and industrial and constructional civil engineering. Ribbed rebar or steel reinforcement in concrete is used to compensate for tensile strength and is produced with different standards. This product is also used to create strength in buildings, bridges, dams, etc.





## **Steel sheet**

**Steel sheets are among the most applicable products, used directly or indirectly in a variety of industries such as the production of secondary tools and equipment. These sheets have different types and each of them is suitable for different uses; In terms of type, method of production, raw materials, properties, and standards are divided into different samples.**





## **Types of sheets produced in Ariel**

- **Black Sheets**
- **Oiled sheets**
- **Acid washing Sheets**
- **Galvanized Sheets**
- **Colored Sheets**
- **Tin coated sheets**
- **And...**





## Hot Briquetted Iron

Compressed blocks of materials such as dust, coal, or other compound materials such as sponge iron, sponge iron soil, iron swarf, or shards are called briquettes. This product is being used to increase and improve the quantity, efficiency, storage, and transportation of sponge iron. This industry has been developed to produce products based on sponge iron and to obtain more desirable properties. Today, sponge iron is one of the most important sources of feed for steelmaking units and has a spongy appearance and a lot of porosity that increases its volume.





## **Sponge Iron**

**This product is obtained from the direct reviving process of iron ore and oxygen is removed from it without the need to melt iron ore. In this method, iron ore pellets with 67% grade have been revived, resulting in sponge iron (porous pellets). Sponge Iron becomes the needed product, in the foundry process, after melting and reviving in steelmaker, and would be used in three forms of slabs, billets, and rebars. The use of sponge iron in induction furnaces is one of the first and most important applications that is done using sponge iron in induction furnaces. Today, scrap iron or sponge iron is used in the production of ingots and steel products.**





## Hematite iron ore

**Hematite iron ore is one of the most abundant minerals on the earth, accounting for about 5% of the earth's crust. This product is divided into different types depending on the appearance and purity of iron; hematite iron ore with 70% iron and magnetite iron ore with 72% iron, are among the best and most popular ores in the world. The main use of Hematite, usually in red and earthy color, is in the process of producing cement. Due to its unique characteristics, it is one of the best-selling types of mineral iron ore.**





## **Hematite Iron Ore Usages**

- **In jewelry production**
- **In cement production**
- **In the production of cosmetics and paint making**
- **And...**





## **Iron Mill Scale**

**This product is separated from the surface of the products at high temperatures in the processes of the foundry, slabs trimming, and rolling sheet. In the process of hot rolling of steel ingots, about 2% of the rolled steel is removed from the production line in the form of iron mill scale wastes. This product is used to assist the melting process in the blast furnaces, granulation, production of ferrosilicon, and construction materials such as concrete, bricks, tiles, etc.**





## Sponge Iron Sludge

**Sponge iron sludge emerges from the direct revival of iron ore and iron pellets and has a sponge-like structure, so it is known as Sponge Iron Sludge and is the best alternative for scrap iron. Approximately 50% of sponge iron can be replaced by scrap iron in the induction furnace, and this material is produced directly from the reduction of iron oxygen and has a grade between 85% to 95%.**





## Properties and characteristics of sponge iron

- **Less sulfur and phosphorus**
- **A suitable alternative to iron waste**
- **Being the cooling element in oxygen furnaces**
- **Lack of scrap iron redundant elements**





## Iron Pellets Fines

**Pellets are small spheres that are produced from iron ore or other additives. The pellet used in the direct reviving method has more iron grade and fewer impurities than the blast furnace pellet, vis-à-vis the blast furnace pellets have a larger size and more strength that both depend on the size of the blast furnace. Because of the quality and properties improvement of metallurgy, additives such as calcium hydroxide may also be used in the production process.**





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