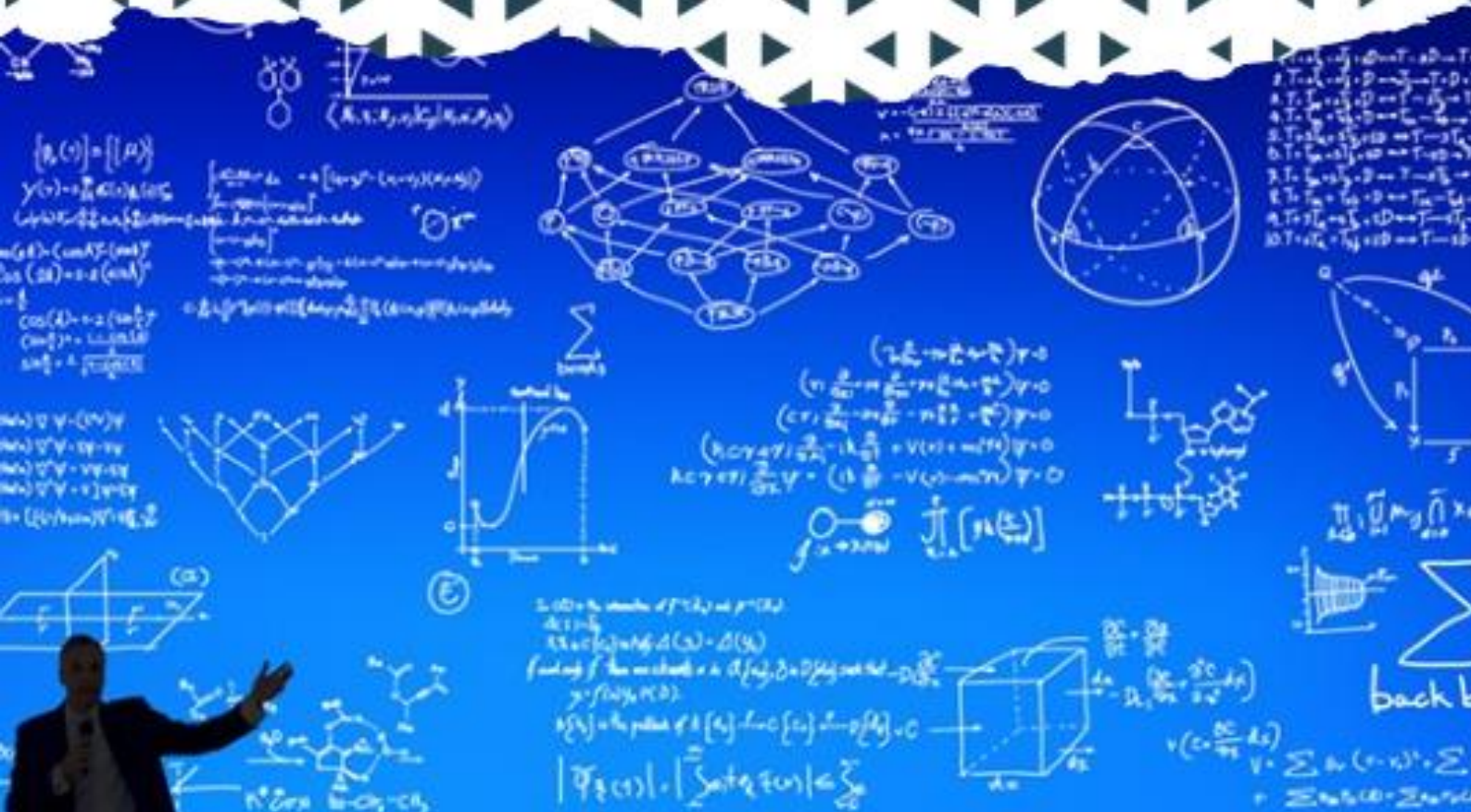




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THEORETICAL FOUNDATIONS OF THE ANALYSIS OF THE MAIN TYPES OF RAW MATERIALS IN THE PRODUCTION OF IRON AND ITS ALLOYS

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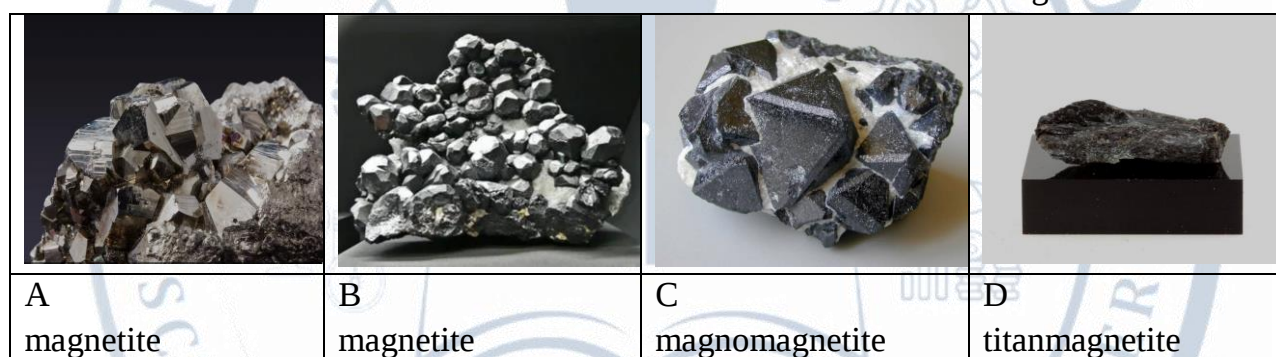
Scientific supervisor: B.I.Abdullayev

Annotation. This article presents an analysis of the main types of raw materials used in the production of iron ores and their alloys. When extracting iron ore and its alloys, we mainly use iron ores: magnesite, magnetite, magnetite, titanomagnetite, hematite, hydrohematite, goiter, hydrogoite, siderite, iron-hylorite mineral ores.

Key words: iron ores, iron alloys, ferrous metals, ore, steel, cast iron, mineral ores.

Since we mainly used iron in the extraction of black metals, we look at Iron Ores. The composition of Iron Ores is made up of useful and harmful impurities in the amount of iron in it. Malumki in nature contains mineral ores with magnetite: magnetite, magnomagnetite, titanomagnetite, hematite, hydrogematite, hydrogiotite, siderite, ferrous chylorites(Figure 1).

Figure 1. Iron ores



Iron ores vary in composition, origin, and quality (Table 1). In the types of iron ore used industrially, the amount of iron varies from 16% to 72%, and depending on this, rich (more than 50% Fe) simple (25-50% Fe) and low (less than 25% Fe) ores are distributed.

Figure 1. Ore is classified according to the amount of iron it contains.

№	Types of ore used in industry	Iron content
1	Many	Fe 50% dan ortiq
2	Middle	Fe 25%-50% orasida
3	Less	Fe 25% dan kam

Typically, iron ores contain harmful additive fashions (sulfur, phosphorus, copper, margimush, blackberries, zinc) and have a negative effect on oshea ore quality from 0.1-0.3 (S, P, Si) as well as from 0.05-0.009% (Ag, Zn, Sn, Pb). Iron ores also contain useful elements - these (Ni, Co, Mp, Sg, Ti, V, etc.), from which (Mn, Cr, Ni) increasing the quantity to a certain level increases the quality of steel, while the likes of Ti, V, Co can be distinguished as an additional useful element. Iron ores are used to Melt

cast iron in natural coining or after enrichment. By adding uranium and other elements to iron ores, we get cast iron and Polish .

Cast iron is an alloy of iron (Fe). Cast iron is obtained by combining carbon (from 2.14% to 6.67%) and other elements (silicon, manganese, phosphorus, and sulfur) in the alloy. Cast iron containing ligering elements (chromium , nickel, molybdenum, copper, aluminum, and other as well as more than 2% manganese and more than 4% Silicon are called ligerized special cast iron, and cast iron is divided into gray cast iron and white cast iron, malleable cast iron, High cast iron in strength, and semi-cast iron. The capture of the Chosons. (Figure 2).

Figure 2. Extraction of cast iron.



Steels are obtained by adding carbon and other elements to iron. Steel is an alloy of iron with a carbon content (from 0.02% to 2.14%) and other elements. Typical technical steel would contain – 0.05-1.5% carbon , 0.4% Silicon ,0.1-1% manganese,0.08% sulfur , 0.1% phosphorus , and 96.92-99.27% iron. Additives added to the composition of steels produced in industry: Silicon (Si) , manganese (Mp) , sulfur (S) , and phosphorus (R) will be these elements. The difference between steel and cast iron is that cast iron contains a carbon content of 2.14% to 6.67% and has many constant additives. Steel is divided into two types depending on the amount of carbon and alloying elements in its chemical composition: carbon steel and alloy steel. Carbon steel contains up to 0.7% manganese, up to 0.37% silicon, up to 0.04% sulfur, and up to 0.035% phosphorus. This steel is used in construction and mechanical engineering, and includes tool steels. Types of alloy steel include low (alloy elements up to 2.5%), medium (alloy elements up to 2.5% -10%), high - alloy (alloy elements over 10%) poles.

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