

**MATERIALS USED FOR THE PREPARATION OF LEATHER-  
GALANTERY PRODUCTION EQUIPMENT**

Annotation: At present, the development of light industry in our republic is given great attention. The introduction of the achievements of science and technology in production contributes to the solution of these tasks.

Key words: leather industry, production, materials, leather equipment.

The development of the leather-galantery industry is based on the application of equipment and new materials with high productivity, which allows to chemical and automate technological processes, improve the quality of products and accelerate production.

At the enterprises of the leather industry, the palace of technological equipment is constantly being updated; new machines and equipment for high-speed operation are equipped with complex units and automatic devices that require the provision of highly qualified services and timely repair. Maintenance and repair of technological equipment is the main task of a person engaged in maintenance, while maintaining the machines and apparatus in a working state, minimizing the interruption in the process of their repair and operation. One of the important conditions for increasing the efficiency of the use of leather-galantery equipment, increasing its service life and punctuality, is its proper use and high-quality repair. To improve the productivity of leather machining machinery and apparatus, improve the quality of repair and reduce cost, it is necessary to increase the labor-intensive work mechanization and apply the most progressive scientifically-based technology of repair.

Leather-the main material for the preparation of galantery production equipment is ferrous and non-ferrous metals and their alloys, non-metallic materials. All metals and alloys are divided into black and colored.

Black metals. Ferrous metals include iron and its base alloys: cast iron, steel and iron alloys. Cast iron is an alloy of iron, the content of which is 2 - 6,7% carbon. Cast iron is a mixture of Silicon, manganese, phosphorus, sulfur and other elements, except for iron and carbon, which pass through the primary materials in the cast iron. Sulfur and phosphorus are considered harmful impurities. Cast-iron is melted in domna Ovens and vagrankas. To obtain in domna ovens, iron ores, collars and fly agaric are used. Iron mines consist of iron oxides mixed with an empty rock. It is considered a magnet, red ironstone, which is widely consumed as a mine for melting cast iron. As a side dish, mainly using coke, it is obtained by heating the coal without air at a temperature of 1000-11000 C. In addition, the coke restores the iron from its oxides, and then saturates the resulting iron with carbon, turning it into cast iron. In order to avoid contamination of the molten metal with the remaining ash from the loose rock and Coke, flutes are added when melting iron mines.

In Mechanical Engineering, castings are used, which are divided into white, gray and hammer groups according to their structure and properties. The white cast received its name in the form of a fracture. Carbon in white cast iron is in the form of a chemical combination with iron. This 15 cast iron has a high hardness, moose, cannot be processed well with a cutting tool, but has a high resistance to ingestion. Gray cast iron also received its name in the form of a fracture. Carbon in gray content is in a Free State in the form of graphite coins, which give the cast iron a moose. Gray cast iron has good molding properties, so it is used in the production of castings. It is light-treated with a cheap, cutting tool.

It has the ability to absorb vibrations that occur during the operation of the machine. The disadvantage of gray cast iron is the smallness of its resistance to shock. The gray cast is denoted by the letters SCH, and two numbers are added to it: the first of them indicates the limit of consistency in stretching, the second indicates the limit of consistency in bending. For example, SS has SCH12-28, SCH15-32, SCH18-36 and other duties on cast iron according to 1412-79. From gray cast iron, leather is made of galantry and stanines of sewing machines, pump

housings, richags, lids, etc. Hammered cast iron is a conditional naming of soft and friable cast iron, which is obtained from white cast iron by long-burning softening. It does not hammer, but has a high viscosity and plasticity compared to gray cast iron, so it is called such.

Steel is an alloy of iron with carbon, in its composition up to 2% contains carbon. In addition to iron and carbon, Steel also contains a mixture of Silicon, manganese, sulfur, phosphorus and other elements. At present, steel was obtained from cast iron in mines, marten and electric ovens. The essence of the mining method is that the liquid that is poured into the deposit is blown out of the air through the deposit, and its oxygen oxidizes the carbon and other impurities of the deposit. converter thick tin is in the form of a pear-shaped vessel, welded in steel, and its interior is covered with fireproof material. Martin's oven consists of a smooth cavity, covered with fireproof material. Martin oven works on gas or gas, and for combustion, heated air is transferred to it up to 1000-12000 C. The production of steel in electric ovens is improved and more productive than martin and converter method. In electric furnaces, quality and legalized steels, including steels with the content of hard-to-ground elements such as tungsten and molybdenum, are melted. By chemical composition, the steels are divided into carbon, legirated and iron-alloy steels. In the composition of carbon Steels there are no special included elements, except for iron, carbon and permanent impurities. Depending on the application of carbon steel is divided into structural and instrumentation steel. Carbon construction steel is divided into ordinary high-quality and high-quality. Simple quality carbon steel machine details, documents, pipes, bolts, shears, etc. It is produced in the form of steel flies, sheets and other semi-factories. From it, machine details are obtained by cutting, molding, molding and other methods. Tooling steel is used for various cutting, measuring and other tooling applications.

Iron alloys are alloys of iron with other elements, mainly used for oxygen treatment and legir of steel. The most important of them are ferrosilitsiy, ferrochrome, ferromarganets, ferrovolfram. 19 non-ferrous metals and their alloys.

Non-ferrous metals – copper, aluminum, titanium, lead, zinc, tin and others have valuable properties, so they are widely used in industry, despite the fact that their price is higher than that of ferrous metal. However, if possible, non-ferrous metals are replaced with ferrous metal or non-metallic materials. Copper occupies one of the first places among non-ferrous metals in terms of its application in the industry. High plasticity, electrical conductivity, thermal conductivity, high resistance to corrosion are among the valuable properties of copper. In the preparation of machine details, pure copper is practically not used, for this purpose alloys – latun and bronze are used.

Latun is an alloy of copper with zinc and has a high strength, hardness, good liquid fluidity and corrosion resistance compared to pure copper. Lathes are legalized in pairs and with other elements, namely Silicon, lead, manganese, etc. The pair lathes are composed only of copper and rukh.

Bronze is an alloy of copper with all other elements than zinc. Usually the name of the bronze depends on the element included: if the second component tin is considered tin, if the second component aluminum is considered aluminum, etc. The bronzes are marked with the letters Br, and after them the entered elements and percentages indicate their amount. Of the bronzes, the most important are tin, aluminum and Silicon. Tin bronzes are considered high-quality. They have high corrosion resistance, are well poured, have high antifriction properties. From them are prepared the drinks of the syrups bearings, water fittings, etc.

Aluminum, silicon, manganese and other bronzes are the seat of tin bronze. Aluminum-silver color-is a white metal, light and hammer-proof, corrosion-resistant. Aluminum has high electrical conductivity and thermal conductivity. For the preparation of machine details, mainly dyuraluminium and silunins, which are its alloys, are used.

Dyuraluminium is an alloy of aluminum with copper, magnesium and manganese. Products from dyuraluminium are prepared by pressing methods, such as molding, rolling and forging. The main components that determine the increased mechanical properties of dyuraluminium are copper and magnesium, since they

increase the strength and 21 hardness of the alloy in thermal processing. Manganese increases the hardness and corrosion resistance of dyuraluminium. Dyuraluminium is used for the preparation of loaded construction elements, various types of rolling, body details, molded details, etc. Silumin is an alloy of aluminum with Silicon. Silumins have high molding properties, that is, low deposition, good liquid fluidity and high durability compared to aluminum.

#### References:

1. Koshel I. V. "Equipment and mechanization of leather goods and saddlery production". Moscow, "Legprombytizdat", 1986.
2. Bolshakov P. A. et al. "Machines and apparatuses of leather production". Moscow, "Light and Food industry", 1983.
3. Bolshakov P. A. et al. "Handbook on repair, adjustment and operation of equipment of industrial enterprises". Moscow, "Light and Food Industry", 1982.