1. R.K. Mysik, S.V. Brusnitsyn, A.V. Sulitsin, I.A. Sokolov, I.A. Gruzdeva. Study of the structure and properties of low-alloyed copper alloy.

The results of a study of the microstructure of tin alloyed copper alloys are presented. It is shown that under cold rolling conditions, an increase in the microhardness of these alloys is observed, and the values of electrical resistivity are within acceptable limits. The recommendations for the use of copper alloys with a tin content of up to 0.4 wt. % as a material for the manufacture of contact wire.

Keywords. Copper alloys, contact wire, microhardness.

2. E.I. Marukovich, M.A. Sadokha, V.E. Sobolev. Foundry of the Republic of Belarus.

Information on the state and trends of development of foundry production of the Republic of Belarus is presented.

Keywords: foundry, castings, casting alloys, cast iron, steel, aluminum alloys, bronze, brass.

3. St.S. Kwon, V.Yu. Kulikov, E.P. Scherbakova. Use of clays of some deposits of Kazakhstan for manufacture of shells at LAN.

The article presents the results of the study of the possibility of Kazakhstan clays of three deposits (Kumkeshu, Darat, Fedorovsky, White Clay) for the manufacture of shells during casting according to molten models. Data of X-ray phase analysis of Kumkeshu deposit clay are given. Disclosed is a mixture composition for making a shell. The structure of the shells was examined using different contents of fine clay fraction. Studies have made it possible to recommend clay fields Darat and Kumkeshu as a component for making the shell. Tests carried out at the production site of KMZ Parkhomenko LLP (Karaganda, Kazakhstan) on the production of shell forms at LVM using Kumkeshu clay on the basis of the developed recommendations showed good properties of the shell — strength of about 14 MPa and good gas permeability of more than 120 units.

Keywords: clay, structure, mold, strength, refractory, binder, shell.

4. I.O. Leushin, A.I. Markov. Characteristic defects of castings received by the V-process: identifi cation, educational mechanisms, precautions.

The article is devoted to the consideration of the characteristic defects of castings obtained by the V-process, in order to identify tasks that remain unresolved and remain relevant today. An informational and analytical review was conducted in which the main defects were considered using the V-process. The mechanisms of formation of defects, as well as well-known methods of prevention are considered.

Keywords: V-process, vacuum-film forming, defects in vacuum-film forming.

5. E.E. Dmitrieva, E.A. Shelkovy, A.S. Yakovleva. Foundry Testing Equipment.

The article offers instruments for monitoring the temperature of melts of ferrous and non-ferrous alloys.

Keywords: temperature, melt, control.

 V.V. Rubanik, V.F. Lucko, V.O. Savickij, V.V. Rubanik Junior, V.A. Janusov, V.G. Samoljetov, V.S. Labeckij, E.I. Marukovich, A.P. Gutev, A. Nofal, A.T. Volochko, M.S. Kovalko. Infl uence of ultrasonic treatment of cast iron and silumin melt in the process of crystallization on the properties of castings. An installation for ultrasonic treatment of cast iron melt has been developed. Studies of cast iron microstructure before ultrasonic treatment and after were made. The research of the influence of ultrasonic melt treatment on doauthenticate AK8M4 hypereutectic silumin and AK18M3 are produced.

Keywords: ultrasound, ultrasonic treatment, cast iron.

7. O.G. Toronov. Russian spectrometers for metal smelting and input control.

The article presents individual models of optical emission spectrometers for determining the chemical compositions of cast metals and alloys. A set of additional equipment is proposed for the preparation of the test samples.

Keywords: control, chemical composition, emission spectrometers.