1. Editorial board of «Russian Foundryman» magazine

2. Invitation at the XVIII Congress of Foundry Workers of Russia, the International exhibition «Casting — 2024», BRICS Foundry Forum

3. **V.D. Belov, A.V. Koltygin, L.D. Miteva, S.A. Sirotkin, A.Yu. Titov** Professions FOUNDRY WORKER yesterday and today. All-Russian Student Olympiad on Foundry Production in 2024

4. **Yu.V. Titova, G.S. Belova, I.Yu. Timoshkin.** Application of highly dispersed composite ceramic powders Si3N4-SiC, AlN-SiC and TiN-SiC of SHS-Az brand as eff ective modifi ers of casting aluminum alloy AK7CH and reinforcing phase in aluminum matrix composites

Abstract. The possibility of using synthesized Si3N4—SiC, AlN—SiC and TiN—SiC nitride-carbide powder compositions of the SHS-Az brand as a reinforcing phase for modifying aluminum alloys is investigated. It was found that the method of injection into the solid-liquid melt of the AK7h alloy allowed the introduction of Si3N4—SiC, AlN—SiC and TiN—SiC powders at a rate of 1.0 wt. % of each Si3N4—SiC, AlN—SiC and TiN—SiC powder separately into the solid-liquid alloy AK7ch and obtain cast composite aluminum alloys AK7h + 1 wt. % Si3N4—SiC,
AK7h + 1 wt. % AlN—SiC and AK7h + 1 wt. % TiN—SiC with enhanced mechanical properties.

Keywords: aluminum alloy AK7h, solid-liquid melt, an effective modifier, aluminum matrix composite, reinforcing phase, ceramic powder, Si3N4—SiC, AlN—SiC, TiN—SiC.

5. **V.P. Fetisov.** Structural aspects of the diverse formation of plastic properties of fi ne and coarse-grained low-carbon steel

Abstract. An increase in the relative elongation with an increase in the ferrite grain size is due to an increase in the intensity of deformation hardening in the area of uniform deformation. An increase in the relative narrowing with a decrease in the size of the ferrite grain is associated with the predominant direction of expansion of the central crack along the axis of tension and with a decrease in the intensity of deformation hardening in the area of local deformation.

Keywords: intensity of deformation hardening, cells' size, the direction of crack expansion, neck development degree.

6. **I.Yu. Timoshkin, K.V. Nikitin, D.A. Solomatin**. The influence of the charge composition on the quality of aluminum solder of the SIL-1C brand

Annotation. The influence of the charge composition on the structure and properties of cast and deformed solder SIL-1C is investigated. The possibility of using secondary charge metals with a high content of impurities to obtain solder of the SIL-1C brand in the form of a tape is shown. It was found that the composition of the charge has a significant effect on the structure of cast and deformed solder, but does not affect the quality of the resulting tape.

Keywords: aluminum solder, deformation, microstructure, tape, secondary charge.

7. **A.V. Golomuzdov, A.V. Eskov, A.M. Korotkevich.** Water-cooled cables.A new direction of domestic production

Annotation. The article describes the thirty-year history of the development of LLC «PO «Energokomplekt» for the development and implementation of equipment for cable and wire products. Currently, the cable is available both for induction furnaces with a cross section from 200 to 1,000 m2, and for arc furnaces with large cross sections from 1,600 to 6,000 mm2. The company aims to introduce new types of products, including large-section 240—800 mm2 three-core power cables or with a monolithic core.

Keywords: water-cooled cables, induction furnaces, electric arc furnaces.