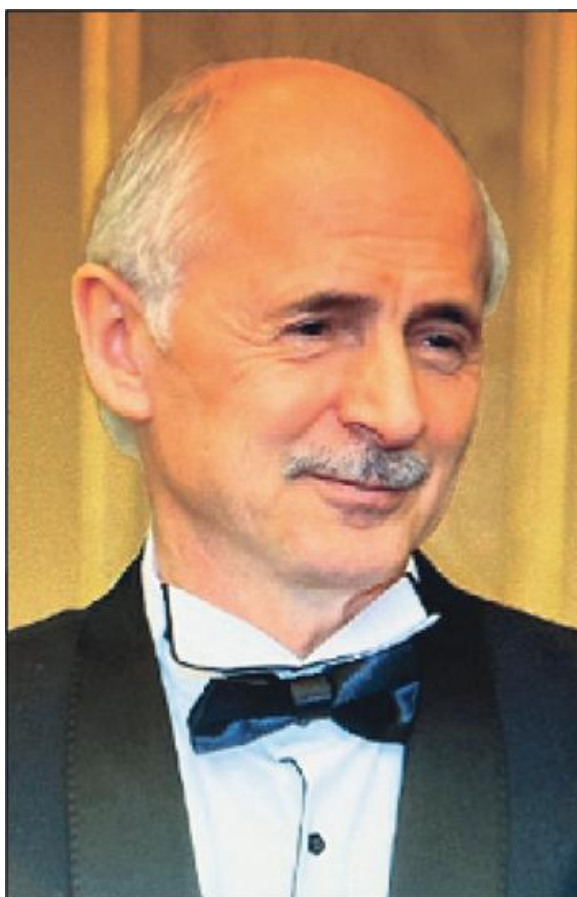


ADNAN SAIDOVICH ELDARKHANOV
(to the 70th anniversary of his birth)



November 21 marks the 70th birthday of Doctor of Technical Sciences Sciences, Professor, Academician of the Russian Ecological Academy (REA) and the Russian Academy of Natural Sciences (RANS), laureate of the PreMission of the Government of the Russian Federation in the field of science and technology

Eldarkhanov Adnan Saidovich

Executive Committee of the Russian Association of Foundry Workers, Editorial Council magazine "Foundryman of Russia", colleagues and friends congratulate Adnan Saidovich Happy anniversary and wish you good health, happiness, family well-being and further success in scientific and social activities.

1. **V.A. Kechin. Scientific contribution of the department of technology of functional and structural materials of VISU to the development of foundry production**

Abstract. The information about the history and formation of the foundry department of Vladimir State University is presented. The information about the scientific school of the department of TFSM and the main results of its activity in the issues of training scientific personnel and research in the field of creating new materials and technological processes of manufacturing products based on them.

Keywords: department, personnel training, scientific achievements.

2. **I.V. Shabaldin, E.S. Prusov, V.A. Kechin.** Production of zinc composite materials using concentrated ligature

Abstract. A method of producing ZA27-SiC zinc composite materials using concentrated reinforcing master-alloy containing 25 vol. % SiC has been developed. The proposed technological solutions contribute to the increase in the degree of assimilation of ceramic reinforcing phase by zinc melts in comparison with the traditional method of mechanical stirring and provide the achievement of enhanced mechanical and tribological properties in comparison with the matrix alloy.

Keywords: zinc composite materials, concentrated reinforcing master-alloy, melting and casting processes, mechanical properties.

3. **V.N. Sharshin, E.V. Sukhorukova, D.V. Sukhorukov.** Improvement of the technological process preparation of tin alloys for casting practice

Abstract. The reason for the decrease and instability of the strength properties of tin alloys has been established. It consists in the formation during melting of structural macro-inhomogeneity of the melt in the form of large intermetallic inclusions, as well as accumulations of intermetallic compounds and their subsequent distribution in the body of the casting. An optimal mode for preparing alloys is proposed, which makes it possible to obtain castings with consistently high strength properties.

Keywords: tin alloys, babbitts, tin, antimony, heterogeneity, technology, melting, temperature, sedimentation, strength, structure.

4. **A.B. Kireev, V.A. Kechin.** Influence of casting conditions on the quality of cast protectors

Abstract. It has been shown that the quality of cast protectors depends on the casting conditions. Groups of factors influencing the quality of tread alloys based on aluminum, magnesium and zinc and products made from them have been identified. Optimum temperatures for casting in metal water-cooled molds have been established

Keywords: casting conditions, quality, protective alloys, defects in castings.

5. **V.N. Sharshin, E.V. Sukhorukova, D.V. Sukhorukov, S.V. Skitovich.** Development of technology for thermoplux remelting of wastes and drip refining of tin alloy melts

Abstract. It has been shown that the maximum efficiency of remelting small lump waste and chips is achieved only with complete wetting of the oxidized surface with the flux melt. A technology has been developed for remelting waste tin alloys using refractory fluxes. The fundamental possibility of obtaining high quality tin alloys corresponding to primary ones in one remelting cycle has been proven.

Keywords: remelting, flux, wetting, tin alloy waste, shavings, refining, efficiency, shaft furnace.

6. **A.A. Kreschik, V.A. Kechin.** Application experience and prospects of using polyurethane foundry waste

Abstract. Options and prospects for processing polyurethane waste from the production of pattern equipment are considered. Technologies for waste regeneration with return to own production, as well as methods for mass recycling of waste in various fields and fields of activity are proposed.

Keywords: model equipment, polyurethane waste, polyurethane composite material.

7. **V.F. Korostelev.** Software-controlled control of foundry processes

Summary. The present paper provides a comparative evaluation of casting and machining processes. The importance of automated control of foundry processes is justified. Attention is drawn to the need for new approaches to using pressure to control crystallization and shrinkage compensation processes.

Keywords: aluminum alloys, pressure crystallization, theory problems, experimental research, equipment design, software control.

8. **L.V. Kartonova.** Specifics of heat treatment of aluminum alloy castings

Summary. The issues of strengthening of aluminum castings are considered. The peculiarities of heat treatment of aluminum alloys castings are presented. Recommendations for selecting heat treatment regimes are provided.

Keywords: cast aluminum alloys, heat treatment of aluminum alloy castings.

**CHIKUNOV VLADIMIR MATVEYEVICH
(18.01.1949 — 01.10.2023)**



Everyone with whom he worked, collaborated, etc. lived note his competence, principles integrity, reliability and honesty. Light memory of Vladimir Matveevich, how highly co-qualified specialist forever will remain in the hearts of his friends and loved ones.