

1. **Ri Hosen, Ri E., Ermakov M.** Heat resistance of chromium cast iron, alloyed graphitized elements.

In this work used methods of penetrating gamma radiation and thermal analysis to determine the initial eutectoid transformation, as well as the method of thermo-graphic analysis to detect the fact of the process, the temperature range in which it occurs, and its endo- and exothermic. The influence graphitizing elements to improve the heat resistance of chromium white cast iron.

Key words: Heat resistance, mass loss of the sample, the eutectoid, thermal analysis, thermogravimetry, endo-thermic effect, exothermic effect.

2. **Kumarin M., Soshkin V.** Choosing of isothermal and exothermal sleeves for systems of feeding steel castings.

The principles of operation of exothermal and isothermal sleeves are traced. The advantages of using inserts are shown. The question of matching sleeves for the system of feeding of castings is touched. Competitive advantages of the company "Fibrous refractories", as the producer of the sleeves are formulated.

Key words: exothermal and isothermal sleeves, improvement of the casting quality, choice of sleeves.

3. **Tikhonov A., Butrim V.** High-strength aluminum alloys AlSi8Cu1,5 (AL104) for die casting.

The aluminum alloy AlSi8Cu1,5 (AL104) for die casting has the high mechanics properties and a good technological qualities. The alloy not behave tendency to corrosion cracking under stresses. Die castings with dimensions 300 x 530 mm and wall thickness 0,7÷3,0 mm. are successful made.

Key words: aluminum alloy AlSi8Cu1,5cl (AL104), die casting, thin-wall castings, large size dimensions casting.

4. **Bondarenko Y., Echin A., Surova V., Narskiy A.** Influence of temperature gradient at the front growth on hot strength alloy structure at its directed crystallization.

Research of influence of temperature gradient at the front growth at the directed crystallization (DC) with liquid-metallic cooler and without it. Influence of temperature gradient on structure and interdendritic distance of hot strength alloy of the ЖС-32 type is shown.

Key words: directional crystallization, liquid metal chiller, heat-resistant alloy, temperature gradient, interdendritic spacing.

5. **Tacheci J., Tkachenko C., Korobeinikov V.** Energy-saving thermal units of new generation Czech company TACHTECH.

Czech company TACHTECH s.r.o. is a modern scientific and industrial company develops and manufactures energy-saving thermal equipment with a wide range of applications. Larger share of activities of the company is production, reconstruction and recovery of thermal furnaces for various purposes, heating of stamps directly in presses and other equipment for the metallurgical, foundry and blacksmith.

Key words: energy-saving, efficiency, safety, ecology.

6. **Dr. A.Popov.** Analysis of foundry production in Germany on the base of the latest projects of Laempe.

Germany is the world leader in casting production. The article describes the current state of foundry production in Germany, the specificity and difference to foundry industry in CIS countries, and gives an overview of modern Laempe core making equipment projects for leading German foundries.

Key words: modern foundry production, core making equipment, ColdBox-Amin-process.

7. **Katc A., Vasiliev S.** We propose a promising automated line for penetrant inspection of castings for critical applications and elaborate on its equipment control systems.

Key words: capillary control, penetrant, machine vision.

8. **Robert John Braun.** Alcohol to Hydrosol: Increasing Capability.

In order to keep up with the latest changes in Environmental Legislation Russian PIC foundries has had to consider changing existing work methods and materials within the shell room. REMET® as a world leader in managing the transition from use of Ethyl-Silicate to Colloidal Silica binder, has found a number of economic and practical benefits for the founder as well as practical recommendations for appropriate modernisation of the shell room.

Key words: REMET®, Foundry Modernisation, Colloidal Silica Binders, Investment Casting, Shell Room, Water based ceramic shell, Process Control, Process Optimisation