

1. **BRICS Forum Foundry Association**
2. **V.A. Grachev.** Production of High Strength Spheroidal Graphite Cast Iron during Cast Iron Smelting in Gas Cupola Furnaces.

The article compares the quality of cast iron produced in coke and gas cupola furnaces, including its gas content and mechanical properties. It has been established that gas cupola furnace was able to produce high quality cast iron with spheroidal graphite, which was suitable for the casting of critical parts.

**Key words:** high strength cast iron, spheroidal graphite cast iron, ductile cast iron, nodular cast iron, gas content, mechanical properties, gas cupola furnace, structural material

3. **V.S. Doroshenko.** Background and examples of the metal savings for casting ductile cast iron in sand molds.

Savings metal corresponds to the current trend for innovation in the foundry industry. Concept combination of new advances in the technology of high-strength alloys and molding processes, and the use of the mold as a tool to change the properties of the metal offered to use for casting ductile cast iron. Guidelines for optimizing the thickness of castings, examples accurate castings of lightweight and high-their production are described in the article.

**Key words:** saving metal, precision castings, ductile iron, Lost Foam Casting, design casting, sand casting, evacuated mold, metal content.

4. **E.I. Marukovich, V.I. Stetsenko.** Silumin casting. New approaches.

The article provides research results for cast billets production by means of hardening solidification casting. This method allows to produce silumin castings with diameter of 50—150 mm and height up to 300 mm. The method is environmentally friendly and allows to produce high-quality castings without modifying fluxes and ligatures.

**Key words.** Silumin, hardening solidification, fluxes, ligatures

5. **Y.N. Murav'ev, M.A. Druzhevskiy.** The experience in complex approach to castings quality improvement by means of progressive technological solutions.

The article proposes silica, olivine and chromite sands for production of molds. The advantages of such sands during production of quality molds are shown. Application of these sands helps to eliminate defects in castings. Lining materials for induction furnaces are recommended.

**Key words:** silica, olivine, chromite sand.

6. **M.Y. Smirnov.** Horizontal flaskless molding lines as a new standard of flaskless green-sand molding.

The article describes a coherent engineering approach and experience of modernization of foundry production at Krontif and its choice of modern foundry molding equipment in green-sand technology. Worldwide distribution and advantages of flaskless molding technology is described, a comparison with vertical flaskless machines cars is made.

**Key words:** flaskless molding, horizontal parting, engineering and modernization of foundry production, international experience of efficient foundries.

7. **N.D. Feklin, Y.F. Voronin, M.V. Scherbakov.** The analysis of conditions of appearance of defects of molding at vacuum and fi lm molding.

The considerable part of defects of castings arises from low-quality development of the technological project with emergence of a number of negative factors. In article processes are considered: drawing a dividing covering mechanical device; a dense prileganiye of a fi lm to models; drawing on a surface of model of a protivoprigrany covering with the equal thickness of drawing; the faultless consolidation of sand which isn't allowing formation of cracks; control of temperature of metal, filling speed, the required discharge level in shape, etc.

**Key words:** Defects of castings, steel, cast iron, form, polystyrene, vacuum filters, absorption, gas, decomposition, firmness of a form, fast knockout, high quality, analysis, decrease in marriage of castings.