

1. **Kolesnikov M., Mukhametzyanova G., Valiev N., Mukhametzyanov I.** Computer-aided design technology of castings for the press-tools.

Based on the analytical calculation of the temperature field in the crystallization of the cast it was developed a system design technology of casting news - tools (molds for hot de-formation, the press - a form of injection molding, etc.). It allows establishing the relations between the speed of castings crystallization, structure and mechanical-physical properties of the castings by varying the cooling rate during solidification forms castings, heat conductivity and wall thickness of the mold.

Key words: CAD, press-tool, the rate of crystallization.

2. **Voronin Y., Matokhina A., Ivanov D., Lobacheva O.** Fast detection and elimination of oxidized blowholes.

Elimination of defects in castings is rather complicated and time-consuming process. This situation happens, because the ignorance of the distinguishing features of defect's varieties makes it difficult to solve the problem of their appearance and elimination[1]. This article is the first one from authors series for fast recognition of different defects of castings.

Key words: castings defects, reasons of appearance and elimination of castings defects.

3. **Leushin I., Koshelev O., Moissev D., Maslov K.** Improvements of piston and cylinder parts of cold chamber die-casting machine.

A variant of bimetallic casting pistons ("brass above steel"), manufactured by gravity die casting are proposed. At the same time as the rod can be overaged steel casting piston. Development successfully passed industrial tests and implemented in current production.

Key words: High pressure die casting, piston and cylinder parts, casting piston, gravity die casting, bimetallic casting, service life, import substitution.

4. **Kovtunov A., Plakhotnyi D., Bochkarev A.** Technology welding permanent mold coatings.

Method for obtaining permanent mold coatings based on intermetallic phases, Nickel - aluminum, the essence of which lies in two arc welding using aluminum and Nickel electrode wires. The results of investigations of the influence of the modes on the chemical composition of the weld metal. Tested heat resistance and heat resistance of the weld metal.

Key words: Die coating, welding, intermetallic compounds, nickel, aluminum.

5. **Soshkin E., Kumarin M.** Modern efficient materials and products for high-temperature insulation based on mullite-siliceous fibers and inorganic binders.

«Voloknistyeogneupory» ltd. is the is a technology developer and manufacturer of modern effective materials and products for high-temperature insulation based on aluminosilicate fibers and inorganic binders made on its own production base.

Key words: fibrous refractories, inorganic water-based binders.

6. **Smirnov M.** Marketing researches of modern foundry productions of Scandinavia by example of pump castings.

The article provides an overview of efficient state-of-the-art foundry plants in Scandinavia, producing castings for the pump industry, as an example of equipping with modern molding equipment for Russian foundries. Modernization plans of the company Krontif-center, Lyudinovoon the basis of own marketing researches of successful world experience – as further guarantee of creation of the efficient foundry production.

Keywords: innovations, efficient foundry production, modern technologies of molding and core-making.

7. **Firstov A.** The relationship of parameters of liquid glass and acid-average power in their interaction.

The analysis of such dependencies allows us to better learn the subject area and to im-prove the quality of the review binder.

Key words: correlation between the parameters, alkaline silicate, processing of the re-sults.