

**Gvidolin A.** Chaplets, spacers and vents for the foundry from the world leading supplier VEMEK S.r.L (Italy)

Description of Vemek S.r.l products: different types of chaplets, spacers, vents, which company delivering to the leading foundries of the world.

**Key words:** chaplets, spacers, vents.

**Golanov S.P. The modernization of PMP-2 furnaces for production of GTD turbines with monocrystal structure.**

In the article is presented the scheme and working principle of modernized pusher vacuum electrical resistance furnace PMP-2 for production of the turbine blades for gas turbine engine with monocrystal structure.

**Key words:** vacuum furnace, turbine blade, gas turbine engine.

**Knustad O. Metallurgical defects in the castings of nodular iron**

Described most often defects in the castings made of nodular iron. Most of defects are related to microstructure and especially to defects of graphite structure.

**Key words:** nodular iron, castings defects.

**Zhukovsky S.S.** The principals of technological process selection while renovation of castings production

Main principles to choose technological process for reconstruction of existing foundries or for the new foundries. Described main technical data on modern technologies, economical efficiency and ecological estimations.

**Key words:** chemical bonded sand, technological process.

**Nehamin I.S., Mitrofanov M.V., Nehamin S.M., S.M. Kisilev, Kulagin V.V.** New steel melting furnace for foundrymen. DC arc furnace for steel melting with 2 tones capacity (up to 3 tones), type DP-2

Consideration of experience of the electric arc furnace DP-2 (two tons steel capacity) installation, its technological capabilities, furnace power supply and furnace control systems. Demonstrated solutions of reactive power compensation. Were shown the results of implementing adaptive to density of scrap control algorithm.

**Key words:** arc furnace, steel melting, transistorized rectifier for arc furnace, integrated system of arc mode compensation, adaptive to the charge density melting algorithm, standard melting time.

**Afonaskin A.V., Byistrov M.V., Merkushev A.G., Brusnitsin S.V.** Construction and material for production of metal conductors for high pressure day casting machines.

In the article is presented the construction and materials for metal conductors of high pressure day casting machines.

**Key words:** crucible, metal conductor, composite material, graphite, pyroceramic, chamotte.

**Padalka V.A., Dovshenko N.N., Sidelnikov S.B., Biront V.S., Mamina L.I., Baranov V.N., Gilmanshina T.R., Trifonenkov L.P., Lopatina E.S., Sokolov R. E., Bespalov V.M.**

**Analysis of structure and properties of casted and deformed semiproducts from the Al-Zr alloys, produced by combined methods of castings and forming.**

Analysis of structure, properties and electro conductivity of aluminum-zirconium alloys with different content of zirconium. It is shown that with increasing of zirconium content in the alloy, specific electro conductivity and mechanical properties are increasing. Shown possibility to produce long-length semiproducts from these alloys by combining casting and rolling in one technological process with mechanical properties increasing.

**Key words:** aluminum-Zirconium alloys, structure, mechanical properties, electro conductivity, long-length semiproducts, combined casting and forming processes.

**Budanov E.N.** Modernization of the operating automatic moulding lines of Künkel Wagner by their replacement with innovative Seiatsu-machines made by HWS-Sinto

Modernization of the obsolete technologies at domestic foundries should rely on the experience of the advanced foundries. In the article an example of modernization of the operating automatic moulding lines with Seiatsu-machines is given.

**Key words:** modernization, competitiveness, laws of economic safety.