

1. **Usmanskiy plant OOO «Litmashpribor»**
2. **Editorial board of «Russian Foundryman» magazine**
3. **V.A. Grachev. Thermodynamics and mechanism of reaction in crucible while iron melting in electrical induction furnaces.**

The paper represents a thermodynamic analysis of crucible reaction in crucible induction furnaces. The author suggests a diagram of a crucible reaction that takes into account partial pressure and activity of the components. The electrochemical mechanism of a crucible reaction has been studied. The obtained data allow improving the technology of iron induction melting.

Key words: iron melting, electric induction furnace, crucible reaction, thermodynamics, electrochemical mechanism of reaction.

4. **V.A. Ivanov, I.A. Dibrov. Review of general documents in the field of standardization, applied in Russian Federation.**

Materials on general documents and sections of standardization valid in Russian Federation. Review of regulations of state standards development.

Key words: standard, technical regulations, state standard.

5. **I.Kh. Tukhvatulin, A.A. Gulakov, E.V. Khrapov. Research of properties of indefinite rolling rolls working layer by means of neural network method.**

The article provides research results of influence of carbon, chrome, manganese and vanadium on structure and hardness of indefinite rolling rolls by means of the artificial neural networks method. As a result of research, the model which allows predicting the properties of rolls with 10% error was obtained. Artificial neural networks method is used at CJSC «Kushva roll manufacturing factory» not only for analysis and optimization of rolling rolls production technology, but also for melting, pouring and heat treatment processes.

Key words: indefinite rolling rolls, structure, hardness.

6. **A.A. Getman, S.S. Tkachenko. Computer modeling of cast part design is the basis of foundry complex simulation model.**

The importance of scientific basis creation for design and CAD constructions of cast parts is proved. The problems of computer modeling of cast part constructions are discussed. Control scheme of engineering logistics at enterprise during casting process development is proposed. The prospects of casting quality improvement by means of development of foundry complex simulation model and dialog expert assessments based on this model are noted.

Key words: computer modeling, simulation model.

7. **I.V. Mochalin, E.B. Ten. Production of continuous-cast wire billets made of Cu—Ni and Ni alloys.**

Production method for wire billets made of copper-nickel and nickel alloys by means of continuous casting by pulling the billers upwards is discussed in this article. In order to eliminate the contact between graphite crystallizer and melt, graphite cup and bushing are nitride coated. The possibility of obtaining high-quality wire billets with diameter of 20 mm is shown.

Key words: continuous casting, wire billets, graphite cup and bushing, nitride coating.

8. **M.A. Ioffe, R.D. Farisov, M.R. Khayrullin. The study of transition zone between cast iron and steel elements of decorative products.**

The article provides the results of decorative products production by means of combined methods. Decorative products are produced of cast iron (VCh50, SCh25) and steel elements. The advantage of the use of products made of ductile cast iron in comparison to gray cast iron is shown.

Key words: decorative art products, steel and cast iron casting.

9. **S.D. Ranich, I.A. Filippova, V.E. Haychenko. Remelting of waste of aluminum by method of electroslag chill moulding on UFEL-100 installations.**

Data on features of the electroslag remelting of the waste of aluminum which are formed as a result stumps and machining of castings are provided. Design features of the melting crucible, the diagram of loading of furnace charge and draining of a ready melt are sorted.

Key words: the electroslag chill moulding, processing of waste of aluminum.

10. **Congratulations with the Anniversary. Isaev Gennadiy Alexandrovich is 70**

11. **Reference Guide for Foundry**