

1. **In honor of anniversary of the domestic enterprise. Masalov A. "Siblitmash" 60th anniversary.**
2. **Dibrov A. New concepts for foundry from IMF.**

This article describes last achievements of IMF Group in No-bake moulding and reclamation. In the first part we presented in details the last concepts of foundry shops for large castings production with examples of moulding lines based on a vertical storage systems. Also we presented all types of reclamation systems: mechanical, dynamic, thermal and also reclamation systems for sodium silicate and green sand systems.

Key words: No-Bake moulding, Reclamation, Vertical Storage, Large Castings.

3. **Prusov E., Korobkov M., Kechin V. Increasing Of Tribotechnical Characteristics Of Castings From Zinc Alloys.**

The article describes the latest achievements in the field of producing of zinc antifrictional alloys. Influence of titanium on the structure and tribotechnical characteristics of zinc alloys with high aluminum content is shown. The possibility of increasing of the wear resistance of zinc alloys due to the reinforcing by intermetallic phases is established.

Key words: zinc alloys, composite master alloys, melting technology, structure and properties.

4. **Smetanuk S., Deev V., Dhindaw B., Nikitina A. Interaction of hydrogen and nonmetallic inclusions in melts cast aluminum alloys.**

The article gives a review of the existing ideas about the relationship of oxide inclusions in melts aluminum alloys and hydrogen. The known mechanisms of this relationship. Based on the known theoretical and practical results concluded that the removal of nonmetallic inclusions from the melt occurs, and removing the hydrogen from the melt.

Key words: nonmetallic inclusions, melt, hydrogen, aluminum alloys, mechanisms relationship.

5. **Sannikov A., Nikitina A. Primary crystallization of intermetallic compounds in the Al-Fe-Mn-Ni-Si system in respect to the heat-resistant nikalins type AN2ZhMts.**

Alloy compositions of Al-Ni-Fe-Mn-Si system expecting primary solidification of intermetallic phases were chosen using the Thermo Calc software. The results showed the formation of two phases of the primary crystals Al₉FeNi and Al₆(Fe, Mn) for nickalin's composition used for casting into molds, providing a high cooling rate. Primary solidification of Al₃Ni and Al₁₅(FeMn)₃Si₂ phases is possible only at high concentrations of nickel and silicon respectively.

Key words: Al-Ni-Fe-Mn-Si system, phase composition, primary solidified phase, intermetallic phases, eutectics.