Production and properties of metal foams from non-ferrous metals alloys

Vlasta Bednářová, Petr Lichý, Tomáš Elbel, Ivo Lána
Department of Metallurgy and Foundry, VŠB – Technical University of Ostrava, 17. listopadu 15/2172, 708 33 Ostrava - Poruba, Czech Republic. vlasta.bednarova@vsb.cz
*Šlěvárna a modelárna Nové Ransko, Nové Ransko 234, 582 63 Ždírec nad Doubravou

Metal foams belong thanks to their unique properties into the group of new and perspective materials. The paper deals with foundry procedures used for production of cast metal foams based on non-ferrous metals alloys. Individual procedures of production in lab and pilot conditions are described, which result in casting with certain structural regularity. Attention is paid also to the obtained microstructure of these cast materials and to evaluation of their properties. The experimental part summarises the existing research works in this area, including future possibilities of their use. Cast metal foams are not yet produced in Czech Republic on industrial scale.

Keywords: metal foams, aluminium alloys, microstructure

Acknowledgement
This work was elaborated within the frame of the research project TA02011333 (Technology Agency of the ČR).

References