FOUNDRY REVIEW
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- SUMMARIES -

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FALLING OF CRYSTALLISATION NUCLEI ORIGINATED FROM ALTI5B FOUNDRY ALLOYS IN THE METAL BATH OF HYPOEUTECTIC SILUMINES – EFFECTS OF THE PROCESS

The paper is focused on weakly recognised effect of heterogeneous nuclei of the primary crystallisation of hypoeutectic Al-Si alloys, falling in the metal bath. These nuclei are titanium borides TiB_2, originated from AlTi5B foundry alloys. Five foundry alloys, available in the market, were tested. It was revealed, that in case of leaving the motionless metal for a longer time (e.g. ~ 2 hours), the upper layers of the metal bath were significantly impoverished of particles originated from AlTi5B, while the lower layers were enriched in them. Simultaneously a significant decrease of the nucleation ability was observed in impoverished layers, which led to forming coarse-grained structures in castings. The test, called the Ring Test, was applied for assessing the nucleation ability. It was demonstrated that particles falling rates were not the same for the investigated foundry alloys and could constitute one of the assessment criterion of their suitability in the casting technology, in which heated ladles are applied. This occurs, among others at pouring metal moulds by means of the low pressure die casting. Works were realised in cooperation of three units of the Faculty of Foundry Engineering of AGH University of Science and Technology and Companies: Technology and Aluminium Technique Z. Smorawiński (Konin) and Royal Polska l.l.c. in Jelcz.

MODERN SEPARATING SUBSTANCES

J. WRÓBEL

FURFURYL RESINS (FURAN)

M. HOLTZER
CLIMATE CHANGES AND THE ENVIRONMENT

On December 3–15, 2018, the 24-th Session of the Conference of the United Nations Framework Convention on Climate Change COP24, in which participated more than 21 500 delegates from 200 countries, was held in Katowice.

Poland has the second place among European Union countries in the CO_2 emission.

This has undoubtedly the influence on the fact that among 50 towns in the world of the highest contamination degree, 36 are Polish towns. Kraków is on the top of that list.

T. FRANASZEK
ALL-POLAND FOUNDRYMAN DAY 2018

J. TYBULCZUK
TRAINING ACTIVITY OF THE POLISH FOUNDRYMEN'S TECHNICAL ASSOCIATION