

Stability of the Casting Process According to the Method BOST

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Process stability is one of the factors determining high quality of the products. By stable process, operations conducted in order to produce a given product are repeatable, and at the same time products manufactured in such process are repeatable and their quality is predictable. In the article the BOST method was used to evaluate casting process stability. The research in form of a survey was conducted in one of the Polish foundry. The results were presented in form of 2x2 matrix. This matrix has two variables: process stability (X axis) and product quality (Y axis). Employees quite highly evaluated the process stability, and medium and low product quality. Which means that the research foundry is located in the B zone of the map of process stability, which is referred as "Fundamental changes in the process".

Keywords: Stability, Quality, Foundry, Foundry products, BOST

References

- [1] INGALDI, M. (2014). Analiza stabilności procesu w wybranej odlewni. In: *Toyotaryzm. Zagadnienia kontroli w metodzie BOST*. Borkowski S., Ingaldi M. (Ed.), pp. 98-109, Oficyna Wydawnicza Stowarzyszenia Menedżerów Jakości i Produkcji, Częstochowa.
- [2] BORKOWSKI, S., INGALDI, M. (2015). Evaluation of the processes stability in metal industry. In: *METAL 2015: 24th International Conference on Metallurgy and Materials*. Ostrava: TANGER.
- [3] SYGUT, P., LABER, K., BORKOWSKI, S. (2012). Investigation of the non-uniform temperature distribution on the metallic charge length during round bars rolling process. In: *Manufacturing Technology*, Vol. 12, No. 13, pp. 260-263.
- [4] KLIMECKA-TATAR, D. (2014). The Powdered Magnets Technology Improvement by Biencapsulation Method and Its Effect on Mechanical Properties. In: *Manufacturing Technology*, Vol.14, No. 1, pp. 30-36.
- [5] KARDAS, E. (2013). The analysis of quality of ferrous burden materials and its effect on the parameters of blast furnace process. In: *Metallurgy*, vol. 52 (2), pp. 149-152.
- [6] PUSTEJOVSKA, P., JURSOVA, S., BROZOVA, S., SOUSEK, J. (2013). Effect of waste and alternative fuels on blast-furnace operation. In: *Metallurgist*, Vol. 56, Iss. 11-12, pp. 908-911.
- [7] INGALDI, M., BORKOWSKI, S. (2014). Recycling Process of the Aluminium Cans as an Element of the Sustainable Development Concept. In: *Manufacturing Technology*, Vol.14, No 2, pp.172-178.
- [8] BORKOWSKI, S. (2012). *Toyotaryzm. Wyniki badań BOST*. Wyd. PTM, Warszawa.
- [9] BORKOWSKI, S. (2012). *Zasady zarządzania Toyoty w badaniach*. Wyniki badań BOST. Wyd. PTM, Warszawa

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