

Effect of degassing addition on the solidification of nickel aluminum bronze

kavinjr¹, azam m¹, hadi a¹, z. shayful², m m rashidi^{1,a)}

¹faculty of mechanical engineering, universiti malaysia pahang, 26600 pekan, pahang, malaysia

²school of manufacturing engineering, universiti malaysia perlis, kampus tetap pauh putra, 02600 arau, perlis Malaysia mrashidi@ump.edu.my

Abstract.

The effect of degassing agent addition on the solidification of Nickel Aluminum Bronze was investigated. The complex relationship between the development of the alloy solidification and its thermal analysis in Nickel Aluminum Bronze was obtained by using data logger. This experiment describes the characterization of thermal analysis in Nickel Aluminum Bronze which was interpret using solidification cooling curve. With this method, the differences of temperature points during solidification were clearly evidenced. The results show a solidification cooling curve directly affected by percentage of degassing agent added in molten Nickel Aluminum Bronze alloy. There is distribution of temperature point after solidification from melting. As for degassing treatment, higher degassing addition on the Nickel Aluminum Bronze decreased the solidification temperature point.