INTISARI

Penelitian ini bertujuan untuk mengetahui nilai konduktivitas termal bahan logam : aluminium, baja dan tembaga. Dalam kasus ini digunakan benda uji berupa silinder aluminium, baja dan tembaga dimana benda uji dicelupkan secara tiba-tiba di dalam air mendidih dan dibiarkan mengalami pendinginan secara alami. Pengujian dilakukan di laboratorium dan dengan metode komputasi, serta diasumsikan sifat bahan tetap dan merata serta tidak ada energi yang dibangkitkan di dalam benda. Setelah dilakukan berbagai pengujian di laboratorium serta metode komputasi diperoleh bahwa tembaga mempunyai nilai konduktivitas termal tertinggi diikuti aluminium dan baja. Berdasarkan hasil yang diperoleh pada penelitian ini, kita dapat beranggapan bahwa kombinasi metode penelitian yang dilakukan di laboratorium dan metode komputasi dapat dijadikan salah satu alternatif dalam mencari nilai konduktivitas termal.

ABSTRACT

The research aimed at knowing the thermal conductivity values of the metal materials : aluminium, steel and copper. In this case, the tester were suddenly dyed into the boiling water and let then experienced the natural cooling. The testing was done in laboratory and with computation method, assumted the characteristic of the meterial was definitive and flat, there was no energy which was generated in the meterial. After doing the testing in laboratory and computation method, it was obtained that copper had the highest thermal conductivity value and it was followed by aluminium and steel. According to the result that was obtained by in this research, we can assume that the combination between research method that was done in laboratory and computation method can become an alternative in looking for the metal thermal conductivity value.