

ABSTRACT

Influences of Ni and Cr addition on the properties of powder metallurgy Co base alloys were investigated. The alloys were produced by powder metallurgy technique and sintered under argon atmosphere. Scanning electron microscope (SEM) was used for morphology observation of the raw materials. The size of the Co, Cr and Ni particles has been characterized using particle analyzer. Density measurement was carried out by Archimedes technique while porosity was calculated based on density data. Hardness testing was done using Vickers hardness machine. The result shows that the bulk density of the alloys decreased with increasing of Cr. Hardness of CoCrNi alloy decreases with increasing of the Ni content.

Keywords: Co-Cr-Ni, density, porosity, microstructure