

Abstrak

Pengujian impact merupakan pengujian ketahanan material terhadap benturan yang digunakan untuk mengetahui kekuatan, kekerasan, serta keuletan material. Penelitian ini bertujuan untuk melakukan proses fabrikasi alat uji impact metode charpy yang akan digunakan sebagai alat penunjang proses manufaktur dan alat praktikum di Laboratorium Manufaktur Teknik Mesin Universitas Dharma Andalas. Pada penelitian ini dilakukan proses identifikasi kebutuhan, pemilihan bahan alat uji impact, pemilihan proses dan proses uji coba alat uji impact. Untuk pembuatan alat uji impact metode charpy skala laboratorium yaitu proses penandaan, pemotongan, pelubangan dan pengelasan, sedangkan proses non pemesinan yang dilakukan meliputi pengecatan. Proses fabrikasi meliputi perakitan rangka, pendulum, poros, lengan pengangkat, kedudukan ragam, dan ragam. Alat ini berhasil diproduksi dan mampu melakukan proses uji impact metode charpy pada skala laboratorium.

Kata Kunci : uji impact, charpy, manufaktur

Abstract

Impact testing is a test of material resistance to impact that is used to determine the strength, hardness, and ductility of the material. This research aims to carry out the fabrication process of the impact test equipment charpy method which will be used as a tool to support the manufacturing process and practicum tools in the Mechanical Engineering Manufacturing Laboratory of Dharma Andalas University. In this study, the process of identifying needs, selecting impact test equipment materials, selecting processes and testing the impact test equipment. For the manufacture of laboratory-scale impact test equipment, namely the process of marking, cutting, punching and welding, while the non-machining process carried out includes painting. The fabrication process includes the assembly of the frame, pendulum, shaft, lifting arm, ragum position, and ragum. This tool is successfully produced and able to perform the impact test process of the charpy method on a laboratory scale.

Keyword: impact test, charpy, manufacturing