

RANCANG BANGUN MESIN *VERTICAL SCREW MOLDING* DENGAN PENGGERAK DINAMO STARTER SEBAGI PENCAIR LIMBAH PLASTIK

Oleh :

Putu Agus Suryantara, 1415071021

Program Studi Pendidikan Teknik Mesin

Abstrak

Penelitian ini merupakan penelitian yang bertujuan untuk menghasilkan rancangan mesin *vertical screw molding* dengan penggerak dinamo starter sebagai pencair limbah plastik sesuai dengan permintaan dan keinginan *customer* dengan menggunakan metode yaitu, *Quality function Deployment* (QFD). Data kelayakan desain dan data kelayakan produk mesin *vertical screw molding* mendapatkan hasil dari penyebaran angket. Kelayakan rancang bangun mesin *vertical screw molding* dengan penggerak dinamo starter sebagai pencair limbah plastik melalui beberapa tahap pengambilan data uji angket melalui uji ahli manufaktur, kelompok kecil, dan kelompok besar. Pada uji manufaktur diuji oleh Dosen Pendidikan Teknik Mesin Universitas Pendidikan Ganesha, dan Guru SMK 3 Singaraja dengan mendapatkan hasil sangat layak dilanjutkan. Pada pengujian kelompok kecil yang menyasar lima mahasiswa pendidikan teknik mesin, mendapatkan hasil 95,00% dan dinyatakan sangat layak. Selanjutnya penyebaran angket kelompok besar dengan menyasar mahasiswa dan masyarakat mendapatkan hasil sebesar 90,32%, dapat dinyatakan bahwa rancangan ini sangat layak. Jadi, berdasarkan hasil penyebaran angket maka rancangan mesin *vertical screw molding* sangat layak untuk di terapkan.

Kata kunci : Limbah Plastik, Mesin *Vertical Screw Molding*, *Quality Function Deployment*

VERTICAL SCREW MOLDING MACHINE DESIGN PLAN WITH DINAMO STARTER AS A DILUENT PLASTIC WASTE

By: Putu Agus Suryantara, 1415071021

Educational Engineering

Abstract

This study is a study that aims to produce a vertical screw molding machine design with dynamo starter as a diluent plastic waste in accordance with customer requests and desires using Quality Function Deployment (QFD) method. The design and product feasibility data of the vertical screw molding machine were obtained from the results of questionnaire distribution. The design feasibility of vertical screw molding machine with dynamo starter as a diluent plastic waste were get through several stages of questionnaire test data retrieval through the test of manufacturing experts, small groups, and large groups. The manufacturing test was tested by the Mechanical Engineering Education Lecturer at Ganesha University of Education, and Singaraja Number 3 Vocational School teachers with very feasible results. In the small group testing which targeted five students of mechanical engineering education, the result was 95.00% and were declared very feasible. Furthermore, the distribution of large group questionnaires which targeted students and community received 90.32% results, it can be stated that this design was very feasible. So, based on the results of questionnaire distribution, the design of vertical screw molding machines is very feasible to be applied.

Keywords: Plastic Waste, Vertical Screw Molding Machine, Quality Function Deployment