Studi Eksperimental Pengaruh Jarak, Waktu Dan Tekanan Penyemprotan Proses Sandblasting Terhadap Ketebalan Dan Kekasaran Permukaan Untuk Mengurangi Tingkat Karat Pada Baja

Tahajudin Arofi Program Studi Mesin Otomotif Jurusan Teknik

ABSTRACT

Sandblasting process is a process that is carried out to clean and change the surface roughness of the material. In this study, the Sandblasting process was carried out on rusty steel with variations in distance, pressure, and nozzle time to obtain changes in surface roughness of the material. The test results show that changes in the nozzle spacing and spray pressure in the Sandblasting process have a significant effect on surface roughness. The parameters in the sandlasting process used are spraying time with variations of 10 seconds, 25 seconds, 30, 200 mm, 300 mm, 400 mm, and pressure of 4 bars, 5 bars, 6 bars. From the results of research from the Sandblasting process shows that the variation of pressure has a greater influence than the time and distance. The results of the Sandblasting process with the lowest roughness is 46.4 µm at a distance of 200 mm, 10 seconds, and 4 bar pressure. While the results of the biggest Sandblasting process were 78.8 μ m with a distance of 400 mm, 30 seconds time and 6 bar pressure. While the results of the lowest paint thickness is 60.7 µm with a distance of 400 mm, 10 seconds time and 3 bar pressure, and the greatest paint thickness results are 87.8 µm with a distance of 200 mm, 30 seconds time and 3 bar pressure

Keywords: Sandblasting, surface roughness, paint thickness.