ANALYSIS OF INFLUENCE OF TIME FRICTION MICRO STRUCTURE AND MECHANICAL PROPERTIES OF STEEL ST 41 (DIMENSIONS 14 MM AND SHEET STEEL 50 MM) IS AN ALTERNATIVE SPRING PIN FRONT OF SUBSTITUTE PRODUCTS WITH DIRECT DRIVE FRICTION WELDING METHOD

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Abstractedly

Production of spring pin is made of carbon steel cylindrical shaft and plate. During this switching process is done by electric welding (SMAW). Where electric welding (SMAW) requires filler metal (filer). Alternative welding process with friction welding (friction welding) welding was carried out because the spring pin with friction welding.

The research was done to mengetaui frictional effect of time on the microstructure and hardness. Process that in doing is welding on the shaft and plate in carbon steel (alloy) ST 41 with the rotational speed n rpm, and the time variation of friction 35.45.55, 65 seconds 127.55 frictional pressure to the pressure of forging wrought 892.3. Friction time on dimensional upset welding produces the same while the connection is analyzed microstructure and mechanical properties (test material, kinking) are compared to local products or products of small industries.

The results of this study is the longer time the friction the greater the mechanical properties of the product hasilkan.pada spring pin with friction welding process, a stronger appeal in the local product. From it can be seen that the friction welding machine can produce a good weld.

Key word: friction welding's machine, friction welding, spring pin