EXPERIMENTAL STUDY OF MECHANICAL PROPERTIES OF METAL CASTING ALUMINIUM WITH ELECTRIC LABORATORY SCALE FURNACE

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ABSTRAK

Aluminum is a material that is resistant to corrosion and is widely used in the industrialized world. One of them as a creation of the display case. the problem posed is waste from the production results. To resolve the problem of waste aluminum can be done by way of casting. The casting itself is done using an electric furnace. As for the advantages of aluminum melting furnace using electricity itself is easy to regulate the temperature, the result of the fusion of clean, and can be used to meld the different types of material. The results of the casting divided into three variations of temperature temperature that is 700^0C, 750^0C, and 800^0C. To know the mechanical properties Testing needs to be done it's own tensile. From the test results drop in temperature of the casting 700^0C obtained average value of UTS 91.66 MPa, 750^0C casting temperature obtained value for UTS 95.66 MPa, and the casting temperature 800^0C obtained the value of UTS of 93 MPa. Tensile test results from all three gained the greatest value 95.66 MPa at temperatures of 750^0C casting, the casting temperature 800^0C obtained the second largest value 93 MPa, and the casting temperature 700^0C obtained the smallest value of 91.66 MPa.

Keywords*: aluminum, electric Furnace, tensile test*