

# ENGINEERING OF CENTRIFUGAL CASTING MACHINE FOR ALUMINUM BNCT PIPE

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## ABSTRACT

Centrifugal casting for aluminum not develop yet. The aim of this research are design and manufacture of centrifugal casting that available for aluminum casting. Beside that to know the process of centrifugal casting and the optimum rotational speed characteristic for aluminum casting.

The methods used in this research are design and manufacture of centrifugal casting. Next steps is casting test for silinder aluminum. The ability of centrifugal casting tested using porous, violence and microstructure of casting results.

*The result of this research is the design and the manufacture was done well. The casting process include prepare of blast furnace and centrifugal casting machines, aluminum smelting, casting, casting product release, and cleaning. The porous occurs in the inside of diameter. To obtain the required casting, it is necessary to estimate the materials. It is very importance to predict the volume of materials. The optimum velocity of aluminum material was 1200 RPM. From the microstructure test we can concluded that the boundary in the outer diameter is closest. This is in accordance with the hardness test and the existing theory, that the outside centrifugal force increasingly and compress the material.*

Kata Kunci: *adaptive, cooperative learning, deductive*