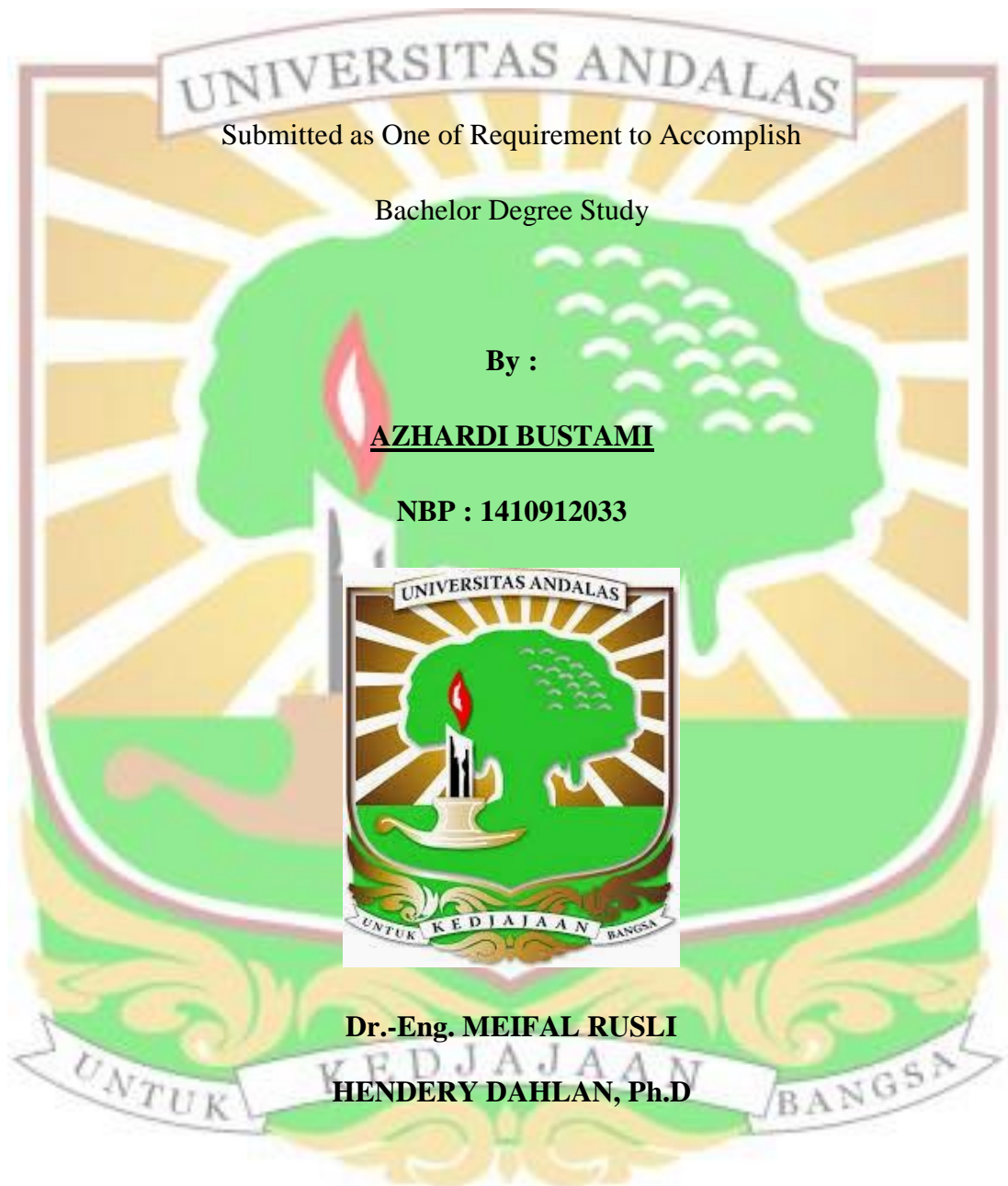


**FINAL PROJECT**  
**DESIGN OF 10 TON/HOUR CAPACITY**  
**OF A SPIN DRYER FOR COAL**



Submitted as One of Requirement to Accomplish

Bachelor Degree Study

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## ABSTRACT

*Coal is the world's most important source of energy fueling around 40% of the power stations around the world. The high moisture content of low-rank coals (LRC) is a major obstacle to their economic utilization. In P.T Semen Padang water content of coal used about 40 percent. Then need a tool to reduce the moisture of coal. At this time, the commonly used dryers for coal are dryers that use temperatures such as: Fluidized Bed Drying, Superheated Steam Drying, Rotary Drying. In this final project will design Spin Dryer to drying coal. Spin dryer is not use temperatures to drying the coal. It use centrifugal force for drying the coal. The optimum centrifugal force for coal drying is 2000 G. Designing spin dryer use Inventor. Spin dryer was analyzed by the failure theory of energy distortion (Von-Mises) using the Ansys program. The design result is a spin dryer with a capacity of 580 kg / 2.5 minutes. From the voltage that occurs, the smallest safety factor is 3.2.*

**Keywords :** coal, moisture, dryer, spin dryer

