DESIGN AND ANALYSIS
SEMI AUTOMATIC PLATE ROLLING MACHINE

Name	:	Safrian Adha
Nim	:	2204181157
Supervisor	:	Syahrizal, S.T.,M.T

ABSTRACT

In the Polbeng Mechanical Engineering fabrication and welding lab there is a plate roll tool whose working system still uses human resources (manual) and is less effective, seeing this problem, the author wants to design a rolling plate with a manual work system to be electric. The design of this tool uses a Research and Development method that refers to the specifications of the type of components used. This design has dimensions of length 750, width 500, height 900 mm, 1 Hp 1 phase motor with rotation speed of 1400 rpm, gearbox 1:60 and has 3 with a diameter of 2 inches and as well as static analysis on the frame through simulation using the Autodesk Inventor Pro application. In 2015 the engine frame material used was galvanized steel and mild steel resulting from Von Misses Stress which occurred at 18.1331 MPa, the value of Stress was 3.43886 Mpa, the value of Strain (strain) that occurred was 0.0000223526 ul, , Strain Safety Factor on the frame of the rolling machine is 11.4156 ul, Displacement with a value of 0.0265574 mm,

Keywords : Semi-automatic plate roll, Frame, Safety factor