

***ANALYSIS OF PRESSURE VESSELS (PRESTO) WITH A
CAPACITY OF 20 KG USING THE FINITE ELEMENT
ANALYSIS (FEA) METHOD***

Nama : Parasdia Agis
NIM : 2204191214
Dosen Pembimbing : Firman Alhaffis, S.T., M.T

ABSTRACT

A pressure vessel is a place or container to store or accommodate a fluid, either liquid or gas and is often used as a process tool used in industry. This study aims to obtain the strength of the ferritic stainless steel material as a constituent of pressure vessel construction (presto). By using the Solidworks 2019 software computing system with the finite element analysis method and mathematical calculations. This analysis process was carried out in the design lab State Polytechnic of Bengkalis. Modeling is done by making field observations regarding presto. Presto construction strength analysis using ferritic stainless steel material. The results showed that the ferritic stainless steel material with a thickness of 8mm had a strength of 118 MPa, displacement of 0.17 mm, and a safety factor of 1.47.

Keywords: Pressure Vessel, presto, analysis, ferritic stainless steel, FEA.