

UNIVERSITAS INTERNASIONAL BATAM

Undergraduate Thesis
Undergraduate Program of Civil Engineering
Odd Semester 2019/2020

IMPLEMENTATION OF *BUILDING INFORMATION MODELING (BIM)* ON CONSTRUCTION PROJECT *WORKSHOP* (Case Study: Shipbuilding Workshop at Sekupang)

NPM: 1611014
FERRY

ABSTRACT

The development of the construction is increasing and demands constructors to complete their project activities as swiftly and efficiently as possible. In general, the implementation of construction is constantly met with obstacles that surround process, time, cost and also quality.

The objective of the research is to apply Building Information Modeling (BIM) into the 4D model and to analyze the operation time in the shipbuilding workshop project. The software that is used in the modeling process is Revit Structure and Navisworks. 3D modeling includes foundations, columns, beams, plates, and roofs. Combining the design of the 3D model will result in 4D model in the Autodesk Navisworks software. The operation time will be analyzed by using the S Curve method.

BIM has already been implemented and 3D and 4D models results were obtained. Based on the deviation value, the project is delay-free. The highest positive deviation is +19.15% and the lowest positive deviation is +7.33%. And calculate the cost budget based on modeling in the revit structure with a total cost of Rp. 5.813.838.429.

Keywords: *Building Information Modeling (BIM), operation time, S Curve, construction management, Revit Structure*