ABSTRACT

Problems often arise in the pipeline system is corrosion. Broadly speaking, the factors that affect the fast or slow the corrosion process, among others, construction materials, environmental conditions / media, forms of construction / composition and construction functions. This was due to the exploration of oil and gas has a high temperature and pressure that can cause changes in voltage on the pipeline. Voltage changes on the pipe during operation greatly affects the integrity of the pipe, especially if the pipe is defective (cracked). Pipeline in its operations will experience a variety of destructive influences from both communities and also of the substances carried by the pipeline.

To prevent or reduce corrosion on the pipe then applied coating (coating) and cathodic protection (cathodic protection), while for the internal use of corrosion inhibitors. Wrapping (dressing) and painting (painting) is an inner coating (coating) are often used to coat the pipes under the sea. In this thesis, the comparison will be wrapping (dressing) and painting (painting) in terms of corrosion resistance and cost investment. In addition to calculating the age of the pipe was done with reference to the API 570 (Piping Inspection).

The final task is to formulate the age of the pipe 12” which is protected against corrosion by the process of painting a 6-meter located dibibir coast has a longer life of the dressing process. It can be seen from the calculations that produce life painting of a pipe protected with a replacement age as follows: 14 months, 15 months, 19 months, and 14 months. While the process of dressing has a replacement age: -6.6 months, -1.5 months, -6.6 months, -1.5 months. Results were obtained from the inspection data is processed using the formula contained in the API 570 Piping Inspection. In addition to formulating the age of the pipe, this thesis also calculate the cost of investment and SOP (Standard Operation Procedure) good painting. For the cost of investment, have the painting process more expensive by a margin of ± a budget of Rp. 272,000 of the dressing process. SOP here will help to facilitate the work and keep workers from workplace accidents. The results of this thesis can help Chevron Indonesia Company - Aberdeen formulate corrosion protection for the pipeline from Serang go to Tanjung Santan a fluid gas, so has resistance to corrosion and has low investment rates and reduce the cost of pipeline maintenance company.