

The Characteristics of the Rate of Hollow Pipe Corrosion by Adding of Moringa, Hibiscus, and Taro Extract (Case Study: Material Handling of Ijen Crater Sulfur)

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ABSTRACT

Corrosion is a major problem for equipment that uses the metal of basic material, one of them is material handling that is used by miner in the Ijen crater. Corrosion cannot be prevented but its rate can be reduced. Various ways have been done to reduce the rate of corrosion, one of them with the use of inhibitors. In this study, moringa leaf, hibiscus, and taro is used as the inhibitor. The purpose of this study is to determine the effect of variation of the green inhibitor to the rate of hollow pipe corrosion in water media at Ijen crater. In this study used variation inhibitor levels (0%, 5% and 10%) using the corrosion test methods of weight loss. Moringa leaf has been obtained phenolic levels of 69.2%, 52% hibiscus and taro 24.8%. Corrosion test results showed that the higher the phenolic, lower of the corrosion rate. The value of the smallest corrosion rate has been obtained on the addition of inhibitors of the Moringa leaf's extract its concentration of 5% that is 0.43mm / y.

Keywords: Corrosion, hibiscus leaf, inhibitor, moringa leaf, taro leaf