PT Pertamina Balikpapan RU V has a component that is susceptible to corrosion that is Debutanizer System. Corrosion on Debutanizer system is caused by hydrochloric acid (HCl) solution which is carried over from previous processes. In order to protect these components from corrosion attack, coating methods by Phenolic Epoxy should be considered.

This study aims to analyze the influence of Phenolic Epoxy coating composition on the characteristics and performance of the Overhead Debutanizer piping application. Material that is coated by Phenolic Epoxy being tested with Phenolic : Epoxy variation at 100:0, 80:20, 60:40, 40:60, 20:80 and 0:100. Tests performed include testing of polymer bonds (FTIR), thermal stability (TGA), drying time test, heat resistance, flexibility test, acid resistance and abrasion resistance testing. Tests carried out referring to existing standards.

From the results of FTIR test, the bonds of phenolic and epoxy are exist while mixing process. The addition of epoxy on the sample composition tends to increase the abrasion resistance and thermal stability. While the addition of phenolic composition will tend to increase the flexibility and acid resistance and speed up drying time. Based on the research performed, comparison of the composition of phenolic and epoxy coatings that produce an ideal performance in a row 60:40.

Keywords: Overhead Debutanizer, Coating, Phenolic, Epoxy