

ABSTRACT

PT Pertamina (Persero) is a state-owned company established to commercialize and develop oil and gas resources and geothermal energy in Indonesia. By having several activities ranging from exploration, drilling and production, shipping, processing, storage and distribution and selling. Pertamina processing business owns and operates seven (7) pieces of refinery units in the country, namely refinery Pangkalan Brandan, Dumai, Musi, Cilacap, Balikpapan, Balongan and Kasim with a total capacity of 1051.70 thousand barrels.

RU-VI Balongan designed to process crude with a large enough residual capacity approximately 62% of the total feed. RU-VI Balongan main characteristic is the unit Residue Catalytic Cracking (RCC), which consists of two main tools, reactor and regenerator. Therefore, the main characteristics, taking RU-VI Balongan logo shaped reactor and regenerator.

Risk Based Inspection (RBI) is an approach to risk assessment and management process that is focused on equipment failures due to defects in materials (API 581, 2000). RBI is a method for determining the inspection plan (where and when equipment must be inspected) based on the risk of failure.

The result from the qualitative analysis obtained RBI risk category for a heat exchanger tube bundles is low risk. The concept of life remaining half performed to determine the appropriate inspection interval schedule either preventive or corrective. With the concept of life remaining half can be determined remaining life and optimum equipment inspections carried out during half of his remaining life. By using analysis of remaining life and inspection schedule preventive cost reduction obtained by Rp2, 970,584.76 and corrective Rp12, 581,039.55 per year

Keywords: Risk-based inspection, RBI, remaining life, inspection intervals, heat exchangers