**ABSTRACT**

PT. PERTAMINA (PERSERO) Surabaya is the oil and gas company developed trading which marketing services and distribution fuel. On distribution fuel has storage tank, it would be a hazard. Because of the capacities of storage tank 2000 kilo litres. If the depot has an accident, it would be disadvantage about more than 100 million IDR for the PT. PERTAMINA (PERSERO).

This research apply using Hazard And Operability Studies (HAZOP) method to identify and assess the risk because of this research about distribution processing fuel gas Pertamax, Pertamax Plus and Premium. Result of Hazard And Operability Studies (HAZOP) method high risk will be use as developed by Fault Tree Analysis (FTA).

The identification result of this research have many risk at the process, and the result of the risk assessment have 2 problems which include in high risk. The first problem is storage tank of gasoline that harm is exploited, than the second problem is storage tank of gasoline that harm is fired. Base of the Fault Tree Analysis (FTA) method aware some of the basic events, there are corrosion on the shell plate, corrosion on the arrester, loading setting is too weight, has of bird nest on the PV Valve, spring is weak, needle guide is break, open cable isolation, wire displacer, lack of improvement, crust, corrosion pipe, lifetime.

**Key word** : HAZOP, FTA, Storage Tank