ABSTRACT

PT Pertamina EP Region Java Cepu Area is one of the industries of oil and natural gas drilling in the region of Java. The process is very possible oil drilling in the form of bursts of blowout. Therefore, it is as a precaution against unexpected events, then the drilling process is always equipped with well control, namely BOP System or Blowout Preventer System. BOP is a system to prevent blowout in case of failure in performing its functions would be fatal.

Hazard identification, which is conducted using qualitative methods consequence Cause Analysis (CCA), which is a combination of Fault Tree Analysis (FTA) and Event Tree Analysis (ETA) for a scenario of accidents in the CCA diagram showing the relation between consequences and the basic causes that can be causing a blowout accident. From the results of hazard identification can know the potential dangers such as "kick" and the failure of any BOP components that accompany a blowout accident Accident Sequence of Minimal Cut Sets.

From this analysis it is known that CCA was the cause of these accidents among other hazards due to human error namely open the valve is not on time, did not learn the procedures, untrained safety equipment failed. Damage to equipment (Active Equipment Failure) namely not inspected, the indicator needle does not work, not calibrated, has been used over and over - again, not replaced, replaced with a hydraulic pump accumulator usual, deformation occurs, the incoming pipe size does not fit, corrosion, no test was done penetrant, there is dust, pump power declining, increasing speed RPM arrived - arrived, Pressure Gauge fails, the alarm failed to sound, the operator and the accumulator fails, Annular Preventer failed to close, failed to close the pipe RAM, fail to close blind RAM , environmental factors (Environment) namely formation pressure > hydrostatic pressure > fluid mixed with gas and oil, the activity of imbibing fluid, the existence of empty space, there are foam empty room, gas cutting fluid that is inserted and human error.

**Keywords:** Blowout, BOP, Cause consequence Analysis, Fault Tree Analysis, Event Tree Analysis