

ABSTRACT

PT Star Energy Geothermal is one of the geothermal power plant (PLTP) company which is located in Pangalengan, South Bandung. With an installed capacity of 227 MW, the power plant supplies the electricity for Bandung and West Java region. The pipeline system plays an important role in transfer the hot fluids from the production well to the power station to be converted into electrical energy and then condensed again and flowed through the pipes for re-injection into the earth. Condensate pipeline that serves the condensate water into the bowels of the earth for re-injection often results in a failure. Many leaks occur although the lifespan is up to 40 years. A failure on the pipes will affect the company's business process and also the environment. One attempt to do to prevent failure is to conduct a more targeted inspection activity apart from the company's scheduled inspection (every 3 years). Determining the proper inspection activities will be able to support the production process.

Risk-Based Inspection (RBI) is a method of grouping equipment to risk category that can be used as a reference for the company to undertake proper precaution action so that the equipment's risk category will not get worst.

The condensate pipe risk category obtained from the qualitative RBI analysis which is on medium risk category. The concept of half remaining life performed to determine the appropriate inspection interval schedule. With the concept of half remaining life, the interval shall be done at half of his remaining life. Overall Inspection interval was found, the 61 area condensate has the shortest average inspection interval.

From this inspection interval there is Rp 483,968,750.00 cost addition.

Keywords : Risk based inspection, RBI, remaining life, inspection interval