

PRESENTATION FROM NTPC SINGRAULI IN O&M CONFERENCE

Topic: Underwater cutting of condenser inlet pipe

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Summery

Problem:- The connection in inlet of condenser was to be done to connect new duct. The root closing valve that isolates CW duct to condenser was closed even then there was significant passing of water with a pressure of around 1.4 KG. When the pipe was punctured huge flow of water was observed from the pipe. Confirming the water passing from the closed valve.

Solution:- In order to complete this work in dry condition all five units had to be shutdown to reduce pressure in CW duct which would have caused huge financial loss. To avoid that this activity was done underwater in running pipe condition.

A prefabricated pipe was welded to the condenser inlet pipeline. A puncture was made in the pipe to fill the newly connected pipe with water upto the pressure of inlet pipe. With the help of divers, the inlet pipe was then cut from inside. To avoid out flow the new valve was closed.

Conclusion:- Usually in order to connect a branch in a pipe, the primary pipe is cut to the size of periphery of the branch and then branch pipe is connected to the primary by welding. As in the problem case the primary pipe could not be cut as this required shutdown of five units. The activity was done in underwater running condition and units were saved from shutdown.