



COOLING WATER SYSTEM OF HYDRO POWER PLANT: A CASE STUDY

**KHAIRUL FAIZAL BIN KUSHIAR
(2006869110)**

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Faculty of Mechanical Engineering
Universiti Teknologi MARA (UiTM)

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ABSTRACT

This project looks into the water cooling system of a Hydro Power Plant in Stesen Janaelektrik Sultan Mahmud, Kenyir. The plant is currently using an open circuit water cooling system. The water for the cooling system is taken from the nearest river. With the existing system, the water produces a lot of sludge that has blocked the delivery tube line in the cooler. This problem has slightly reduced the heat transfer from the generator to the cooling system and the efficiency of the cooler. The main objective of this project is to address this issue. The project has been carried out in two parts. The first part of the project is to study, assess, and properly document the current water cooling system and the major problems reported. In the second part of the project, different water cooling systems are discussed from which the most practical system has been selected and presented as solution for the current problem faced in the hydro power plant. Some of the design criteria of the proposed cooling system are to reduce maintenance cost and work for the cooler. The outcome of this project is a detailed proposal of a new cooling system that will eliminate the present problem face by the Hydro Power Plant in Stesen Janaelektrik Sultan Mahmud, Kenyir.

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