ABSTRACT

The cooling system or a so-called cooling module has an important role in gas and steam power generation (PLTGU) UP Semarang. The condition of the cooling modules is now deteriorating due to breaches in the system, resulting in continuously additional water consumption. Meanwhile, when the additional water depleted and not filled, the most fatal result is a unit becomes trip, the another impact is when the unit is being filled of water often occurs overflow because the filling system is still manual.

In preventing losses from leakage of cooling module system, it is necessary an automation system on water filling of the cooling module tank by adding a level switches and actuators such as solenoid valve, so that the cooling module system is no longer a shortage of water and the excess of water until overflow occurs.

Keywords: cooling module, manual filling system, automatic filling system, level switch, solenoid valve

INTISARI

Sistem pendingin atau disebut *cooling module* mempunyai peranan penting pada pembangkit listrik tenaga gas dan uap (PLTGU) UP Semarang. Kondisi dari semua *cooling module* saat ini semakin memburuk karena adanya kebocoran sistem, akibatnya dibutuhkan konsumsi air penambah secara terus-menerus. Sedangkan ketika air penambah habis dan tidak diisi maka akibat paling fatal adalah unit trip, dampak yang lain adalah ketika unit dilakukan penambahan air seringkali terjadi overflow karena sistem pengisian masih manual.

Dalam mencegah kerugian akibat dari kebocoran sistem *cooling module*, diperlukan automatisasi pada sistem pengisian air tanki cooling module dengan cara menambahkan level switch dan aktuator berupa solenoid valve, sehingga sistem *cooling module* tidak lagi kekurangan air maupun kelebihan air sampai terjadi *overflow*.

Kata kunci : *cooling module*, sistem pengisian manual, sistem pengisian automatis level switch, solenoid valve