

Expert System for Problems Handling in Water Vapor Chemical Cycles in Steam Power Plant

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Abstract

One of the problems that often occurs in the power plant owned by PT PLN (Persero) is damage to the boiler or turbine caused by poor water and steam quality, as seen in the results of the assessment of the water vapor chemical cycle conducted by PT PLN Puslitbang on Steam Power Plants owned by PLN (Persero). The main problem is due to improper control of the chemical quality of water, currently the control is carried out by humans so that human resources are required to have sufficient competence. But it needs to be realized that this competence is not evenly distributed throughout the plant so that human error is still possible. In order to reduce human error, an application of expert system needs to be made that can monitor conditions, analyze and recommend actions.

The methodology used is descriptive qualitative including problem identification, data collection, application preparation, validation and implementation. The resulting application called "Steam Water System" is proven to be able to help the unit in knowing the conditions, causes, and what actions should be taken to prevent damage due to the condition of the chemical cycle of water vapor. This application is web-based and is connected via Ethernet so that it can be monitored by management..

note: This document will be opened to the participants on IERE website before the Workshop and opened to the public afterward.