

Efficiency monitoring of a cooling water pump based on machine learning techniques

A. Muñoz San Roque; D. González Calvo; F.J. Bellido López; M. Casero Martín; M.A. Sanz Bobi; T. Álvarez Tejedor

Abstract-

This paper presents a method for efficiency monitoring of two circulating water pumps working in a combined cycle power plant for cooling the steam coming from a water-steam turbine. The method is based on monitoring the performance of the pumps over time using machine learning techniques that try to discover patterns in the data observed from the pumps. This permits the maintenance staff to assess the possible degradation of the pumps and evaluate the effect of the corrective and preventive maintenance implemented. Some examples of real cases will be presented in the paper to illustrate the method proposed.

Index Terms- machine learning, health condition, cooling water pump, efficiency degradation

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