

عنوان مقاله:

A mathematical model to predict the amount of aluminum ions in the cooling systems in combined cycle power plants using factors affecting corrosion

محل انتشار:

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خلاصه مقاله:

In today's world the human needs for electric power is inevitable, hence, the power plants, as generators of electricity, are having of special attention. The cooling systems are among the most important units in power plants. Due to the constant water contact with these units, there is always the risk of corrosion in these units. Because of this, having the knowledge of corrosion situation in these units is very important. By predicting the working ability of the system and the probability of corrosion, one can draw the prevention strategies and the needs to avoid problem creation. In a 2-year case study in Shariati combined cycle power plant of Mashhad, by measuring the parameters affecting the Al ion concentration in the cooling system, these factors were identified. Following this, in examining the behavior and the effects of each of these factors using genetic algorithm, a relation to calculate the concentration of aluminum ions using these parameters and their usage range was given

کلمات کلیدی:

power plants, cooling systems, corrosion, Al ion, a mathematical model

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