ABSTRACT

Chandra Asri Petrochemical is one of the largest integrated companions that produce petrochemical products in Indonesia. It is built in Cilegon, Banten. In 2012, Chandra Asri Petrochemical had a project to build the new plant that was named Butadiene Plant. Butadiene Plant would be built with the new electrical system and totally different from the existing electrical system that is used. In development plans, Butadiene Plant Electrical Systems will use the source of electricity to the contract 10MVA, 20KV distribution, 6KV and 380V. And the electrical system will be separate from the electrical Chandra Asri Petrochemical that has been there before. Therefore, it is necessary to make protection coordination studies in Butadiene Plant Chandra Asri Petrochemical to get protection systems that meet protection standards. In a study of the coordination of protection to consider fault current that can occur and the full load current of electrical equipment installed. It is also important characteristics of the equipment used to perform the analysis. Based on the results of modeling and simulation, and then analyzed to obtain the appropriate coordination of relay protection against applicable standards. As well as formed into a curve that describes the condition of relay protection coordination on the electrical system results from the analysis conducted. Then concluded that the recommended protection coordination analysis are conducted according to standards coordination and able to protect the equipment in the plant electrical system Butadiene Chandra Asri Petrochemical. So that electrical equipment can be perfectly installed and reliability of electric power delivery systems in optimum condition.

Keywords: overcurrent relay, protection coordination.
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