



# The Reasoning and the Status Inquiry Certificate of Power System

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## Abstract

In this paper, some unknown information is discovered using P-reasoning, which is discovered in Xor outer X, i.e.  $XfcX$  or  $XcXf$ . The fault status of power system is abstracted into inter-concentric circle or outer-concentric circle, which can be found by internal-outer reasoning. From this, it can be seen that P-sets is a novel mathematics theory and method studying the fault identification of power system. Except for the normal operation status, the supply network of power system can bring about some fault status because of natural or anthropic factors, such as local short circuit or open circuit. Some studies are given for the above fault status identification. In the paper, a novel mathematics model P-sets and P-reasoning generated by P-sets are used to identify the status information of power system, and P-sets has been applied in lots of research fields.

*Keywords:* Inquiry certificate; power system; P-reasoning; anthropic factors