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论文**基于模糊综合评判的火电厂状态评估**

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摘要:

将模糊综合评判引入火电机组状态评估, 系统地来自5座电厂的5台容量为600 MW级机组的总体状态进行综合评判。通过选取有代表性的模糊评判集、评判主因素集和子因素集, 建立完整的模糊综合评判模型, 重点研究与分析了建立评估模型的过程——评判因素集的选取及多指标的层次划分、隶属函数的选取和建立以及因素重要程度模糊集的确定方法。通过对所有指标评估的汇总, 可以进行不同机组在同一特性下的比较, 也能够清楚地判断出综合性能较好的机组, 评估的结果可以用来考核机组各项指标的完成情况, 同时也可以用来开展机组间竞赛。

关键词: 模糊综合评判 状态评估 隶属函数 模糊集 机组竞赛

Condition Assessment of Fossil-fired Power Plant Based on Fuzzy Comprehensive Evaluation

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Abstract:

Fuzzy comprehensive evaluation (FCE) is introduced into condition assessment of fossil-fired power plant, the entire state of the five units of 600 MW in five plants were comprehensively assessed. The representative set of fuzzy evaluation, primary factors set and subsidiary factors set were selected and a complete model was established. The process of modeling was analyzed and studied, as follows: selecting of factors set, layout hierarchy of index, selecting of sub function and the method of determining factors of fuzzy sets. Through collection of all index assessment, comparison could be made among different units in the same condition and sets of preferable compositive characteristics could be distinctly estimated. The results could be used not only to assess the completion of varieties of set indexes, but also to keep competition among units.

Keywords: fuzzy comprehensive evaluation condition assessment sub function fuzzy set units competition

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