Extended Abstract

According to the characteristics of both steam and power, the optimal running model of the coal-fired power-heat system was researched in this paper. The power plant’s physical structure was researched, the superstructure was established, and the boiler and turbine running model was analyzed. With the help of mathematical programming, each turbine unit optimal loads were obtained when the same power and steam were produced, moreover, the minimum coal cost were calculated with each boiler unit optimal load distribution. The case study of one paper mill showed that the optimization model was helpful and the coal consumption can decrease 4.7% aiding with the model.