Primary air regulation in thermal power plants

This article takes a 650MW thermal power heating unit as an example, and optimizes the primary frequency regulation of the unit.

To ensure the system frequency stability, this paper proposes to enhance the PFR capability of TPPs through integrating energy storage systems (ESSs) into them.

Primary frequency control (PFC) has become increasingly important for the stable operation of power systems due to the development of renewable energy resources, and the thermal ...

In order to further improve PFR performance of thermal power units, a multi-model predictive control method is adopted to optimize and improve the traditional steam turbine power ...

A novel coordinated control strategy, informed by the characteristics of distributed energy storage and power ramping stages of thermal power plants, is proposed.

Thermodynamic analysis of temperature boosting of hot primary air in an ultra-supercritical lignite-fired power plant: Scheme comparison and performance enhancement

The primary frequency regulation capacity of the combined heat and power unit often fails to meet the requirements due to heating. This article takes a 650MW thermal power heating unit as an example, ...

By decomposing and quantifying the dynamic energy conversion ...

The PFR capability of coal-fired power plants tends to degenerate and the prediction error of the PFR model increases progressively under deep peak-shaving conditions. To reveal the ...

By decomposing and quantifying the dynamic energy conversion process, this paper proposes a novel mechanism to evaluate the PFC capability for the supercritical thermal power ...

This paper proposed a universal assessment mechanism to evaluate PFC capability for thermal power plants under various working conditions by decomposing and quantifying the energy ...

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