Denitrification dilution wind of Shendong Power Plant

How to control denitrification system during load cycling transient processes?
In this study, a dynamic model of the coal-fired power plant is developed, and the characteristics of a denitrification system during load cycling transient processes were evaluated. Then, an improved control strategy for the denitrification system using cooperative control of NH 3 injection and flue gas temperature is proposed.
Can a control strategy improve the control effect of SCR denitrification system?
For most of coal-fired power plants that equipped with a flue gas or feed water bypass to achieve denitration under wide load ratio,the inlet flue gas temperature of SCR system can be adjusted dynamically. Therefore,the control strategy proposed in this study can be applied to enhance the control effect of SCR denitrification system.
How to control flue gas denitrification in coal-fired power plants?
Conclusions An improved control strategy for flue gas denitrification is proposed in this study. For most of coal-fired power plants that equipped with a flue gas or feed water bypass to achieve denitration under wide load ratio, the inlet flue gas temperature of SCR system can be adjusted dynamically.
How to control the denitrification system using cooperative control of NH3 injection and flue gas?
Consequently, a control strategy for the denitrification system using the cooperative control of NH 3 injection and flue gas temperature is proposed. On the basis of the original control strategy, temperature adjustment is added to the improved control strategy.

Denitrification technology in thermal power plants plays a critical role in reducing nitrogen oxide (NOx) emissions, thereby improving air quality and mitigating climate change. This study ...

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This work is supported by the science and technology project of Electric Power Research Institute of State Grid Shandong electric power company(ZY-2022-15), which studies Research on peak ...

The optimal control of denitrification system in coal-fired power plants in China has recently received widespread attention. The accurate prediction of denitrification efficiency and formulate ...

At present, the selective catalytic reduction (SCR) flue gas denitrification system in thermal power plants in China has many shortcomings, such as long reaction time, poor control lag and poor linearity of ...

Using FLUENT software to simulate the SCR denitrification system of 650MW coal fired unit in a power plant in Shandong.The flow field of SCR system was optimized by the number and ...

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On the basis of the established model, integrated combustion optimization was then implemented by a genetic algorithm. Based on the input-output data of the system in coal-fired power ...

Study on Optimization Experiment of SCR Denitrification Technologies in a Coal-fired Power Plant Limeng Zhang1,*, Xinguang Dong1, Fanjun Hou1, Ke Liu1, Gang Che2 1Stat Grid Shandong Electric ...

Abstract: NOx control has always been a difficult problem in power plant process control, often resulting in problems such as excessive ammonia injection and large control fluctuations. To ...

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