SIMULATION OF DENOX MASS BALANCE BASED ON VISUAL COMPONENT LIBRARY (VCL)

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Abstract

Mass and energy balance calculation is the premise and key of the SCR (Selective Catalyst Reduction) DeNOx system design. However, the traditional calculation method is too complicated. In this paper, the author designed E-R data model for DeNOx system, simulated mass and energy transfer process, and developed visual calculation software based on VCL (visual component library) after studying the principle of SCR and data structure of DeNOx system. Comparing the ammonia demand and flue gas volume at outlet obtained from traditional method and this method, the relative deviation is far below the limitation of engineering practice 5 percent.

Key words: aided design, calculation software, E-R data model, mass and energy balance, SCR DeNOx

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