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PURIFICATION OF FLUE GASES BY MEMBRANE PROCESSES

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Nowadays, there is an increasing pressure for lower emission limits of major compounds contained in flue gases, and also waste-free production. It's deeply intended in the area of flue gases. Membrane separation techniques seems to be promising and powerful purification alternative to classical industrial processes offer low cost, high efficiency, energy saving and waste-free operation. The main subject of the reseach is purification of emissions from power plants. The unique technology based on water-swollen thin film composite membrane, developed at Institute of Chemical Process Fundamentals of the Czech Academy of Science, was used for purification. The principle of successful separation is based on different solubility of compounds present in combustion gases such as – nitrogen, oxygen, carbon dioxide, sulphur dioxide, nitrogen oxides and hydrochlorid acid in water. It has been designed unique lab-scale apparatus to obtain experimental results of membrane separation.

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