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An analysis of the use of waste heat from exhaust gases of a brown coal-fired power plant for drying coal

Summary. Drying of the coal fed into a boiler is a very effective method to increase electricity generation efficiency in power units. This mainly concerns brown coal, which contains approx. 50% of moisture that has to evaporate during the combustion process in the boiler. The heat absorbed by the water evaporating from fuel decreases the amount of heat transferred to the feeding water in the boiler. The paper presents an analysis of the use of waste heat for partial drying of coal, and of the possibility of feeding the electromagnetic mill developed and built at Czestochowa University of Technology with exhaust gases. The effect of brown coal drying on the basic indices of a supercritical unit was analyzed.