

Title (en)  
DEVICE AND METHOD FOR CONTROLLING THE FUEL-AIR RATIO DURING THE COMBUSTION OF GROUND COAL IN THE FIRING SYSTEM OF A COAL POWER PLANT

Title (de)  
EINRICHTUNG UND VERFAHREN ZUR STEUERUNG DES BRENNSTOFF-LUFT-VERHÄLTNISSSES BEI DER VERBRENNUNG GEMAHLENER KOHLE IN EINER KOHLEKRAFTWERKSFEUERUNGSANLAGE

Title (fr)  
DISPOSITIF ET PROCEDE DE REGULATION DU RAPPORT AIR-COMBUSTIBLE LORS DE LA COMBUSTION DE CHARBON BROYE DANS UNE INSTALLATION DE COMBUSTION D'UNE CENTRALE AU CHARBON

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Application  
**EP 09768827 A 20090624**

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Abstract (en)  
[origin: WO2009155903A2] The invention relates to a device and method for controlling the fuel-air ratio during the combustion of ground coal in the firing system of a coal power plant, which comprises means for the pneumatic delivery of ground coal to the burners of the firing system of the coal power plant and means for feeding combustion air to the burners or into the firing chamber of the firing system of the coal power plant and in which the amount of combustion air and the amount of carrier air is controlled. The aim of the invention is to achieve a high reliability of the control combined with low maintenance of the air mass measurement devices for measuring the amount of combustion air and carrier air. According to the invention, this aim is achieved by a measurement device for measuring the amount of combustion air which, according to the correlation measurement method, evaluates the triboelectric effects on sensors which are arranged in series in the direction of flow of the combustion air and thus measures the flow velocity of the combustion air. To this end, between 0.1 mg and 10 mg of fine-grained particles having a particle diameter of between 20 µm and 200 µm are introduced per m3 air into the suctioned fresh air. The introduction of particles into the suctioned fresh air is carried out essentially during the starting phase of a firing system of a coal power plant. The measurement of the amount of carrier air is preferably carried out by means of a correlation measurement device that evaluates the triboelectric effects on sensors which are arranged in series in the carrier air stream in the direction of flow of the carrier air.

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