

Title (en)

SYSTEM FOR MILLING AND AIR-WATER COOLING BOTTOM ASH FROM HEATING FURNACES FOR SOLID FUELS

Title (de)

SYSTEM ZUM MAHLEN UND ZUR LUFT-WASSER-KÜHLUNG VON BODENASCHE AUS HEIZÖFEN FÜR FESTBRENNSTOFFE

Title (fr)

SYSTÈME DE BROYAGE ET DE REFROIDISSEMENT AIR-EAU DU MÂCHEFER PROVENANT DE FOURS DE CHAUFFAGE POUR CARBURANTS SOLIDES

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Application

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Abstract (en)

[origin: WO2007104502A1] The present invention relates to a milling and water-air combined cooling system for bottom ash from heating furnaces for solid fuels, able to maximize the efficiency in milling and cooling also large ash lumps at high temperature and in improving cooling air fluid dynamics which passes said system in counter-flow. The system comprises a crusher (1) provided with a pre-crusher integral with the crusher's (1) port, a water cooling system (3-4), and a separation (5-6) of the flow of the fine material entering the crusher (1) from the lump sized ash. The pre-milling device (2) allows a partial milling of the large lumps and it is actuated by laser or equivalent sensors (7) which detect the presence of ash agglomerates in the milling area. The cooling water passes preferably throughout the shaft (8) of the toothed rotor (9) and/or throughout the fixed slab (10) and moves therefrom, through suitable ducts (4) and nozzles (3), to the milling area. The water intervention is automated depending on the crusher rotor's (9) or casing's (11) temperature detected by suitable sensors (12). The flow separation of the fine material is achieved creating an opening (13) at the rear wall of the crusher and isolating it by a counterweight or automatic valve (5) at the unloading channel (14) and a closing shield (6) downstream of the traction head of the fine ash recuperator (15).

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