

Title (en)
GAS-STEAM GENERATING POWER PLANT

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Application
EP 88908952 A 19881013

Priority
DE 3734959 A 19871015

Abstract (en)
[origin: WO8903471A1] A gas-steam generating power plant has at least one high-pressure steam generator (1) with a steam circuit, in which heat and flue gases are produced by combustion of a fuel (K) in a pressurized furnace (2), at least one heating surface (3, 21) connected to the furnace and through which heat from the furnace is transferred directly to the steam circuit, at least one steam turbine (5; 5a, 5b) connected downstream to the heating surface (3; 21), and at least one gas turbine (14; 34) connected to the flue gas side of the furnace (2) for work-performing expansion of the flue gases. To improve the efficiency, at least partially expanded steam (16; 30; 31) is withdrawn from the steam turbine (5; 5a, 5b) during quasi-stoichiometric combustion of the fuel (K) in the furnace and an equivalent amount of water is fed (19) into the steam circuit. Said steam is introduced directly into the furnace (2) at a pressure higher than that prevailing in the furnace, heated to the highest possible furnace temperature, and then expanded, together with the flue gas, in the gas turbine (14; 34).

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