

Title (en)
POWER REGULATION DEVICE FOR FUEL-FIRED HEAT PRODUCERS

Publication
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Application
EP 88102494 A 19880220

Priority
DE 3707883 A 19870312

Abstract (en)
[origin: EP0281823A2] With a view to optimum fuel utilisation and the reduction of harmful emissions, fuel-fired heat producers must work with a fuel/air ratio to be kept within narrow limits. This optimum ratio can be observed in a heat producer working with constant heating capacity in that a temporally constant quantity of fuel is added to a regulated quantity of air, the flow rate of which is adjusted in the main pipe leading to the burner by means of a blower supplying air. The disadvantage of such a heat producer is that it works with constant heating capacity. There is, however, a requirement for heat producers, the heating capacity of which can be changed, while retaining a very simple regulating device. A change in the heating capacity, while maintaining the optimum fuel/air ratio, can be achieved simply in that, using a heat exchanger (16) arranged in the air pipe (2), the fuel is brought to the same temperature as the air, so that measurement of the flow rates of air and fuel by means of flow sensors (10, 17) in the air pipe (2) and the gas pipe (13) allows an accurate determination of the ratio of gas and air quantities and thus also precise observance of this ratio. Regulation of the heating capacity can then also be achieved simply by changing the quantity of fuel supplied which is matched to the correct air quantity.

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