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WO 2001/011215 A DE 019810820 A
DE 004325802 A US 5689948 A
US 3969892 A

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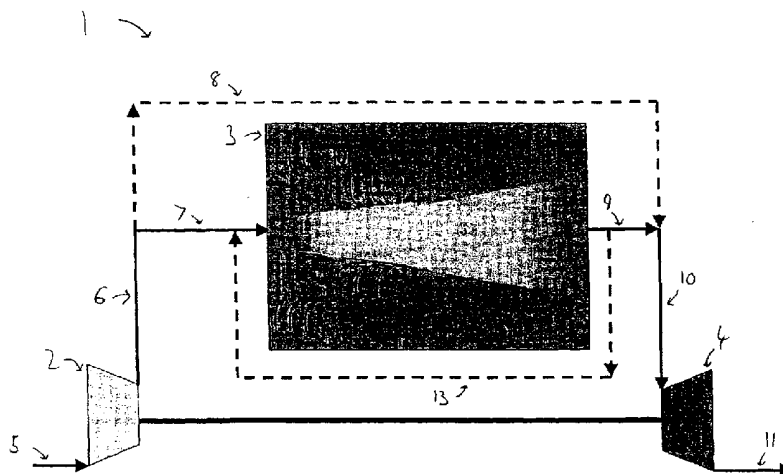
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(54) Abstract Title: **Gas turbine adapted to operate with a high exhaust gas recirculation rate and a method for operation thereof**

(57) A gas turbine adapted to operate in a highly diluted mode comprises a compressor (3) adapted to compress oxidant (5); a combustion chamber (3) adapted to accept the compressed oxidant (7) and provide an exit means for flue gas (9); a turbine (4); and a flue gas re-circulation means (12, 13) adapted to re-circulate the flue gas (9) from the combustion chamber (3) and mix the said flue gas with the compressed oxidant (7) from the compressor (2) in order to provide a highly diluted mode of combustion with a flue gas re-circulation rate of from 100 % to 200 %.



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