



PATENT ABSTRACTS OF JAPAN

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(54) **GAS AND AIR COMBINED TURBINE FACILITY
 AND POWER PLANT AND OPERATING METHOD
 THEREOF**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a gas and air combined turbine process capable of operating at higher efficiency and power as compared to a gas turbine process and a method for operating a power plant performing the process.

SOLUTION: A gas turbine 3 and an air turbine 7 are provided. A primary side of a heat exchanger 5 heating air L is arranged and connected to an exhaust gas side of the gas turbine 3. The air turbine 7 is arranged and connected to a secondary side of the heat exchanger 5. Exhaust heat of exhaust gas AG from the gas turbine 3 is used for power of driving the air turbine 7. A concept based on this invention is profitably adopted in a region with little source of water where an ordinary gas and steam combined turbine facility or a steam power plant can't be adopted due to poor water supply.

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