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(71) Applicant: Hitachi, Ltd. Tokyo 100-8280 (JP)

(72) Inventors:

INUI, Taiji
 c/o Thermal & Hydroelectric Syst. Div.
 Hitachi-shi,
 Ibaraki 317-8511 (JP)

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KAWAGUCHI, T.
 c/o Thermal & Hydroelectric Syst Div
 Hitachi-shi,
 Ibaraki 317-8511 (JP)

 YAGI, Hiroshi, c/o JFE Holdings, Inc. Tokyo 100-0005 (JP)

 ANDO, Yasuto, c/o JFE Holdings, Inc. Tokyo 100-0005 (JP)

(74) Representative: Beetz & Partner Steinsdorfstrasse 10 D-80538 München (DE)

(54) NOVEL FUEL PRODUCTION PLANT AND SEAWATER DESALINATION SYSTEM FOR USE THEREIN

(57)A novel fuel production plant and a seawater desalination system for use therein in which a water production system using an evaporation method can be applied at a seawater intake amount comparable to that required in system using a reverse osmosis membrane method, the degree of freedom in selecting the plant installation site is high, salinity of produced water is reduced as compared with that in the case using the reverse osmosis membrane method, and the merit of the evaporation water production system having a low maintenance cost can be enjoyed. A novel fuel producing section (100) produces synthesized gas from a feedstock and synthesizes novel fuel from the synthesized gas thus produced, and has exhaust heat recovery boilers (5, 8) for generating steam by recovering excess heat generated from the synthesizing processes. An exhaust heat utilizing section (200) includes steam turbines (9, 12, 17, 18, 21) driven with the steam generated from the exhaust heat recovery boilers (5, 8). An open circulation cooling water supply section (300) supplies cooling water for a plant, including water for cooling exhausts of the steam turbines, and includes a seawater desalination system (38, 39) for desalinating seawater by the evaporation method and supplying desalinated water to replenish the cooling water. The cooling water supplied from the open circulation cooling water supply section is used in condensing of the desalinated water produced by the seawater desalination system 38, 39.

FIG.1

