

Title (en)
EVAPORATION METHOD FOR THE PRODUCTION OF CLEAN DRINKING WATER AND HIGH-PERCENTAGE BRINE FROM UNTREATED WATER CONTAINING SALT

Title (de)
AUSDAMPFVERFAHREN ZUR HERSTELLUNG VON REINEM TRINKWASSER UND HOCHPROZENTIGER SOLE AUS SALZHALTIGEN ROHWÄSSERN

Title (fr)
PROCEDE D'EVAPORATION POUR LA PRODUCTION D'EAU POTABLE PURE ET DE SAUMURE CONCENTREE A PARTIR D'EAUX BRUTES SALINES

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Application
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Abstract (en)
[origin: WO02087722A1] The invention relates to an economical method and devices for obtaining distillate-quality drinking water and high-percentage brine containing varying amounts of salt. Combined with a thermal power generation process, the system also provides electric current with a fuel utilization rate of more than 85 %. The inventive method uses waste heat and works with an evaporation-saturated air circulation system over a temperature interval with recuperative pre-warming of untreated water. Said systems can consist of a very large number of evaporation modules and can therefore be adapted to all drinking water requirements. The evaporation modules work in up to 4 system pressure stages and can use waste heat from the higher ranking system pressure stages in the pressure stages disposed downstream therefrom. Heat consumption values of less than 10 kWh/m³ of drinking water can thus be obtained. The modular design can meet capacities of 3.0 -1000 m³/h drinking water using standard gas turbines/generator sets. Smaller amounts of drinking water can be obtained by using the waste heat from internal combustion engines.

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Cited by
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