

Title (en)
POWER PLANT WITH CO2 CAPTURE AND WATER TREATMENT PLANT

Title (de)
KRAFTWERK MIT CO2-AUFNAHME UND WASSERBEHANDLUNGSANLAGE

Title (fr)
CENTRALE ÉLECTRIQUE AVEC CAPTURE DU CO2 ET PURIFICATION D'EAU

Publication
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Application
EP 10714004 A 20100421

Priority

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Abstract (en)
[origin: EP2246531A1] A power plant for the generation of electrical energy comprises steam and/or gas turbines (2, 3, 4, 13) driven by fossil fuels and a CO2 capture system (20) for capturing CO2 gases from the flue gases that result from the combustion of the fossil fuels. It furthermore comprises a CO2 gas processing unit (GPU) for the compression and cooling of the captured CO2. A cooling circuit (24) of the gas processing unit (GPU) forms a closed loop that includes a heat exchanger (25) for the heating of brine, where this heat exchanger (25) is part of a water treatment system having a multi-stage flash distiller (MSF). In the closed loop (24) low-temperature waste heat from the CO2 gas processing unit (GPU) is utilized for the water treatment system. The overall power plant energy efficiency is thereby increased.

IPC 8 full level
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B01D 1/0058 (2013.01 - EP US); **B01D 1/26** (2013.01 - EP US); **C02F 1/048** (2013.01 - EP US); **C02F 1/16** (2013.01 - EP US); **F01K 13/00** (2013.01 - EP US); **F01K 23/10** (2013.01 - EP US); **Y02E 20/16** (2013.01 - EP US); **Y02E 20/32** (2013.01 - EP US); **Y02P 20/129** (2015.11 - EP US)

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