

Title (en)

COGENERATION TURBINES FOR POWER AND DESALINATION OF SEA WATER

Title (de)

KOGENERATIONSTURBINEN ZUR ENERGIEERZEUGUNG UND MEERWASSERENTSALZUNG

Title (fr)

TURBINES DE COGÉNÉRATION POUR PRODUCTION D'ÉLECTRICITÉ ET DESSALEMENT DE L'EAU DE MER

Publication

EP 4041686 A4 20240103 (EN)

Application

EP 20874807 A 20201006

Priority

- CA 3058596 A 20191011
- IB 2020059359 W 20201006

Abstract (en)

[origin: WO2021070041A1] By using the gas turbine and closed cycle gas/(air or nitrogen) turbine in cascade way we can get the required heat for the heat exchanger chamber (for adding heat) in the closed cycle gas turbine, by using the heat diverted with exhaust gases from the open cycle gas turbine. Also we can get the heat from nuclear plant instead the open cycle gas turbine if it is available. When we get the very hot air to the heat exchanger chamber (for cooling the air) after leave the turbine in the closed cycle gas/air turbine, we use the sea water in multi heat exchanger to cool the air and use the heat make desalination of the sea water, so at the end we can produce fresh water and electricity by the open and closed gas turbine same time.

IPC 8 full level

C02F 1/16 (2023.01); **C02F 1/04** (2023.01); **F01K 13/00** (2006.01); **F01K 15/00** (2006.01); **F02C 6/04** (2006.01); **F02C 6/18** (2006.01); **F02G 5/02** (2006.01); **F24S 20/40** (2018.01); **H02K 7/18** (2006.01); **C02F 103/08** (2006.01)

CPC (source: EP KR)

C02F 1/043 (2013.01 - KR); **C02F 1/048** (2013.01 - EP KR); **C02F 1/16** (2013.01 - EP KR); **F01K 13/00** (2013.01 - EP); **F01K 15/00** (2013.01 - EP); **F02C 1/04** (2013.01 - EP); **F02C 1/10** (2013.01 - EP); **F02C 6/18** (2013.01 - EP); **F24S 20/40** (2018.04 - KR); **C02F 2103/08** (2013.01 - EP KR); **C02F 2303/10** (2013.01 - EP KR); **F05D 2260/213** (2013.01 - EP); **F24S 20/40** (2018.04 - EP); **Y02A 20/124** (2017.12 - EP KR); **Y02A 20/142** (2017.12 - KR); **Y02E 10/46** (2013.01 - EP); **Y02E 20/14** (2013.01 - KR); **Y02W 10/30** (2015.05 - EP KR)

Citation (search report)

- [A] EP 1701006 A2 20060913 - TOSHIBA KK [JP]
- [A] EP 1481947 A1 20041201 - GEN ELECTRIC [US]
- [A] CN 104847428 A 20150819 - STATE GRID CORP CHINA, et al
- [A] US 2018187627 A1 20180705 - APTE RAJ [US], et al
- See references of WO 2021070041A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

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