

Title (en)  
FLUORINE GAS PRODUCTION METHOD AND FLUORINE GAS PRODUCTION DEVICE

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG VON FLUORGAS

Title (fr)  
PROCÉDÉ ET DISPOSITIF DE PRODUCTION DE GAZ FLUOR

Publication  
**EP 4083262 A1 20221102 (EN)**

Application  
**EP 20904686 A 20201211**

Priority  
• JP 2019238479 A 20191227  
• JP 2020046390 W 20201211

Abstract (en)  
Provided is a method for producing fluorine gas, capable of suppressing clogging of pipes and valves with mist. Fluorine gas is produced by a method including electrolyzing an electrolyte in an electrolytic cell, measuring the current efficiency of fluorine gas production in the electrolyzing, and sending a fluid generated in the inside of the electrolytic cell in the electrolyzing the electrolyte, from the inside to the outside of the electrolytic cell through a flow path. In the sending, the flow path in which the fluid flows is switched in accordance with the current efficiency measured in the measuring the current efficiency, such that the fluid is sent to a first flow path that sends the fluid from the inside of the electrolytic cell to a first outside when the current efficiency measured in the measuring the current efficiency is not less than a predetermined reference value, or the fluid is sent to a second flow path that sends the fluid from the inside of the electrolytic cell to a second outside when the current efficiency is less than the predetermined reference value. The predetermined reference value is a numerical value of 50% or more.

IPC 8 full level  
**C25B 1/24** (2021.01); **C25B 9/00** (2021.01); **C25B 11/04** (2021.01)

CPC (source: CN EP KR US)  
**C25B 1/245** (2013.01 - CN EP KR US); **C25B 1/50** (2021.01 - CN); **C25B 9/17** (2021.01 - EP US); **C25B 9/60** (2021.01 - CN KR); **C25B 9/70** (2021.01 - CN); **C25B 11/043** (2021.01 - EP KR US); **C25B 15/023** (2021.01 - CN EP KR US); **C25B 15/08** (2013.01 - KR)

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

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**US 2022228272 A1 20220721**; CN 113874554 A 20211231; CN 113874554 B 20240105; EP 4083262 A1 20221102; EP 4083262 A4 20240911; JP WO2021131818 A1 20210701; KR 20220065864 A 20220520; TW 202136585 A 20211001; TW I762106 B 20220421; WO 2021131818 A1 20210701

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**US 202017595964 A 20201211**; CN 202080038845 A 20201211; EP 20904686 A 20201211; JP 2020046390 W 20201211; JP 2021567256 A 20201211; KR 20227013542 A 20201211; TW 109145918 A 20201224