

Title (en)

METHOD AND SYSTEM FOR PRODUCING A GAS PRODUCT CONTAINING CARBON MONOXIDE

Title (de)

VERFAHREN UND ANLAGE ZUR HERSTELLUNG EINES KOHLENMONOXID ENTHALTENDEN GASPRODUKTS

Title (fr)

PROCÉDÉ ET INSTALLATION POUR LA PRÉPARATION D'UN PRODUIT GAZEUX CONTENANT DU MONOXYDE DE CARBONE

Publication

EP 3638828 A1 20200422 (DE)

Application

EP 18729868 A 20180530

Priority

- DE 102017005681 A 20170614
- EP 2018000280 W 20180530

Abstract (en)

[origin: WO2018228718A1] The invention relates to a method (100, 200) for producing a gas product (D) containing at least carbon monoxide, in which method at least carbon dioxide is subjected to an electrolysis process (10) in order to obtain a raw gas (A) containing at least carbon monoxide and carbon dioxide and the carbon dioxide contained in the raw gas (A) is partially or completely fed back to the electrolysis process (10), characterized in that the raw gas (A) is partially or completely subjected to an adsorption process (20) in order to obtain the gas product (D), which is enriched in carbon monoxide and depleted of carbon dioxide in comparison with the raw gas (A), and a residual mixture (E), which is depleted of carbon monoxide and enriched in carbon dioxide in comparison with the raw gas (A), and that the residual mixture (E) is at least partially subjected to a membrane separation process (30) in order to obtain a first gas mixture (B) as a retentate and a second gas mixture (H) as a permeate, the first gas mixture (B) at least partially being fed back to the adsorption process (20) together with the raw gas (A) or with the portion thereof subjected to the adsorption process (20), and the second gas mixture (H) at least partially being fed back to the electrolysis process (10). The invention further relates to a corresponding system.

IPC 8 full level

B01D 53/02 (2006.01); **B01D 53/22** (2006.01); **C01B 32/40** (2017.01); **C25B 9/23** (2021.01); **C25B 15/08** (2006.01)

CPC (source: EP US)

B01D 53/0462 (2013.01 - EP US); **B01D 53/047** (2013.01 - EP US); **B01D 53/229** (2013.01 - EP US); **C01B 32/40** (2017.07 - EP US); **C25B 1/00** (2013.01 - EP US); **C25B 15/08** (2013.01 - EP US); **B01D 53/226** (2013.01 - EP); **B01D 2256/16** (2013.01 - EP); **B01D 2256/20** (2013.01 - EP US); **B01D 2257/504** (2013.01 - EP US); **Y02C 20/40** (2020.08 - EP)

Citation (search report)

See references of WO 2018228718A1

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

DOCDB simple family (publication)

WO 2018228718 A1 20181220; CA 3065580 A1 20181220; CN 110730830 A 20200124; DE 102017005681 A1 20181220; EP 3638828 A1 20200422; JP 2020525641 A 20200827; US 2020165732 A1 20200528

DOCDB simple family (application)

EP 2018000280 W 20180530; CA 3065580 A 20180530; CN 201880037167 A 20180530; DE 102017005681 A 20170614; EP 18729868 A 20180530; JP 2019565914 A 20180530; US 201816621093 A 20180530