

Title (en)
MOLTEN SALT MEMBRANE ELECTROLYZER

Title (de)
MEMBRANELEKTROLYSEUR FÜR SALZSCHMELZEN

Title (fr)
ÉLECTROLYSEUR DE SELS FONDUS À MEMBRANE

Publication
EP 4004260 A4 20240124 (EN)

Application
EP 20844442 A 20200724

Priority
• CA 2020051021 W 20200724
• US 201962878444 P 20190725

Abstract (en)
[origin: WO2021012055A1] A molten salt, membrane electrolyzer apparatus may include an anolyte compartment containing a molten salt anolyte comprising primarily chloride salts and a lithium carbonate (Li₂CO₃) feed material. A first and second electrode assemblies each having respective anodes, cathode housings proximate the first anode within the anolyte compartment and in fluid contact with the molten salt anolyte and having a primary transfer portion comprising a porous membrane and cathodes positioned within the first catholyte compartment so that the primary transfer portion is disposed between respective anode and cathode. A power supply can be configured to apply an electric potential between the first anode and the first cathode that is sufficient to initiate electrolysis of lithium carbonate and is greater than the electric potential required to initiate LiCl electrolysis.

IPC 8 full level
C25C 3/02 (2006.01); **C25C 7/00** (2006.01); **C25C 7/02** (2006.01); **C25C 7/04** (2006.01); **C25C 7/06** (2006.01)

CPC (source: EP US)
C25C 3/02 (2013.01 - EP US); **C25C 7/005** (2013.01 - EP US); **C25C 7/025** (2013.01 - EP); **C25C 7/04** (2013.01 - EP US);
C25C 7/06 (2013.01 - EP)

Citation (search report)
• [YA] US 4988417 A 19910129 - DEYOUNG DAVID H [US]
• [YA] US 4089770 A 19780516 - LEMKE CHARLES H
• See also references of WO 2021012055A1

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)
WO 2021012055 A1 20210128; CA 3145506 A1 20210128; CN 114599820 A 20220607; EP 4004260 A1 20220601; EP 4004260 A4 20240124;
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