Title (en)

USING THE SOLID WASTE-QUICKLIME MEMBRANE SWQM PROCESS FOR THE PRODUCTION OF SODIUM HYDROXIDE

Title (de)

VERWENDUNG DES FESTSTOFFABFALL-BRANNTKALKMEMBRANVERFAHRENS (SWGM) FÜR DIE HERSTELLUNG VON NATRIUMHYDROXID

Title (fr)

UTILISATION DU PROCÉDÉ MEMBRANAIRE DÉCHETS SOLIDES-CHAUX VIVE (SWQM) POUR OBTENTION D'HYDROXYDE DE SODIUM

Publication

EP 2509919 A1 20121017 (EN)

Application

EP 09852000 A 20091209

Priority

IB 2009007713 W 20091209

Abstract (en)

[origin: WO2011070384A1] The proposed invention uses ion exchange technology to produce dilute caustic soda liquor from calcium hydroxide liquor $Ca(OH)_2$ followed by the reaction of carbon dioxide CO_2 with caustic soda to produce dilute sodium carbonate solution. Multiple reverse osmosis and acidic CO_2 sparging can concentrate the Na_2CO_3 liquor to 6-7%. The 6-7% liquor is treated with waste heat to produce 50% or solid Na_2CO_3. The 6-7% liquor can be treated with $Ca(OH)_2$ to produce 6-7% NaOH liquor then can be transformed to 50% or solid NaOH. The output of many industrial processes generates waste heat, brine water and CO_2 and the present invention combines these components in the production of solid Na_2CO_3, NaOH or their high % liquors. Availability of waste heat sources can lead to higher efficiency in Na_2CO_3 and NaOH production. The process is not electrochemical chloro alkali technology or Solvay process.

IPC 8 full level

C01D 1/04 (2006.01); **C01D 1/22** (2006.01); **C01D 7/00** (2006.01); **C02F 1/44** (2006.01)

CPC (source: EP KR US)

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Citation (search report)

See references of WO 2011070384A1

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