Title (en)

METHOD AND APPARATUS FOR SEQUESTERING CARBON DIOXIDE FROM A SPENT GAS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR SEQUESTRIERUNG VON KOHLENDIOXID AUS EINEM AUSGEGEBENEN GAS

Title (fr)

PROCÉDÉ ET APPAREIL POUR SÉQUESTRER LE DIOXYDE DE CARBONE CONTENU DANS UN GAZ USÉ

Publication

EP 2956406 A2 20151223 (EN)

Application

EP 13875010 A 20131125

Priority

• US 201313768331 A 20130215
• US 2013071559 W 20131125

Abstract (en)

[origin: WO2014126631A2] A method and apparatus for sequestering carbon dioxide from a waste gas and reusing it as a recycled gas without emissions concerns, including: given a gas source divided into a process gas and a waste gas: mixing the process gas with a hydrocarbon and feeding a resulting feed gas into a reformer for reforming the feed gas and forming a reducing gas; and feeding at least a portion of the waste gas into a carbon dioxide scrubber for removing at least some carbon dioxide from the waste gas and forming a carbon dioxide lean gas that is mixed with the reducing gas. Optionally, the method also includes feeding at least a portion of the waste gas into the carbon dioxide scrubber for removing at least some carbon dioxide from the waste gas and forming a fuel gas after the addition of a hydrocarbon that is fed into the reformer. Optionally, the gas source and the reducing gas are associated with a direct reduction process for converting iron oxide to metallic iron in a reduction furnace that utilizes the reducing gas, optionally after some modification, and produces the gas source.

IPC 8 full level

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