

Title (en)

DESULFURIZATION AND SULFONE REMOVAL USING A COKER

Title (de)

ENTSCHWEFELUNG UND SULFONENTFERNUNG MITHILFE EINER KOKEREI

Title (fr)

DÉSULFURISATION ET ÉLIMINATION DE SULFONE À L'AIDE D'UNE UNITÉ DE COKÉFACTION

Publication

**EP 3583190 A1 20191225 (EN)**

Application

**EP 18708309 A 20180220**

Priority

- US 201715437265 A 20170220
- US 2018018755 W 20180220

Abstract (en)

[origin: WO2018152512A1] Embodiments provide a method and apparatus for upgrading a hydrocarbon feedstock. According to at least one embodiment, the method includes (a) supplying a hydrocarbon feedstock to an oxidation reactor, where the hydrocarbon feedstock is oxidized in the presence of a catalyst under conditions sufficient to selectively oxidize sulfur compounds present in the hydrocarbon feedstock; (b) separating the hydrocarbons and the oxidized sulfur compounds by solvent extraction; (c) collecting a residue stream that includes the oxidized sulfur compounds; (d) supplying the residue stream to a coker to produce coker gases and solid coke; and (e) recycling at least a portion of the volatile component stream to the oxidation reactor to selectively oxidize sulfur compounds in the volatile component stream, the recycled portion of the volatile component stream comprising at least one of light coker gas oils and heavy coker gas oils.

IPC 8 full level

**C10G 53/14** (2006.01); **C10B 55/00** (2006.01); **C10G 21/16** (2006.01); **C10G 21/20** (2006.01); **C10G 21/22** (2006.01); **C10G 21/27** (2006.01); **C10G 21/28** (2006.01); **C10G 25/00** (2006.01); **C10G 27/04** (2006.01); **C10G 55/04** (2006.01)

CPC (source: EP KR)

**C10B 55/00** (2013.01 - EP KR); **C10G 21/16** (2013.01 - EP KR); **C10G 21/20** (2013.01 - EP KR); **C10G 21/22** (2013.01 - EP KR); **C10G 21/27** (2013.01 - EP KR); **C10G 21/28** (2013.01 - EP KR); **C10G 25/00** (2013.01 - EP KR); **C10G 27/04** (2013.01 - EP KR); **C10G 53/14** (2013.01 - EP KR); **C10G 55/04** (2013.01 - EP KR); **C10G 2300/202** (2013.01 - EP KR); **C10G 2300/44** (2013.01 - EP KR)

Citation (search report)

See references of WO 2018152512A1

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 2018152512 A1 20180823**; CN 110312779 A 20191008; CN 110312779 B 20210831; EP 3583190 A1 20191225; JP 2020509113 A 20200326; KR 20190115084 A 20191010; SG 11201907203T A 20190927

DOCDB simple family (application)

**US 2018018755 W 20180220**; CN 201880012378 A 20180220; EP 18708309 A 20180220; JP 2019544874 A 20180220; KR 20197027154 A 20180220; SG 11201907203T A 20180220