

Title (en)

METHOD AND DEVICE FOR REFINING WASTE PLASTIC PYROLYSIS OIL

Title (de)

VERFAHREN UND VORRICHTUNG ZUR RAFFINATION VON KUNSTSTOFFABFALLPYROLYSEÖL

Title (fr)

PROCÉDÉ ET DISPOSITIF POUR RAFFINER DE L'HUILE DE PYROLYSE DE PLASTIQUE RÉSIDUAIRE

Publication

EP 4368685 A1 20240515 (EN)

Application

EP 23207945 A 20231106

Priority

KR 20220151305 A 20221114

Abstract (en)

The present invention provides a method and device for refining waste plastic pyrolysis oil, the method including: (S1) subjecting a waste plastic pyrolysis oil feedstock to a heat treatment by charging the waste plastic pyrolysis oil feedstock into a rotary kiln reactor and increasing a temperature of the rotary kiln reactor; (S2) recovering a gas component from a product in the step (S1); (S3) separating a high boiling point wax component from the recovered gas component and re-supplying the separated high boiling point wax component to the rotary kiln reactor in the step (S1); and (S4) recovering refined oil from the gas component from which the high boiling point wax component is removed.

IPC 8 full level

C10G 1/10 (2006.01); **C10G 9/00** (2006.01)

CPC (source: EP KR US)

C10G 1/002 (2013.01 - KR US); **C10G 1/10** (2013.01 - EP KR US); **C10G 7/00** (2013.01 - KR); **C10G 9/00** (2013.01 - EP); **C10G 9/04** (2013.01 - US); **C10G 11/02** (2013.01 - KR); **C10G 55/04** (2013.01 - US); **C10G 55/06** (2013.01 - US); **C10G 70/043** (2013.01 - US); **C10G 73/02** (2013.01 - KR); **C10G 2300/1003** (2013.01 - KR US); **C10G 2300/202** (2013.01 - US); **C10G 2300/4006** (2013.01 - US); **C10G 2300/4081** (2013.01 - KR US)

Citation (search report)

- [X] KR 20200126707 A 20201109 - KOREA INST ENERGY RES [KR]
- [X] KR 20190055975 A 20190524 - KOREA INST ENERGY RES [KR]
- [A] KYONG-HWAN LEE ET AL: "Effect of heating rate on pyrolysis of low-grade pyrolytic oil", KOREAN JOURNAL OF CHEMICAL ENGINEERING, SPRINGER US, BOSTON, vol. 28, no. 6, 5 May 2011 (2011-05-05), pages 1468 - 1473, XP019912230, ISSN: 1975-7220, DOI: 10.1007/S11814-011-0065-X

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4368685 A1 20240515; CN 118028024 A 20240514; JP 2024071365 A 20240524; KR 20240070013 A 20240521; US 2024158705 A1 20240516

DOCDB simple family (application)

EP 23207945 A 20231106; CN 202311010535 A 20230811; JP 2023193141 A 20231113; KR 20220151305 A 20221114; US 202318388968 A 20231113