

Title (en)  
APPARATUS AND METHOD FOR THE CATALYTIC PRESSURE-FREE DEPOLYMERISATION

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR KATALYTISCH DRUCKLOSEN VERÖLUNG

Title (fr)  
DISPOSITIF ET PROCÉDÉ DE DÉPOLYMÉRISATION CATALYTIQUE SANS PRESSION

Publication  
**EP 3177698 B1 20190612 (DE)**

Application  
**EP 16702889 A 20160120**

Priority  
• DE 102015100938 A 20150122  
• EP 2016051079 W 20160120

Abstract (en)  
[origin: WO2016116484A1] The invention relates to a device for the catalytic pressure-less depolymerization of a hydrocarbon-containing starting material (15), comprising: at least one oil supply (12, 12-1, 12-2, 12-3) with oil (19); at least two mixing reactors, wherein a starting material (15) can be mixed and preheated in a first mixing reactor (13); and a separator (2). The invention further relates to a method for the catalytic pressure-less depolymerization of hydrocarbon-containing starting materials (15), having the following steps: finely commutating, mixing, and preheating a starting material (15) with oil (19) from an oil supply (12) in a first mixing reactor (13); transferring the mixed and preheated starting material (15) into a second mixing reactor (14); thermolyzing the oil/starting material mixture; and transferring the oil/starting material mixture into a separator (2) for depolymerizing the oil/starting material mixture in the separator (2). Heat is input into the carrier oil starting material by a friction-type turbine (11), and the middle distillate is distilled in the separator (2). The entire process is operated in an automatically temperature-controlled manner, and the used carrier oil residue mixture is recycled via a centrifuge (18). Only the solids are further processed, and the carrier oil (19) is returned to the circuit. Fig. 2

IPC 8 full level  
**C10G 1/08** (2006.01); **C10G 1/10** (2006.01)

CPC (source: EP)  
**C10G 1/083** (2013.01); **C10G 1/10** (2013.01)

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 2016116484 A1 20160728**; EP 3177698 A1 20170614; EP 3177698 B1 20190612; ES 2743792 T3 20200220; HR P20191552 T1 20200124

DOCDB simple family (application)  
**EP 2016051079 W 20160120**; EP 16702889 A 20160120; ES 16702889 T 20160120; HR P20191552 T 20190828