Title (en)

CONVERTING MIST FLOW TO ANNULAR FLOWV IN THERMAL CRACKING APPLICATION

Title (de)

VERFAHREN ZUR UMWANDLUNG VON NEBELFÜHRUNG ZU ANNULAREN ENTWEICHUNGEN IN THERMISCHEN KRACKVERFAHREN

Title (fr)

CONVERSION DE FLUX BROUILLARD EN FLUX ANNULAIRE POUR APPLICATION DE CRAQUAGE THERMIQUE

Publication

EP 1639060 A1 20060329 (EN)

Application

EP 03742280 A 20030627

Priority

- US 0320375 W 20030627
- US 18890102 A 20020703
- US 18846102 A 20020703
- US 18961802 A 20020703

Abstract (en)

[origin: WO2004005431A1] A process to increase the non-volatile removal efficiency in a flash drum in the steam cracking system. The gas flow from the convection section is converted from mist flow to annular flow before entering the flash drum to increase the removal efficiency. The conversion of gas flow from mist flow to annular flow is accomplished by subjecting the gas flow first to at least one expander and then to bends of various degrees and force the flow to change directions at least once. The change of gas flow from mist to annular helps coalesce fine liquid droplets and thus being removed from the vapor phase.

IPC 1-7

C10G 9/00

IPC 8 full level

C10G 9/00 (2006.01); **C10G 9/20** (2006.01); **C10G 9/36** (2006.01); **F28F 27/02** (2006.01)

CPC (source: EP KR)

C10G 9/00 (2013.01 - EP); **C10G 9/36** (2013.01 - EP KR); **F28F 9/0265** (2013.01 - EP); C10G 2300/1022 (2013.01 - EP); C10G 2300/1033 (2013.01 - EP); C10G 2300/104 (2013.01 - EP); C10G 2300/1044 (2013.01 - EP); C10G 2300/1051 (2013.01 - EP); C10G 2300/1055 (2013.01 - EP); C10G 2300/1059 (2013.01 - EP); C10G 2300/107 (2013.01 - EP); C10G 2300/1074 (2013.01 - EP); C10G 2300/1077 (2013.01 - EP); C10G 2300/301 (2013.01 - EP); C10G 2300/807 (2013.01 - EP); C10G 2400/20 (2013.01 - EP)

Citation (search report)

See references of WO 2004005431A1

Cited by

US10012417B2; US10458683B2; US11407950B2; WO2020190777A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2004005431 A1 20040115; AT E396244 T1 20080615; AU 2003247755 A1 20040123; AU 2003247756 A1 20040123; AU 2003281371 A1 20040123; CA 2489876 A1 20040115; CA 2489876 C 20110419; CA 2489888 A1 20040115; CA 2489888 C 20110712; CA 2490403 A1 20040115; CA 2490403 C 20110607; CN 100494318 C 20090603; CN 100587030 C 20100203; CN 1281715 C 20061025; CN 1665908 A 20050907; CN 1665909 A 20050907; CN 1665910 A 20050907; EP 1523534 A1 20050420; EP 1523534 B1 20170719; EP 1527151 A1 20050504; EP 1527151 B1 20180718; EP 1639060 A1 20060329; EP 1639060 B1 20080521; JP 2005531683 A 20051020; JP 2005531684 A 20051020; JP 2006508198 A 20060309; JP 4387301 B2 20091216; JP 4403071 B2 20100120; JP 5166674 B2 20130321; KR 100945121 B1 20100302; KR 100979027 B1 20100830; KR 20050016708 A 20050221; KR 20050016709 A 20050221; SG 177003 A1 20120130; WO 2004005432 A1 20040115; WO 2004005433 A1 20040115

DOCDB simple family (application)

US 0320375 W 20030627; AT 03742280 T 20030627; AU 2003247755 A 20030627; AU 2003247756 A 20030627; AU 2003281371 A 20030627; CA 2489876 A 20030627; CA 2489888 A 20030627; CA 2490403 A 20030627; CN 03815634 A 20030627; CN 03815733 A 20030627; CN 03815806 A 20030627; EP 03742280 A 20030627; EP 03763036 A 20030627; EP 03763037 A 20030627; JP 2004519667 A 20030627; JP 2004519668 A 20030627; JP 2004519669 A 20030627; KR 20047021682 A 20030627; KR 20047021683 A 20030627; SG 2006079370 A 20030627; US 0320377 W 20030627; US 0320378 W 20030627