

Title (en)  
METHOD AND RIBBED TUBE FOR THERMALLY CLEAVING HYDROCARBONS

Title (de)  
VERFAHREN UND RIPPENROHR ZUM THERMISCHEN SPALTEN VON KOHLENWASSERSTOFFEN

Title (fr)  
PROCEDE ET TUBE A AILETTES POUR SEPARATION THERMIQUE D'HYDROCARBURES

Publication  
**EP 1525289 A1 20050427 (DE)**

Application  
**EP 03725176 A 20030508**

Priority  
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• EP 0304827 W 20030508

Abstract (en)  
[origin: EP2298850A1] In a process to crack crude oil in the presence steam, super-heated gases pass through pipes with helical inner ribs which twist the rising gases, progressively forming a core zone with a primarily axial flow. The helical ribs impart a twist action at their outer margins. The gas speed is faster at the tub roots than at the rib tips. The ribs are set at an angle of 22.5-32.5[deg] w.r.t the pipe axis. The temperature varies within the pipe wall by less than 12[deg]C. The notional isothermal lines in the core are circular. The flow of twisting gases advances in the pipe at a speed of 1.8-2 m/s, representing 7-8% of the free cross sectional area. The ribs and their separation are symmetrical.

IPC 1-7  
**C10G 9/20**; **C22C 38/40**; **C22C 30/00**

IPC 8 full level  
**B01J 19/00** (2006.01); **C07C 4/02** (2006.01); **C10G 9/20** (2006.01); **C10G 9/36** (2006.01); **C22C 19/05** (2006.01); **C22C 38/40** (2006.01); **C22C 38/48** (2006.01); **F28F 1/40** (2006.01)

CPC (source: EP KR)  
**C10G 9/20** (2013.01 - EP KR); **C10G 9/24** (2013.01 - KR); **C22C 19/05** (2013.01 - EP); **C22C 38/40** (2013.01 - EP); **C22C 38/48** (2013.01 - EP); **F28F 1/40** (2013.01 - EP); **C10G 2300/807** (2013.01 - EP)

Cited by  
DE102016012907A1; DE102017003409A1; WO2018078030A1; DE102017003409B4; US11440106B2; WO2018185167A1; US11220635B2; EP3384981A1

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