

Title (en)  
FURNACE AND PROCESS FOR HYDROCARBON CRACKING

Publication  
**EP 0253633 B1 19921202 (EN)**

Application  
**EP 87306227 A 19870714**

Priority  
GB 8617214 A 19860715

Abstract (en)  
[origin: EP0253633A2] A heat exchanger, particularly for use in a thermal cracking furnace for hydrocarbons, comprises a pair of coaxial metal tubes (12, 14) defining an inner duct (11), and a ceramic block (13) defining an outer duct (10) coaxially disposed about the inner duct for substantially radiative heat transfer between the outer duct and the inner duct. The surface area per unit length of the outer wall of the outer duct increases continuously along at least a portion of the length of the outer duct, and the cross sectional area of the outer duct (10) reduces along its length, to provide an inwardly directed radiative heat flux from the outer wall which varies along the said portion of the length of the outer duct. The heat flux through the heat exchanger can thereby be maximised and short residence times achieved. The outer wall of the outer duct is formed of a ceramic which may be cast monolithically and has inwardly projecting ribs having a cross sectional area which increases continuously along the said portion of the length of the outer duct.

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**C10G 9/20**

IPC 8 full level  
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CPC (source: EP)  
**C10G 9/20** (2013.01)

Cited by  
EP1683850A1; US6675880B2; WO9533016A1; WO9533015A1; WO2017078893A1; US7279610B2; US8398846B2; WO2006078159A1; WO03062352A3

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