

Title (en)  
IMPROVED PROCESS AND CATALYST STRUCTURE EMPLOYING INTEGRAL HEAT EXCHANGE WITH OPTIONAL DOWNSTREAM FLAMEHOLDER

Title (de)  
VERBESSERTE VERFAHREN UND KATALYTISCHE, STRUKTUR, BENUTZEND INTEGRALEN WÄRMEAUSTAUSCH MIT WAHLWEISE VORGESCHALTETEM FLAMMENHALTER

Title (fr)  
PROCEDE ET STRUCTURE CATALYTIQUES AMELIORES ASSURANT UN ECHANGE THERMIQUE INTEGRAL AVEC EVENTUELLEMENT UNE FLAMME ENTRETENUE EN AVAL

Publication  
**EP 0745180 B1 20020403 (EN)**

Application  
**EP 95911772 A 19950228**

Priority

- US 9501989 W 19950228
- US 20527994 A 19940302
- US 37820695 A 19950125

Abstract (en)  
[origin: WO9523915A1] The invention is an improved catalyst structure and its use in highly exothermic processes like catalyst combustion. This improved catalyst structure employed integral heat exchange in an array of longitudinally disposed, adjacent reaction passage-ways or channels, which are either catalyst-coated (14) or catalyst-free (16), wherein the configuration of the catalyst-coated channels (14) differ from the non-catalyst channels (16) such that, when applied in exothermic reaction processes, such as catalyst combustion, the desired reaction is promoted in the catalytic channels (14) and substantially limited in the non-catalytic channels (16). The invention further comprises an improved reaction system and process for combustion of a fuel wherein catalytic combustion using a catalyst structure employing integral heat exchange, preferably the improved structures of the invention, affords a partially-combusted, gaseous product which is passed to a homogeneous combustion zone where complete combustion is promoted by means of a flameholder.

IPC 1-7  
**F01N 3/28**; **F23C 11/00**; **B01J 35/04**

IPC 8 full level  
**B01J 23/40** (2006.01); **B01J 35/04** (2006.01); **F01N 3/10** (2006.01); **F01N 3/28** (2006.01); **F23C 6/04** (2006.01); **F23C 9/00** (2006.01); **F23C 13/00** (2006.01); **F23D 11/40** (2006.01); **F23D 14/18** (2006.01)

CPC (source: EP)  
**F01N 3/28** (2013.01); **F01N 3/281** (2013.01); **F01N 3/2814** (2013.01); **F01N 3/2821** (2013.01); **F01N 3/2882** (2013.01); **F23C 6/045** (2013.01); **F23C 9/006** (2013.01); **F23C 13/00** (2013.01); **F01N 2240/02** (2013.01); **F01N 2330/321** (2013.01); **F01N 2330/323** (2013.01); **F01N 2330/42** (2013.01); **F23C 2900/13002** (2013.01)

Designated contracting state (EPC)  
AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 9523915 A1 19950908**; AT E215669 T1 20020415; AU 1921495 A 19950918; CA 2184752 A1 19950908; CN 1147288 A 19970409; DE 69526212 D1 20020508; DE 69526212 T2 20040325; EP 0745180 A1 19961204; EP 0745180 A4 19980218; EP 0745180 B1 20020403; JP 3705299 B2 20051012; JP H10501052 A 19980127

DOCDB simple family (application)  
**US 9501989 W 19950228**; AT 95911772 T 19950228; AU 1921495 A 19950228; CA 2184752 A 19950228; CN 95192518 A 19950228; DE 69526212 T 19950228; EP 95911772 A 19950228; JP 52292195 A 19950228