

Title (en)  
BURNING DEVICE FOR SOLID PARTICULATES IN INTERNAL-COMBUSTION ENGINE EXHAUST GASES

Publication  
**EP 0250829 B1 19890809 (DE)**

Application  
**EP 87107311 A 19870520**

Priority  
DE 3621914 A 19860630

Abstract (en)  
[origin: US4716725A] An apparatus for burning solid particles, in particular soot particles, in the exhaust gas of internal combustion engines comprising a combustion chamber and an ignition burner connected coaxially through an overflow opening. The ignition burner, to which fuel and combustion air are supplied, has a rotationally symmetrical glow element disposed centrally in a preparation chamber and has a glow plug disposed in a bulge of the preparation chamber. The combustion chamber includes an annular cup-like portion forming a hot combustion chamber that is open toward the overflow opening, and downstream of this hot combustion chamber has a plurality of labyrinthine annular conduits toward which a plunger tube extends centrally toward the combustion chamber, through which tube a flow of exhaust gas carrying the soot particles is directed into the hot combustion chamber. The flow of exhaust gas having the soot particles emerges into the hot combustion chamber through radial outlets transversely to the direction of extension of the ignition flame that is propagating through the overflow opening. The soot particles that are supplied are for the most part burned in the hot combustion chamber, and the remainder is burned in the labyrinthine conduits. The exhaust gas from the burner is carried away in a counter current to the exhaust gas laden with soot particles that is delivered to the plunger tube.

IPC 1-7  
**F01N 3/02**; **F01N 3/26**; **F01N 3/38**

IPC 8 full level  
**F01N 3/36** (2006.01); **F01N 3/025** (2006.01); **F01N 3/26** (2006.01); **F01N 3/38** (2006.01); **F01N 3/02** (2006.01)

CPC (source: EP US)  
**F01N 3/025** (2013.01 - EP US); **F01N 3/26** (2013.01 - EP US); **F01N 3/38** (2013.01 - EP US)

Cited by  
DE102009022040B4; WO2013120804A1

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**EP 0250829 A1 19880107**; **EP 0250829 B1 19890809**; DE 3621914 A1 19880107; DE 3760426 D1 19890914; JP S639615 A 19880116; US 4716725 A 19880105

DOCDB simple family (application)  
**EP 87107311 A 19870520**; DE 3621914 A 19860630; DE 3760426 T 19870520; JP 13195787 A 19870529; US 3019187 A 19870326