

Title (en)  
DEVICE AND METHOD FOR STABILIZING THE FLAME IN A BURNER

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR FLAMMENSTABILISIERUNG IN EINEM BRENNER

Title (fr)  
DISPOSITIF ET PROCEDE POUR STABILISER UNE FLAMME

Publication  
**EP 1730441 A1 20061213 (DE)**

Application  
**EP 05717130 A 20050323**

Priority  
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Abstract (en)  
[origin: US7467942B2] A device and a method for flame stabilization in a burner (10), includes a burner housing at least partially enclosing a burner volume, into which may be introduced via at least one fuel line, fuel, and via at least one air feed means, air, forming an air/fuel mixture spreading in a preferred flow direction, which may be ignited in a combustion chamber (11) connecting downstream of the burner housing to form a stationary flame (13). Upstream of the flame (13), a catalyst arrangement (1) is provided through which an air/pilot fuel mixture (4), separate from the air/fuel mixture, is flowable. The catalyst arrangement (1) has at least two catalyst stages which are located one behind the other in the through-flow direction, of which the catalyst stage (3) located upstream, the so-called POX-catalyst, is flow-washable by the air/pilot fuel mixture (4) with an air/pilot fuel mixture ratio  $\lambda < 1$ , by which catalyst stage (3) the air/pilot fuel mixture (4) is partially oxidized, and of which catalyst stages the downstream catalyst stage (8), the so-called FOX-catalyst, is flow-washable by a leaned air/pilot fuel mixture (7) with a mixture ratio  $\lambda > 1$ , by which the leaned air/pilot fuel mixture is completely oxidized forming an inert hot gas flow (9).

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