

Title (en)  
FUEL COMBUSTION DEVICE AND METHOD

Title (de)  
VORRICHTUNG UND VERFAHREN ZUM VERBRENNEN VON BRENNSTOFF

Title (fr)  
PROCEDE ET DISPOSITIF DE COMBUSTION D'UN COMBUSTIBLE

Publication  
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Application  
**EP 98907987 A 19980124**

Priority  
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Abstract (en)  
[origin: US6193502B1] The fuel is fed centrally into a fire tube (3), where it is mixed with combustion air in a combustion zone. The air exits through first and second air line nozzles (4 or 5) which are arranged in two directly adjoining rows (6, 7) and inclined in the direction of counterflow at an angle of 60° to the axis of the fire tube. The distance (x) between the fuel nozzle (9) and the openings of the first air line nozzles (4) is 0.70 times the diameter of the fire tube. In addition, the second air line nozzles (5) extend into the fire tube by a distance (y) which is 0.17 times the diameter of the fire tube. The total cross-section of the second air line nozzles (5) is 0.6 times that of the first air line nozzles (4). A highly turbulent toroidal eddy forms inside the fire tube (3) which generates a very homogeneous mixture across the cross-section of said fire tube (3). This results in lower NO<sub>x</sub> values and even temperature distribution already inside the fire tube.

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