

Title (en)

Burner head for premix combustion of a liquid fuel in an atmospheric combustion installation

Title (de)

Brennerkopf für die vormischartige Verbrennung eines flüssigen Brennstoffes in einer atmosphärischen Feuerungsanlage

Title (fr)

Tête de brûleur pour la combustion à mélange préalable d'un combustible liquide dans une installation de combustion atmosphérique

Publication

EP 0491079 B1 19961016 (DE)

Application

EP 90124798 A 19901219

Priority

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Abstract (en)

[origin: EP0491079A1] The burner head has a fuel lance (1) which runs through the burner head in its length and which ends on the downstream side with a fuel nozzle (2). Acting around this fuel lance (1) is a combustion air duct (4) which stops on the downstream side with a screen (3). Arranged around this first combustion air duct (4) is a further combustion air duct (6) which passes on the downstream side into an outlet, where a number of guide members (9) is situated, which impose a twist on at least the combustion air flowing through this duct. Also affected by this twist are the waste gases (10) flowing in through a tangential duct (11) in the region of the guide members (9), as a result of which there is good mixing between the two media. Acting on the downstream side of the fuel nozzle (2) is a premixing zone (8), adjoining the end of which is a vortex backflow zone (14). As far as this vortex backflow zone, the combustion chamber is provided with a premixing pipe (13), and subsequently a combustion pipe (19, 19a) acts, which has a greater cross-section in relation to the premixing pipe (13). At the transition of these two pipes, a vortex ring (17) is formed, which surrounds the vortex backflow zone (14) and ensures that the flame stabilisation is maintained, by the last-mentioned zone not being able to flatten. The initial ignition (18) of the mixture takes place in the vortex ring (17).

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CPC (source: EP)

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Cited by

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