

Title (en)
Burner with improved air-fuel mixing

Title (de)
BRENNER MIT VERBESSERTER LUFT-KRAFTSTOFF-MISCHUNG

Title (fr)
BRÛLEUR À MÉLANGE AIR-CARBURANT AMÉLIORÉ

Publication
EP 3617599 A1 20200304 (EN)

Application
EP 18192157 A 20180903

Priority
EP 18192157 A 20180903

Abstract (en)
Burner (01) for a combustor of a gas turbine, the burner (01) comprising in fluid flow sequence a swirler section (02) and a mixing section (12) and an outlet section (32) generally arranged around a burner axis (10). At the swirler section (02) air and fuel are introduced into the burner (01). The mixing section (12) is downstream of the swirler section (02) and comprises a tube (24) and defines a mixing volume (13) to mix the stream of air and fuel. The outlet section (32) comprises an annular bulge (34) and a burner outlet (33) therein to introduce the mixed stream of air and fuel into a combustion chamber. To enhance the mixing of air and fuel the mixing section (12) further comprises a sleeve (14) inside the tube (24) so that an annular channel (23) is defined between the sleeve (14) and the tube (24).

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Citation (applicant)
EP 2815184 B1 20180829 - SIEMENS AG [DE]

Citation (search report)
• [XYI] EP 3290804 A1 20180307 - SIEMENS AG [DE]
• [X] US 6019596 A 20000201 - KNOEPFEL HANS PETER [CH], et al
• [Y] US 3973395 A 19760810 - MARKOWSKI STANLEY J, et al
• [A] US 6210152 B1 20010403 - HAFFNER KEN [CH], et al
• [A] US 2004139748 A1 20040722 - DITTMANN ROLF [CH], et al
• [A] US 2002189257 A1 20021219 - STEINBACH CHRISTIAN [CH], et al

Designated contracting state (EPC)
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