

Title (en)

SOLID FUEL BURNER AND COMBUSTION DEVICE USING SAME

Title (de)

FESTBRENNSTOFFBRENNER UND VERBRENNUNGSVORRICHTUNG DAMIT

Title (fr)

BRÛLEUR À COMBUSTIBLE SOLIDE ET DISPOSITIF DE COMBUSTION UTILISANT CE DERNIER

Publication

EP 2667094 A1 20131127 (EN)

Application

EP 12736749 A 20120116

Priority

- JP 2011010544 A 20110121
- JP 2012000203 W 20120116

Abstract (en)

Provided are a solid fuel burner and a combustion device using the solid fuel burner. The solid fuel burner (44) comprises: a throat (6) provided to the outer periphery of a fuel nozzle (10) and injecting combustion gas into a furnace (40) ; a duct (2) for delivering the combustion gas to the throat (6), the duct (2) being provided with an inlet opening (8) into which the gas is introduced from a direction perpendicular to the central axis of the nozzle (10) and having a flow path formed so as to be bent at a right angle in the direction of the central axis of the nozzle (10); a damper (1) provided in the duct (2); and a differential pressure detection device (32) for detecting the difference between the pressure of the combustion gas flowing through the upstream portion of the duct (2) and the pressure of the combustion gas flowing through the downstream portion of the duct (2). The damper (1) is provided near and downstream of the inlet opening (8) of the duct (2). The upstream-side pressure detection point (31) of the differential pressure detection device (32) is provided in the region (90) of stagnation of the combustion gas, the region (90) being located on the wake side of the damper (1), and the downstream-side pressure detection point (30) is provided to the outer wall of the throat (6). The difference between the pressures at the detection points (31, 30) is converted into the flow rate of the combustion gas, and the flow rate of the combustion gas is adjusted by operating the damper (1). The solid fuel burner (44) has a simple configuration, is less susceptible to the influence of local drift, and can accurately measure and adjust the flow rate of the combustion gas for each burner.

IPC 8 full level

F23D 1/00 (2006.01); **F23C 5/08** (2006.01); **F23C 99/00** (2006.01); **F23N 3/02** (2006.01); **F23N 5/18** (2006.01)

CPC (source: EP KR US)

F23C 5/08 (2013.01 - EP KR US); **F23C 5/28** (2013.01 - EP US); **F23D 1/00** (2013.01 - EP KR US); **F23D 1/005** (2013.01 - EP US); **F23N 3/002** (2013.01 - EP US); **F23N 3/02** (2013.01 - EP KR US); **F23N 5/18** (2013.01 - KR); **F23N 5/184** (2013.01 - EP US); **F23N 2225/06** (2020.01 - EP US); **F23N 2235/06** (2020.01 - EP US)

Citation (search report)

See references of WO 2012098848A1

Cited by

EP2679899A4

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2667094 A1 20131127; JP 5490924 B2 20140514; JP WO2012098848 A1 20140609; KR 20140003558 A 20140109; US 2013291770 A1 20131107; WO 2012098848 A1 20120726

DOCDB simple family (application)

EP 12736749 A 20120116; JP 2012000203 W 20120116; JP 2012553607 A 20120116; KR 20137021961 A 20120116; US 201213979677 A 20120116