

BURNER DEVICE AND COMBUSTION APPARATUS

ABSTRACT

A powder burner device which can utilize a coarsely pulverized biomass powder as an industrial fuel and a combustion furnace which can be operated stably and efficiently by using the burner device are disclosed. The powder burner device 10 in this application comprises a burner tube 12, a fuel supply device 30 that supplies a biomass powder F to the burner tube 12, and a primary air supply pipe 14 connected to the side wall of the burner tube 12, wherein the biomass powder F supplied from the fuel supply device 14 falls within the burner tube 12 while being swirled by the primary air supplied from the primary air supply pipe and is discharged from a fuel discharge port 13 at a lower end of the burner tube 12. The powder burner device 10 further includes a heat insulating wall 17 having a conical inner wall 17a provided below the fuel discharge port 13.

Fig. 1