

Title (en)

Device of the boiler-type using a solid-liquid suspension of the coal-water-type as fuel.

Title (de)

Vorrichtung vom Kesseltyp in der eine Feststoffflüssigkeitssuspension vom Kohle-Wasser-Typ verwendet wird.

Title (fr)

Dispositif du type chaudière utilisant comme combustible une suspension solide-liquide du type charbon eau.

Publication

**EP 0107527 A1 19840502 (FR)**

Application

**EP 83401755 A 19830906**

Priority

FR 8215359 A 19820910

Abstract (en)

1. A boiler type device for the industrial production of thermal fluid such as water vapor, including : - a first combustion zone (5) of stretched cylindrical shape, of length L and diameter D, inclined with respect to the horizontal plane, activated with a rotating motion and equipped with a combustion organ (4). - a second combustion zone (12), distinct from the preceding one, called a solidification zone, of depth P, with l and height H, in which : a) a fraction of the calories contained in the combustion products is transferred by radiation to a receiving panel equipped with cold tubes (13) in which the fluid to be reheated is circulating, and in which b) non combustible particles, melted or dough-like and in suspension in the gaseous current are solidified, with the so-called solidification zone having in its lower part hopper for recovering slag, a third zone (17) for thermal exchange by convection via a tubuar network (18) equipped in its lower part with dust hoppers (21) and connected to the flushing systems (24) for gas and unwatering (25), characterized by the fact that the combustion organ (4) is a multi-fluid burner adapted to burn solid fuel suspended in a liquid, and that in the first combustion zone (5) the fuel is pulverized axially by an auxiliary fluid adapted to the fuel being used, and that the combustion zones shown (5, 12) and the solidification zone are associated via the following geometrical relationships expressed as a function of the parameter D :  $3.25 D \leq L$   $3.25 D \leq 2.25 D \leq 4 D$   $D \leq H$

Abstract (fr)

L'invention concerne un dispositif du type chaudière utilisant comme combustible une suspension solide-liquide. Le dispositif est caractérisé en ce qu'il comporte - une zone de combustion (5) cylindrique allongée, alimentée axialement, légèrement inclinée sur l'horizontale et animée d'un mouvement de rotation - une deuxième zone (12), dite de solidification, distincte de la précédente, dans laquelle le transfert thermique s'effectue par rayonnement vers les parois froides (13), et équipée à sa base d'une trémie (16) de récupération des scories - une troisième zone (17) d'échange thermique par convection.

IPC 1-7

**F23C 11/00**; **F22B 21/34**

IPC 8 full level

**F22B 21/34** (2006.01); **F23C 99/00** (2006.01); **F23G 7/00** (2006.01)

CPC (source: EP)

**F22B 21/343** (2013.01); **F23C 99/00** (2013.01); **F23G 7/001** (2013.01)

Citation (search report)

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- FR 2088628 A5 19720107 - HEURTEY SA, et al
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- DE 2418504 A1 19751030 - VORKAUF HEINRICH
- GB 714749 A 19540901 - BABCOCK & WILCOX LTD
- POWER, vol. 125, no. 12, décembre 1981, Concord, New Hampshire (US)

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