

Title (en)  
FORCED-CIRCULATION STEAM BOILER

Publication  
**EP 0054601 B2 19910828 (DE)**

Application  
**EP 81100601 A 19810128**

Priority  
CH 949780 A 19801223

Abstract (en)  
[origin: US4430962A] The vapor generator is constructed with an evaporator of vertical tubes about the combustion chamber and a final evaporator which is disposed between the economizer and at least one superheater within the flue of the generator. The first superheater tubes are vertically disposed and are welded to the tubes of the evaporator in a seamless manner and connect with the vapor outlet of the water separator.

IPC 1-7  
**F22B 29/06**; **F22B 29/12**

IPC 8 full level  
**F22B 35/00** (2006.01); **F22B 29/06** (2006.01); **F22B 29/12** (2006.01); **F22B 35/10** (2006.01)

CPC (source: EP US)  
**F22B 29/062** (2013.01 - EP US); **F22B 29/12** (2013.01 - EP US)

Cited by  
US5839396A; DE102010038883C5; CN109269138A; US6125634A; DE19504308C1; EP0197378A1; EP0104272A1; DE19528438A1; DE19528438C2; US5983639A; US9962664B2; WO9624803A1; WO2014048779A1

Designated contracting state (EPC)  
DE FR IT NL SE

DOCDB simple family (publication)  
**EP 0054601 A1 19820630**; **EP 0054601 B1 19840919**; **EP 0054601 B2 19910828**; AU 542220 B2 19850214; AU 7836481 A 19820701; CA 1176517 A 19841023; DE 3166099 D1 19841025; FI 68458 B 19850531; FI 68458 C 19850910; FI 813379 L 19820624; JP H0348402 B2 19910724; JP S57117705 A 19820722; US 4430962 A 19840214; YU 238181 A 19840229

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**EP 81100601 A 19810128**; AU 7836481 A 19811208; CA 390896 A 19811125; DE 3166099 T 19810128; FI 813379 A 19810128; JP 18901681 A 19811125; US 33137281 A 19811216; YU 238181 A 19811002