

12 **EUROPEAN PATENT APPLICATION**

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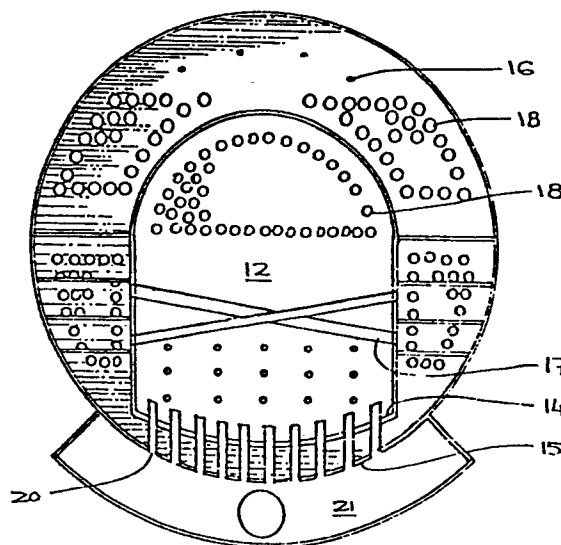
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54 **Fluidised-bed boilers and method of operating the same.**

57 This invention relates to boilers and in particular to fluidised bed boilers and burners, and to a method of controlling such boilers and provides a base plate (14) which is water cooled during operation by virtue of having the combustion chamber (12) located within the water jacket of the boiler. The invention provides a method and apparatus for reconditioning the bed, thereby reducing the necessity of topping up the bed with new sand or a similar carrier material as well as an accurate system of controls for the boiler. A vertical and a horizontal boiler incorporating the above mentioned features are described.



**Fig. 2.**



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# EUROPEAN SEARCH REPORT

0028458

Application number  
EP 80 30 3472

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. <sup>3</sup> )
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	BE - A - 398 976 (STOUFF) * Page 5, lines 10-35; figure 1 * --	1,2,4	F 22 B 31/00 F 23 C 11/02 F 22 B 35/00
	US - A - 1 443 496 (MORRIS) * Whole document * --	1	
	DE - A - 2 356 059 (RHEINSTAHL) * Page 7, claim 1; figures * --	4	
	FR - A - 2 021 007 (LAPORTE) * Page 2, lines 16-39; page 3, lines 1-27; page 4, lines 34-40; pages 5 and 6; figures * & GB - A - 1 292 442 --	4	TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>3</sup> )
	EP - A - 0 001 358 (EXXON) * Page 6, lines 26-33; figures * --	5,7,8	F 22 B F 23 C F 23 G B 01 J F 23 N
	US - A - 3 863 606 (BRYERS) * Column 4, lines 55-67; column 5, lines 1-8; figures * --	6,7	CATEGORY OF CITED DOCUMENTS
	FR - A - 2 394 015 (ENERGY RESOURCES) * Page 11, lines 14-32; figure 6 * & US - A - 4 130 071 -- ./.	9	X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
X	The present search report has been drawn up for all claims		& member of the same patent family. corresponding document
Place of search The Hague		Date of completion of the search 15-10-1981	Examiner V. GHEEL



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### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### ☒ LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1,2,3: Water cooled base plate.
2. Claim 4: Airflow control for standpipe.
3. Claims 5,6,7,8: Injection of auxiliary fuel.
4. Claims 9,10: Layer of coarse bodies.
5. Claims 11,12: Transfer to crusher.
6. Claims 13,14,15: Control method.

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	<u>US - A - 4 072 130 (ZENZ)</u> * Column 2, lines 30-37; column 3, lines 35-43 and 67-68 ; column 4, lines 1-36; figures *	6,7, 13	
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A	<u>DE - A - 2 439 095 (COAL IND.)</u> & GB - A - 1 426 579		
A	<u>FR - A - 2 189 116 (PLESSEY)</u> & GB - A - 1 433 482		TECHNICAL FIELDS SEARCHED (Int. Cl.)
A	<u>US - A - 3 907 674 (ROBERTS)</u>		
A	<u>US - A - 3 972 180 (VAN GELDER)</u>		
A	ENGINEERING, vol. 207, March 7, 1969, London, GB N.E. HARDY: "Research for coal and industry", pages 394-396.		
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