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(54) **Thermal enhancement.**

(57) Burner apparatus, comprising a tubular coolant jacket assembly (150',202), a tubular combustion chamber unit (224) disposed within said coolant jacket assembly, and ignition zone structure (164') at one end of said combustion chamber unit for flowing an ignited fuel-oxidant mixture into said combustion chamber unit, characterized in that said combustion chamber unit includes a monolithic tube (234) of refractory material having an inner surface (236) that defines a combustion zone, a reinforcing sleeve (230) surrounding and extending the length of said tube having its outer surface being spaced less than one millimeter from the inner surface (242) of said coolant jacket assembly in standby condition, providing residence time sufficient to complete combustion of the fuel-oxidant mixture within said combustion chamber unit such that the stream of combustion products discharged from the end of said combustion chamber unit remote from said ignition zone structure is essentially particulate free.

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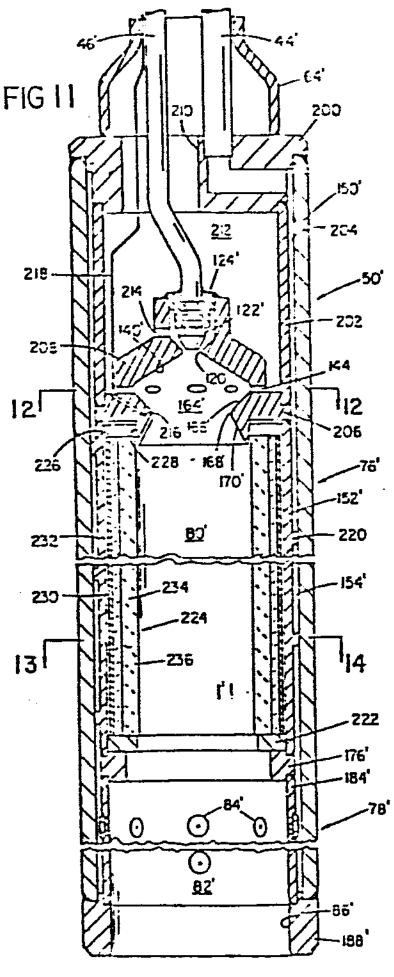
FIG 11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EUROPEAN SEARCH REPORT

0200195
Application number

EP 86 10 5864

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int Cl 4)
Y	US-A-3 595 316 (MYRICK) * Column 2, lines 26-74; figure 2 *	1,4	F 23 M 5/00 E 21 B 36/02
Y	US-A-3 724 447 (PARKHILL) * Column 2, lines 3-27; column 3, lines 1-16; figure *	1,4	
A		6	
A	US-A-3 669 079 (BLACK) * Column 3, lines 23-40; figure 2 *	1	
A	US-A-2 210 854 (HAGEN) * Page 2, left-hand column, lines 23-27; figure 1 *	1	TECHNICAL FIELDS SEARCHED (Int Cl 4)
A	FR-A-1 097 553 (GEWERK. KERAMCHEMIE) * Whole document *	3	F 23 M E 21 B F 24 H F 22 B
A	GB-A-2 020 403 (HEENAN) * Page 2, lines 31-36; figure 1 *	6	
A	US-A-4 078 613 (HAMRICK)		

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	28-10-1986	BORRELLI R.M.G.A.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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