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(54) **Method of supplying heat to high temperature process streams.**

(57) A petroleum process stream is heated by injecting an oxygen-containing gas into the stream to cause partial combustion and a rise in temperature. The process is particularly useful in delayed coking and visbreaking although it may also be used for other processes operating at elevated temperatures such as fluid catalytic cracking. It is of particular utility with processes such as delayed coking where fouling of the preheater tubes has been a problem, since the furnace may be operated at a lower temperature with the feed being brought to the final reaction temperature by combustion. Thermal efficiency is increased since heat transfer occurs directly and the injected oxidant and the combustion products help to strip volatile cracked products from the coking drum. Decreased fouling enables higher coker temperatures to be used, with consequent improvements in the yield of cracked products and a decrease in the yield of coke.

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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)												
X	US-A-2 630 378 (W.P. GEE) * Columns 1-2; claims 1-6 * ---	1,4,12, 13	C 10 B 55/00 C 10 G 9/38												
X	FR-A-1 026 393 (ASBOTH) * Whole document * ---	1,4,12, 13	C 10 G 9/00 C 10 G 11/22 C 10 G 11/18												
A	GB-A- 361 714 (ZOTOS) * whole document * ---	1,5,12, 13,14													
A	US-A-4 240 898 (GOMI) * Figure; abstract; columns 1,2; claims 1-5 * ---	1,2,13													
A	US-A-4 166 830 (GUTH et al.) ---														
A	US-A-2 813 824 (GORIN) ---														
A	GB-A- 912 445 (SHELL) ---														
D,A	US-A-2 775 549 (SHEA) -----														
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)												
			C 10 G C 10 B												
The present search report has been drawn up for all claims															
Place of search THE HAGUE		Date of completion of the search 28-03-1988	Examiner LO CONTE C.												
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