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11/804,362 18 May 2007 (18.05.2007) US(71) Applicant (for all designated States except US): **LUM-MUS TECHNOLOGY INC.** [US/US]; 1515 Broad Street, Bloomfield, NJ 07003-3096 (US).(72) Inventors: **PONZI, Peter, R.**; 174 Park Ave, Randolph, NJ 07869 (US). **BERTOLA, Francesco**; 22 Passaic Ave, Apt. 8B, Nutley, NJ 07110 (US). **GARTSIDE, Robert, J.**; 167 Colonial Rd, Summit, NJ 07901 (US).(74) Agents: **COVELLO, Diane, F.** et al.; Alix, Yale & Ristas, LLP, 750 Main Street - Suite 1400, Hartford, CT 06103-2721 (US).

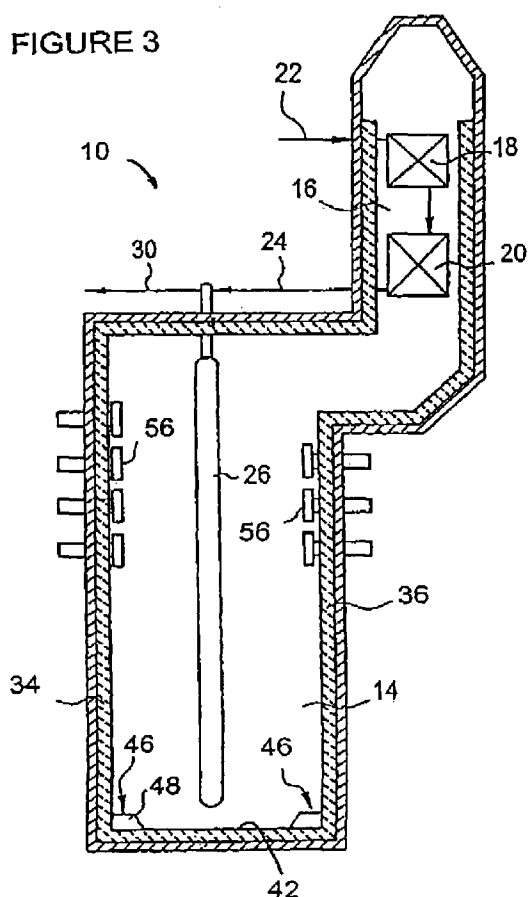
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(54) Title: HEATER AND METHOD OF OPERATION

FIGURE 3



(57) Abstract: A furnace (10), firing pattern and method of operating a heater that employs a combination of hearth burners (46) and wall burners (56) for the cracking of hydrocarbons is described. The firing pattern leads to improvements in the uniformity of the coil metal (26) temperatures and vertical heat flux profiles over the firebox elevation. The hearth burners (46) operate with a stoichiometric excess of air while the wall burners (56) operate with less than the stoichiometric amount of air.



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