

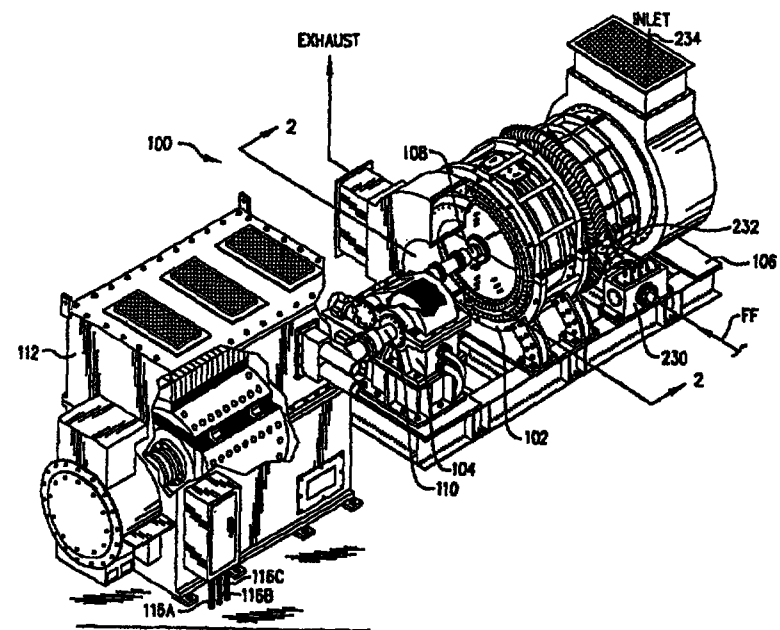
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| <p>(51) International Patent Classification <sup>6</sup> :<br/> <b>F02K 7/10</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p><b>A1</b></p> | <p>(11) International Publication Number: <b>WO 98/27330</b><br/>         (43) International Publication Date: <b>25 June 1998 (25.06.98)</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>(21) International Application Number: <b>PCT/US97/23351</b><br/>         (22) International Filing Date: <b>16 December 1997 (16.12.97)</b><br/>         (30) Priority Data:<br/>                 <b>60/028,311</b>                      <b>16 December 1996 (16.12.96)</b>      <b>US</b><br/>         (71)(72) Applicant and Inventor: <b>LAWLOR, Shawn, P. [US/US];</b><br/>                 <b>EM Power, Inc., Suite W190, 11808 Northup Way, Belle-</b><br/>                 <b>vue, WA 98005 (US).</b><br/>         (74) Agent: <b>GOODLOE, R., Reams, Jr., Suite 3, 10725, S.E. 256th</b><br/>                 <b>Street, Kent, WA 98031 (US).</b></p> |                  | <p>(81) Designated States: <b>AL, AM, AT, AU, AZ, BA, BB, BG, BR,</b><br/> <b>BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE,</b><br/> <b>GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,</b><br/> <b>LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ,</b><br/> <b>PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,</b><br/> <b>UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM,</b><br/> <b>KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ,</b><br/> <b>BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,</b><br/> <b>CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,</b><br/> <b>PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN,</b><br/> <b>ML, MR, NE, SN, TD, TG).</b></p> <p><b>Published</b><br/> <i>With international search report.</i><br/> <i>Before the expiration of the time limit for amending the</i><br/> <i>claims and to be republished in the event of the receipt of</i><br/> <i>amendments.</i></p> |
| <p>(54) Title: <b>RAMJET ENGINE FOR POWER GENERATION</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|  <p>The diagram shows a cross-sectional view of a ramjet engine power generator (100). It features a central shaft (110) connected to a generator (102). The engine has an inlet (234) at the top, an exhaust (2) at the front, and various internal components like fuel injectors (108, 110, 112, 114, 116, 118) and a combustion chamber (104). The engine is mounted on a base (106) with a fuel filter (FF) and a fuel pump (230). The entire assembly is housed in a casing (100).</p>                                                                                  |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>(57) Abstract</p> <p>A ramjet engine power generator (100) having supersonic ramjets (U) has partially shrouded ramjet inlets. Fuel is oxidized in the ramjets to produce thrust and rotate a shaft (110). Efficient mixing of the oxidant and fuel prior to entry into the ramjet combustor, and the short residence times in the combustion chamber minimize the formation of NO<sub>x</sub>.</p>                                                                                                                                                                                                                                                            |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |