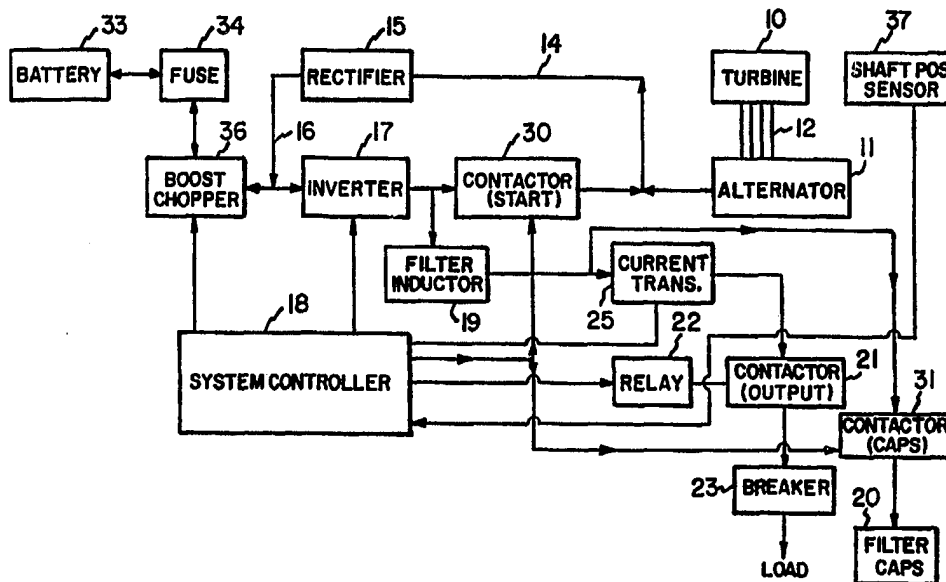




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<p>(21) International Application Number: PCT/US97/22405 (22) International Filing Date: 3 December 1997 (03.12.97) (30) Priority Data: 60/032,149 3 December 1996 (03.12.96) US (71) Applicant (for all designated States except US): ELLIOTT ENERGY SYSTEMS, INC. [US/US]; 2901 S.E. Monroe Street, Stuart, FL 34997 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): GUPTA, Suresh, E. [IN/US]; 3351 Rossmoor Way, Los Alamitos, CA 90720 (US). BHARGAVA, Brij [US/US]; 4596 Sierra Madre, Santa Barbara, CA 93110 (US). BURNHAM, Douglas, R. [US/US]; P.O. Box 537, Stuart, FL 34995 (US). TEETS, J., Michael [US/US]; 5225 Inkwood Drive, Hobe Sound, FL 33455 (US). TEETS, Jon, W. [US/US]; 7556 E. Sweetwater Avenue, Scottsdale, AZ 85260 (US). (74) Agents: BYRNE, Richard, L. et al.; Webb Ziesenheim Bruening Logsdon Orkin &amp; Hanson, P.C., 700 Koppers Building, 436 Seventh Avenue, Pittsburgh, PA 15219-1818 (US).</p>		<p>(81) Designated States: AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 15 October 1998 (15.10.98)</p>

(54) Title: ELECTRICAL SYSTEM FOR TURBINE/ALTERNATOR ON COMMON SHAFT



(57) Abstract

An electrical system (1) for a turbine (10)/alternator (1) comprising a gas driven turbine (10) and permanent alternator (3) rotating on a common shaft comprised of an inverter circuit (17) connectable either to an ac output circuit or the stator winding of the alternator (3). A control circuit during a start up mode switches the inverter circuit to the stator winding of the alternator (3) and during a power out mode switches the inverter circuit (17) to the ac output circuit. Thus, during that start up mode, the alternator (11) functions as a motor to raise the speed of the turbine (10) to a safe ignition speed and in the power out mode the electrical system (1) outputs to the ac output circuit, k electrical power having a frequency unrelated to the rotational speed of the alternator (3).

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**INTERNATIONAL SEARCH REPORT**

International application No.  
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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) :HO2P 5/20  
US CL : 318/144

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 318/144,146,140,148,157

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
NONE

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,E	US 5,714,851 A (ANTONY ET AL.) 03 FEBRUARY 1998 (03.02.98) ENTIRE DOCUMENT	1-18
A	US 5,428,275 A (CARR ET AL.) 27 JUNE 1995 (27.06.95) ENTIRE DOCUMENT	1-18
A	US 5,119,071 A (TAKEZAWA ET AL) 02 JUNE 1992 (02.06.92) SEE ENTIRE DOCUMENT	1-18

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