Title (en)

ELECTRIC ARC MONITORING SYSTEMS

Title (de)

ÜBERPRÜFUNGSSYSTEM FÜR ELEKTRO-LICHTBOGEN

Title (fr)

SYSTEMES DE SURVEILLANCE DES ARCS ELECTRIQUES

Publication

EP 1004031 A4 20041027 (EN)

Application

EP 98943182 A 19980810

Priority

- US 9816521 W 19980810
- US 9714497 W 19970814

Abstract (en)

[origin: WO9909422A1] Electric arc monitoring is effected by exploiting the discovery that electric arcs are fractal phenomena in that all essential information that signifies "arc" is contained in each fractal subset. These fractal subsets are logarithmically distributed over the arc spectrum. Monitoring of arcs is most advantageously effected on a fractal subset (16) of low logarithmic order where the amplitude is higher pursuant to the 1/f characteristic of electric arcs, where cross-induction among neighboring circuits is lower, and where travel between the arc (12) and the arc signature pickup (23) is longer than at the high frequencies customary for electric arc detection. Fractal subset transformation (17) reduces the danger of false alarms. Arc signature portions may be processed in out of phase paths (242, 342) or treated as modulated carriers (42) for monitoring. Aircraft may be equipped with spark monitoring systems (80) that record (82-86) occurence of dangerous sparking at different locations (92-96) aboard the aircraft (81).

IPC 1-7

G01R 23/00; H02H 1/00; G01R 31/02; G01R 31/00

IPC 8 full level

G01R 31/02 (2006.01); **B23K 9/095** (2006.01); **G01R 23/18** (2006.01); **G01R 29/00** (2006.01); **G01R 29/08** (2006.01); **H01T 1/12** (2006.01); **H01T 15/00** (2006.01)

CPC (source: EP)

G01R 23/18 (2013.01); **G01R 29/0842** (2013.01)

Citation (search report)

- [X] US 5185687 A 19930209 - BEIHOFF BRUCE C [US], et al
- See references of WO 9909422A1

Designated contracting state (EPC)

CH DE FR GB LI NL SE

DOCDB simple family (publication)

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US 9816521 W 19980810; AU 4072197 A 19970814; AU 9103198 A 19980810; CA 2298789 A 19970814; EP 97938382 A 19970814; EP 98943182 A 19980810; JP 2000510035 A 19970814; US 9714497 W 19970814