

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 13-44020- -7	FECHA: 2015-05-16 23:22:18
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 1 REGISTRO/DEPOSITO/CONCESION/DEPOSITO
TRA: 2 PATENTES DE INVENCION	FOLIOS: 5
ACT: 430 REQUERSOLICITA	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
LAURA MARCELA MANZANO JIMENEZ

Asunto: Radicación: 13-44020- -7
 Trámite: 2
 Evento: 1
 Actuación: 430
 Oficio: 5302
 Folios: 5

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional	X				
Vía PCT (Fase Nacional)		Capítulo I		Capítulo II	
No. Solicitud Internacional					
Fecha de Presentación Internacional					

Como resultado del examen de fondo realizado, con fundamento en el Artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se comunica:

1 . Documentos estudiados

Descripción:	Rad. N° 13-044020-00000-0000	05/Marzo/2013
Reivindicaciones:	Rad. N° 13-044020-00000-0000	05/Marzo/2013
Dibujos:	Rad. N° 13-044020-00000-0000	05/Marzo/2013

2. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto, se estudiarán las reivindicaciones 1 a 12.

Título de la solicitud: “Método y sistema para la detección y diagnóstico de fallas en máquinas eléctricas en operación” (ver página 1 del radicado N° 13-044020-00000-0000).

El problema planteado en esta solicitud consiste en la necesidad de suministrar un método y un sistema para la detección de fallas dentro de máquinas eléctricas, especialmente fallas eléctricas en generadores rotativos eléctricos, que permita

establecer fallas de componentes de tipo resistivo, capacitivo e inductivo cuando la máquina se encuentre en operación; evitando de esta manera, la inyección de señales externas que pueden ocasionar daños al sistema eléctrico de la máquina y la parada de la misma.

Para resolver este problema técnico, la solicitud en estudio proporciona un método para la detección de fallas en máquinas eléctricas en operación, que comprende los pasos de: obtener simultáneamente una señal de corriente y una señal de voltaje; emular una falla eléctrica y obtener simultáneamente una señal de corriente y una señal de voltaje asociadas a una condición de falla emulada; sensibilizar las señales obtenidas para detectar cambios en las señales de corriente y de voltaje; definir un vector de corriente, un vector de voltaje un vector de corriente emulada y un vector de voltaje emulado; identificar variaciones de los componentes de los vectores para los vectores obtenidos con los vectores emulados; asociar las variaciones y comparaciones con los componentes de los vectores y determinar la presencia o ausencia de un tipo de falla en la máquina. Así mismo, se proporciona un sistema para la detección de fallas en máquinas eléctricas que incluye; un módulo para obtener una señales; un módulo para la emulación de fallas; un módulo de sensibilización; una unidad de memoria y un módulo de procesamiento, análisis y reporte.

El objeto de la presente solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): G01R 33/00.

3. De la solicitud de patente

Reivindicaciones (Art 30 D 486, Art 22 PCT)

Las reivindicaciones 1, 2 y 8 no son claras porque el término “*al menos*” es impreciso, por lo cual no permite distinguir la invención del estado de la técnica. Se sugiere sustituirlo por un término preciso o un rango concreto.

Las reivindicaciones 1, 2 y 8 a 12 no son claras porque los términos “*sensibilizar*”, “*módulo*”, “*módulo de sensibilización*”, “*módulo de procesamiento*”, “*componentes electrónicos*” son generales, por lo tanto no permiten establecer la diferencia y el aporte realizado por la invención frente al estado de la técnica.

Las reivindicaciones 2, 4, 5, 8 y 12 no son claras porque caracterizan la invención por sus resultados a obtener así, “*para detectar las señales asociadas a condiciones de falla*”, “*donde dicho método puede ser usado para las señales de voltaje y corriente en condición de operación de la máquina y para la condición de falla emulada*”, “*donde las variaciones de las componentes de los vectores $[X]$, $[X^*]$, y $[Y]$, $[Y^*]$ para los valores de los niveles de AC y DC determinan el tipo de falla*”, “*para la obtención de señales de corriente (I_f) y voltaje (V_f)*”, “*para la emulación de fallas en la máquina eléctrica*”, “*para la detectar cambios en las señales de corriente (I_f y I_f^*) y voltaje (V_f y V_f^*)*”, “*asociados al menos a un tipo de falla en la maquina*”, “*para el almacenamiento de datos y el procesamiento de las señales*”, “*de presencia o ausencia de algún tipo de falla en la máquina eléctrica*”, “*para la separación sucesiva de los niveles de DC y AC de las señales de voltaje y corriente, y amplificación de las sub señales resultantes*” lo cual no es permitido ya que equivaldría a definir el problema técnico a resolver y el alcance de la reivindicación incluiría no sólo la solución propuesta por el solicitante, sino todas las alternativas presentes o futuras que lleguen a ese resultado. Se sugiere reemplazarlo por las características esenciales estructurales que contribuyen a la obtención de ese efecto.

Se le sugiere a las solicitantes que indiquen al frente de la característica o del elemento, el número de referencia guardando correspondencia con el capítulo descriptivo, las gráficas o dibujos y dicho capítulo reivindicatorio, con el objetivo de comprender mejor la invención al momento de hacer el análisis y distinguir los elementos de dicha invención.

Se recuerda a las solicitantes que las reivindicaciones son las características técnicas esenciales de una invención para las cuales se reclama la protección legal mediante la solicitud de patente. Para el caso de producto, estas deben contener todas las características técnicas de carácter tangible (partes mecánicas, eléctricas, electrónicas y su relación o conexión), las cuales le permitan obtener los usos, resultados o funcionamiento deseado, pueden contener si es necesario referencias de los dibujos para ser más claras, se permite la presencia de signos de referencia entre paréntesis después de la característica mencionada en la reivindicación; para un procedimiento, estas deben divulgar los pasos necesarios para obtener un producto y/o una transformación de un estado inicial, en el caso de invenciones implementadas por computador, los pasos deben estar vinculados con una materia técnica tangible, la cual debe ser específica para el desarrollo de dicho procedimiento, y que resuelva el problema técnico propuesto por la solicitud.

Por lo anterior, el capítulo reivindicatorio de la solicitud en estudio no cumple con el requisito de claridad acuerdo con el artículo 30 de la Decisión 486. En consecuencia, las solicitantes deberán presentar un nuevo capítulo reivindicatorio, donde se hayan modificado las objeciones anteriormente citadas; dichas modificaciones no deben ampliar el objeto inicialmente presentado por la presente solicitud.

4. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de presentación de la solicitud de patente nacional: marzo 05 de 2013 y se encontró el siguiente documento que anticipa el objeto de esta solicitud:

Ítem	Documento	Título	Fecha de Publicación
D1	US 4,050,017	"Sequence component tester "	20/Septiembre/1977

El documento D1¹ divulga los probadores de componentes eléctricos y más específicamente a un puente controlado digitalmente para probar rápidamente una pluralidad de tipos de componentes eléctricos y su secuencia de presentación (Pág. 24, Col. 1, líneas 6 a 10).

5. Examen de Patentabilidad (Art 14 D486)

Novedad (Art 16 D486)

La reivindicación 8 consiste en *"Un sistema para la detección en máquinas eléctricas en operación, caracterizado porque comprende.*

a. un módulo para la obtención de señales de corriente (If) y voltaje (Vf);

b. un módulo para la emulación de fallas en la máquina eléctrica..." (Ver página 28 del radicado N° 13-044020-00000-0000).

1 <https://docs.google.com/viewer?url=patentimages.storage.googleapis.com/pdfs/US4050017.pdf>

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Características esenciales	D1
Un módulo para la obtención de señales.	Un conjunto de sondas que hacen contacto eléctrico con cada cable para completar un circuito de prueba. Las sondas, ubicadas en la posición indicada como estación de prueba (40) (Pág. 26, Col. 5, líneas 6 a 9).
Un módulo para la emulación.	Medios para generar una señal de referencia de tensión fija y una señal de prueba de tensión variable (Pág. 37, Col. 28, líneas 49 y 50).
Un módulo de sensibilización.	Medios para comparar la señal de salida en la unión entre dichas patas de dicho puente con un valor de tensión predeterminado (Pág. 38, Col. 29, líneas 3 a 5).
Una unidad de memoria.	La unidad de procesamiento central (50) utiliza una memoria de computador (Pág. 26, Col. 6, líneas 25 y 26).
Un módulo de procesamiento análisis y reporte.	Un procesador (ordenador), una caja de entradas/salidas (I/O Box), un teletipo, una fuente y el cable de interfaz comprenden la unidad central de procesamiento (CPU) (50) (Pág. 26, Col. 5, líneas 47 a 49).

De acuerdo con la tabla anterior, las características esenciales del sistema de la reivindicación 1 habían sido divulgadas previamente en el documento D1, por lo tanto, la materia reivindicada no es nueva.

Por su parte, la reivindicación dependiente 12 no menciona alguna característica que haga nuevo el sistema de la reivindicación 1, debido a que, divulga las mismas características técnicas de la reclamación independiente o se encuentra redactada en términos de usos, resultados y/o características no técnicas. Por lo tanto, no se considera nueva.

6. Conclusión

Los requisitos de Patentabilidad de la presente solicitud están afectados así:

Ítem	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	US 4,050,017	8 y 12	Novedad/Nivel Inventivo

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir del día siguiente de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única No. 10 de 2001.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-05-19

Elaboró: Diego Gonzalez Castillo
Revisó: Angelica Maria Ramirez

DiegoG

Search history

Search 1: TAC=(FAULT~ AND ELECTRICAL~ AND MACHINES~ AND VOLTAGE~ AND CURRENT~ AND VECTOR~) (Results 51)
Search 2: TAC=(FAULT~ AND ELECTRICAL~ AND MACHINES~ AND VOLTAGE~ AND CURRENT~ AND VECTOR~ AND AC~ AND DC~) (Results 13)
Search 3: TAC=(FAULT~ AND ELECTRICAL~ AND MACHINES~ AND VOLTAGE~ AND CURRENT~ AND VECTOR~) AND IC=(G01R) (Results 14)
Search 4: TAC=(FAULT AND ELECTRICAL AND MACHINES AND VOLTAGE AND CURRENT AND VECTOR AND AC AND DC) (Results 3)
Search 5: TAC=(FAULT~ AND ELECTRICAL~ AND MACHINES~ AND VOLTAGE~ AND CURRENT~ AND VECTOR~ AND EMULATE~) (Results 3)
Search 6: TAC=(MODULE~ AND ISOLATED~ AND MEASUREMENT~ AND PROBES~ AND EMULAT* AND AWARENESS~ AND MEMORY~ AND PROCES*) (Results 0)
Search 7: TAC=(MODULE~ AND ISOLATED~ AND MEASUREMENT~ AND PROBES~ AND EMULAT* AND MEMORY~ AND PROCES*) (Results 8)
Search 8: TAC=(MODULE~ AND ISOLATED~ AND MEASUREMENT~ AND PROBES~ AND EMULAT* AND MEMORY~ AND PROCES*) AND IC=(G01R) (Results 4)
Search 9: TAC=(MODULE~ AND CURRENT~ AND VOLTAGE~ AND EMULAT* AND SIMULAT* AND MEMORY~ AND UNIT~ AND PROCESS*) (Results 24)
Search 10: TAC=(MODULE~ AND CURRENT~ AND VOLTAGE~ AND EMULAT* AND SIMULAT* AND MEMORY~ AND UNIT~ AND PROCESS*) AND IC=(G01R) (Results 5)
Search 11: TAC=(MODULE~ AND CURRENT~ AND VOLTAGE~ AND EMULAT* AND SIMULAT* AND MEMORY~ AND UNIT~ AND PROCESS* AND ELECTRIC* AND MOTOR~) (Results 5)

Title: STATE AND TOPOLOGY PROCESSOR

Abstract: Source: US2009125158A A State and Topology Processor (STP) may be communicatively coupled to one or more intelligent electronic devices (IEDs) communicatively coupled to a **electrical** power system to obtain one or more **current** measurements, **voltage** measurements, and dynamic topology data therefrom. The STP may receive the measurement data and may determine a **current** topology and a **voltage** topology therefrom. A **current** processor may use the **current** topology and the **current** measurements to refine the measurements, perform KCL, unbalance, symmetrical component, and consistency checks on the **electrical** power system. The **voltage** processor may use the **voltage** topology and the **voltage** measurements to perform similar checks on the **electrical** power system. One or more alarms may be generated responsive to the checks. The data may be displayed to a user in a display of a human **machine** interface and/or may be transmitted to a user programmable task module, and/or an external control unit.

Classifications:

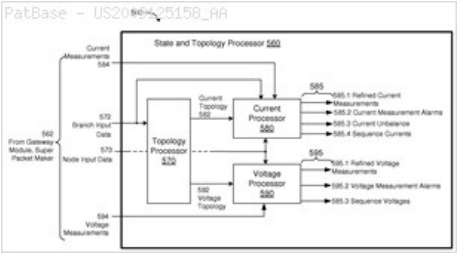
International (IPC 8-9): G01R21/06 G05D3/12 G05F1/14 G06F1/26 G06F1/28 G06F19/00 G06F3/048 H02H3/00 H02H3/32 H02H7/22 H02H7/45 H02J13/00 H02J3/00 (Advanced/Invention);

G05D3/12 G06F3/048 H02H3/00 (Core/Invention)

CPC: H02J3/1878 G01R19/2513 H02J3/46 H02P13/06 Y02E40/30 Y02E60/728 Y04S10/265 H02H7/261 H02H3/30 H02H7/22

European: G01R19/25D H02H3/30 H02H7/22 H02H7/26B H02J3/18F H02J3/46 H02P13/06 S01R19/25D T02H3/30 Y02E40/30 Y02E60/72N2 Y04S10/26B

US: 361/36 361/60 361/64 361/64P 361/87 361/93.2 700/286 700/286S 700/292 700/292S 700/293 700/293P 700/297 700/297S 700/298 700/298S 702/60 702/60P 715/734 715/772 715/772S



Family:

Publication number	Publication date	Application number	Application date
CA2736044 AA	20100325	CA20092736044	20090918
CA2736044 C	20131126	CA20092736044	20090918
CA2786242 AA	20110804	CA20102786242	20101209
CA2786242 C	20140211	CA20102786242	20101209
MX2011002467 A1	20110405	MX20110002467	20110304
MX2012008040 A1	20120801	MX20120008040	20120710
US2009125158 AA	20090514	US20080239678	20080926
US2010002348 AA	20100107	US20090562861	20090918
US2010125373 AA	20100520	US20100695778	20100128
US2011004425 AA	20110106	US20100881240	20100914
US7856327 BB	20101221	US20080239678	20080926
US8112235 BB	20120207	US20100881240	20100914
US8321162 BB	20121127	US20100695778	20100128
US8405944 BB	20130326	US20090562861	20090918
WO09048763 A2	20090416	WO2008US78246	20080930
WO09048763 A3	20091230	WO2008US78246	20080930
WO10033839 A1	20100325	WO2009US57533	20090918
WO11093952 A1	20110804	WO2010US59734	20101209

Priority:

US20070978711P	20071009	US20080098267P	20080919	US20080239678	20080926
US20090562861	20090918	US20100695778	20100128	WO2009US57533	20090918
US20100881240	20100914	WO2010US59734	20101209		

Assignee(s): (std): DONOLO MARCOS A ; FISCHER NORMANN ; GUZMAN CAILLAS ARMANDO ; GUZMAN CASILLAS ARMANDO ; LABUSCHAGNE CASPER A ; SCHWEITZER EDMUND O III ; SCHWEITZER ENGINEERING LAB INC ; SCHWEITZER III EDMUND O ; SCHWEITZER EDMUND O ; SAMINENI SATISH

Assignee(s): SCHWEITZER ENGINEERING LABORATORIES INC

Inventor(s): (std): DONOLO MARCOS A ; FISCHER NORMANN ; GUZMAN CAILLAS ARMANDO ; GUZMAN CASILLAS ARMANDO ; LABUSCHAGNE CASPER A ; SAMINENI SATISH ; SCHWEITZER EDMUND O ; SCHWEITZER EDMUND O III ; SCHWEITZER III EDMUND O

Inventor(s): SATISH SAMINENI ; MARCOS A DONOLO ; NORMANN FISCHER ; EDMUND O SCHWEITZER III ; ARMANDO GUZMAN CASILLAS ; CASPER A LABUSCHAGNE

Agent(s): SCHWEITZER ENGINEERING LABORATORIES INC RICHARD EDGE; STOEL RIVES LLP; EDGE RICHARD M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: PHASOR TRANSDUCER APPARATUS AND SYSTEM FOR PROTECTION, CONTROL, AND MANAGEMENT OF ELECTRICITY DISTRIBUTION SYSTEMS

Abstract: Source: US2003101008A A phasor monitoring system and apparatus for use with a distribution system for electricity wherein periodic three phase electricity is distributed in a plurality of circuits. The phasor monitoring apparatus comprises a phasor transducer that has an input that receives analog signals representative of parameters of electricity in a circuit of the distribution system, an analog to digital converter that receives the analog signals and outputs a digital data signal representative of the analog signals, a processor coupled to the analog to digital converter to receive the digital data signal output from the analog to digital converter, programming on the processor that computes phasor data representative of the electricity in the circuit based on the digital data received from the analog to digital converter and provides a digital output representative of the phasor data, and a network-compatible port coupled to the processor to transmit the phasor data onto a data network coupled thereto. The phasor monitoring system comprises a data network interconnecting a plurality of phasor transducers each associated with one of the circuits of an electricity distribution system. A phasor array processor is connected to the data network and receives phasor data from a plurality of the phasor transducers connected to the network. The phasor array processor computes combined phasor data for the plurality based upon the phasor data received from the plurality of phasor transducers.

Classifications:

International (IPC 8-9): G01D4/00 G01R1/00 G01R11/00 G01R15/00 G01R15/18 G01R19/25 G01R21/00 G01R21/06 G01R21/133 G01R22/00 G01R22/06 G01R22/10 G01R31/08 G05B11/01 G05B19/418 G05D11/00 G05D17/00 G05D3/12 G05D9/00 G05F1/00 G06F1/26 G06F1/32 G06F11/00 G06F11/30 G06F12/14 G06F13/12 G06F17/00 G06F17/30 G06F17/40 G06F19/00 G06F21/00 G06F21/20 G06F3/00 G06F7/04 G06F9/44 G06Q20/00 G06Q50/00 G08B1/08 G08B13/00 G08B13/14 G08B21/00 G08B23/00 G08B29/00 G08C17/00 G08C17/02 G08C19/04 G08C19/16 H02H1/00 H02J11/00 H02J13/00 H04B1/38 H04B7/14 H04K1/00 H04L1/00 H04L1/08 H04L11/08 H04L12/12 H04L12/24 H04L12/26 H04L29/06 H04L29/08 H04L9/00 H04L9/30 H04L9/32 H04M1/00 H04M11/00 H04N7/16 H04Q7/00 H04Q7/24 H04Q9/00 H04W24/00 H04W28/04 H04W40/12 H04W40/24 H04W52/02 H04W52/04 H04W52/46 H04W84/00 H04W84/18 (Advanced/Invention); G01R11/24 G01R19/25 G01R21/133 H02J3/00 H04W28/04 H04W40/24 H04W52/02 H04W84/18 (Advanced/Non-invention); G01D4/00 G01R1/00 G01R15/00 G01R15/14 G01R19/25 G01R21/00 G01R22/00 G01R22/06 G01R31/08 G05B19/418 G05D11/00 G05D17/00 G06F1/26 G06F11/00 G06F11/30 G06F12/14 G06F17/30 G06F17/40 G06F19/00 G06F21/00 G06F7/02 G06Q20/00 G08B1/00 G08B13/00 G08B13/14 G08B21/00 G08B23/00 G08B29/00 G08C17/00 G08C19/02 G08C19/16 H02H1/00 H02J13/00 H04B1/38 H04K1/00 H04L12/26 H04L29/06 H04L9/32 H04M1/00 H04M11/00 H04N7/16 H04Q7/00 H04Q7/24 H04Q9/00 H04W24/00 H04W28/02 H04W40/02 H04W40/24 H04W52/00 H04W84/18 (Core/Invention); G01R11/00 G01R21/00 H02J3/00 H04W28/02 H04W40/24 H04W84/18 (Core/Non-invention); G01D (Subclass/Invention)

International (IPC 1-7): G01D4/00 G01M19/00 G01R1/00 G01R15/00 G01R21/00 G01R21/06 G01R21/133 G05B11/01 G05D17/00 G05D3/12 G05F1/00 G06F1/26 G06F1/32 G06F15/00 G06F19/00 G06F3/00 G06F9/44 G08B23/00 G08C17/02 G08F19/00 H02H9/00 H03M1/06 H04L12/26 H04L9/00 H04Q9/00

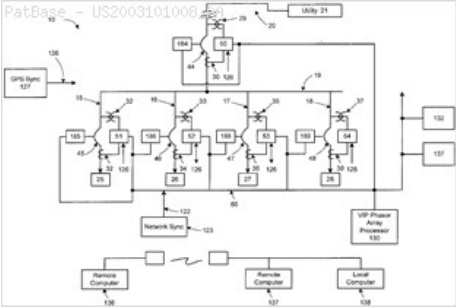
CP: Y02B90/245 Y02B90/246 Y04S20/40 Y04S20/42 G06F21/64 G01R15/185 G01R15/186 H04L63/029 H04L63/168 Y10S707/99931 H04Q2209/25 H04W52/0209 H04L63/08 H04L9/3247 H04L9/3268 H04L2209/56 H04L2209/68 H04L2209/80 G06F21/87 H04L63/0272 Y02B70/346 Y04S20/525 Y02B90/248 Y04S20/52 Y02B90/241 Y04S20/30 Y04S20/32 H02J13/0062 H02J13/0079 H02J13/0006 Y02E60/723 Y04S10/16 Y04S50/10 H04W40/12 H04B7/2606 H04L1/0061 H04L1/08 H04L1/1829 H04L2001/0092 H04L2001/0097 H04W24/00 H04W28/04 H04W40/24 H04W52/04 H04W52/46 H04W84/18 G01D4/00 G01R22/066 G06F21/32 H02H3/006 H02H7/261 G06Q50/06 Y02E60/728 Y04S10/265 H04L12/10 G01D4/006 G01R22/10 Y02B90/243 Y04S20/325 Y02B90/242 Y04S20/322 H04L67/125 H04L67/02 G06F21/606 G06F1/28 G06F1/3209 G06F21/73 H04B3/544 H04B2203/5408 H04B2203/5445 H04L63/0428 H04L63/0442 H04L63/0823 Y04S40/24 H04L63/1441 Y02E60/74 Y02E60/7838 Y02E60/7869 Y04S10/30 Y04S10/40 Y04S40/124 Y04S40/128 H04L63/20 H02J13/001 H02J3/008 Y02B60/50 G05B19/4185 G05B2219/32142 H04Q9/00 G01D4/004 Y02B90/24 H02J13/00 G01R19/2513 G01R21/133 G01R22/00 H02H1/0061 H02J3/00 H04L1/203 Y10T307/461

European: G01D4/00 G01D4/00R1 G01D4/00R2 G01D5/00 G01R15/18C2 G01R15/18D G01R19/25D G01R21/133 G01R22/00 G01R22/06D1 G01R22/06D3 G01R22/10 G05B19/418N G06F1/28 G06F1/32P1A G06F17/40 G06F21/32 G06F21/60C G06F21/64 G06F21/73 G06F21/87 G06Q50/06 H02H1/00E H02H7/26B H02J13/00 H04B3/54B H04B7/26B2 H04L1/00B7E H04L1/08 H04L1/18R H04L12/10 H04L29/08N1 H04L63/02C H04L63/04B2 H04L63/08 H04L63/08C H04L63/14D H04L63/14D10 H04L9/32 H04L9/32S H04Q9/00 H04W24/00 H04W40/12 H04W52/04 H04W52/46 S01R11/24 S01R19/25D S01R21/133 S01R22/06D1 S01R22/10 S05B219/32142 T02H3/00C T02J13/00F T02J3/00 T02J3/00T T04B203/54M2 T04B203/54P8 T04L1/00T T04L1/00T11 T04L63/04B T04L63/08 T04W28/04 T04W40/24 T04W52/02 T04W84/18 Y02B90/24B2 Y02B90/24B4 Y02B90/24D Y02B90/24F Y02E60/72F Y02E60/72H Y02E60/72N2 Y04S10/16 Y04S10/18 Y04S10/26B Y04S20/32B Y04S20/32D Y04S20/40 Y04S20/42 Y04S40/24 Y04S50/10

US: 307/38 324/113 324/118 324/119 324/126 324/126P 324/141 324/142 324/547 324/74 340/3.51 340/539.1 340/539.100S 340/541 340/568.1 340/635 340/637 340/664 340/664P 340/825.06 340/870.01 340/870.010P 340/870.02 340/870.020P 340/870.020S 340/870.03 340/870.21 340/870.39 364/483 364/488 364/489 364/578 370/241 370/252 370/254 370/254S 370/329 370/335 370/338 370/338P 380/258 395/200.1 395/200.11 395/201 395/601 395/701 455/127.1 455/575.1 455/90.03 455/90.3 700/22 700/286 700/286P 700/286S 700/291 700/291P 700/292 700/293 700/295 700/295P 700/295S 700/296 700/297 700/9 702/122 702/122P 702/124 702/178 702/182 702/185 702/187 702/188 702/57 702/57P 702/58 702/6 702/60 702/60P 702/61 702/61P 702/61S 702/62 702/62P 702/65 702/79 702/81 702/82 703/18 705/412 705/63 707/1 707/999.001 709/201 709/203 709/224 709/248 713/151 713/151P 713/186 713/186P 713/193 713/194 713/200 713/201 713/300 713/300P 713/340 713/400 717/123 726/17 726/18 726/2 726/26 726/30 726/34 726/4 726/4P 726/4S 726/6 726/6P

Family:

Publication number	Publication date	Application number	Application date
AT488774 E	20101215	AT20060005666T	20060320
AU2003303583 AA	20040729	AU200330303583	20031212
AU2003303583 AH	20040729	AU200330303583	20031212
BRPI0401095 A	20051101	BR2004PI01095	20040402
BRPI0610480 A2	20100622	BR2006PI10480	20060504
BRPI0610481 A2	20100622	BR2006PI10481	20060504
CA2148076 AA	19960701	CA19952148076	19950427
CA2148076 C	20010327	CA19952148076	19950427
CA2511004 AA	20050617	CA20032511004	20031212
CA2532984 AA	20060118	CA20042532984	20040716
CA2540774 AA	20060918	CA20062540774	20060320
CA2559666 AA	20060913	CA20052559666	20050304
CN101194294 A	20080604	CN200680019856	20060504
CN101194294 B	20110615	CN200680019856	20060504
CN101258761 A	20080903	CN200680020810	20060504
CN101258761 B	20120704	CN200680020810	20060504
DE602006018213 D1	20101230	DE200660018213T	20060320
EP1583976 A1	20051012	EP20030814760	20031212
EP1625358 A1	20060215	EP20040732078	20040511
EP1646880 A2	20060419	EP20040778480	20040716
EP1646880 A4	20130619	EP20040778480	20040716
EP1703289 A1	20060920	EP20060005666	20060320
EP1703289 B1	20101117	EP20060005666	20060320
EP1733243 A2	20061220	EP20050724482	20050304
EP1733243 A4	20120704	EP20050724482	20050304
EP1817863 A1	20070815	EP20050824098	20051123
EP1880375 A2	20080123	EP20060752282	20060504
EP1880375 A4	20100728	EP20060752282	20060504
EP1880563 A2	20080123	EP20060759119	20060504
EP1880563 A4	20120502	EP20060759119	20060504
EP1880563 B1	20140409	EP20060759119	20060504



HK1113033 A3	20080919	HK20080101284	20080201
MX2007013712 A1	20080422	MX20070013712	20071101
MXPA04003032 A1	20050816	MX2004PA03032	20040331
US2003101008 AA	20030529	US20020068431	20020206
US2003105608 AA	20030605	US20020271367	20021015
US2003204756 AA	20031030	US20030340374	20030109
US2003212512 AA	20031113	US20020271368	20021015
US2003220752 AA	20031127	US20020271167	20021015
US2004059469 AA	20040325	US20030613611	20030703
US2004107025 AA	20040603	US20030627244	20030724
US2004133367 AA	20040708	US20030613701	20030703
US2004138786 AA	20040715	US20010024896	20011217
US2004138787 AA	20040715	US20030689895	20031021
US2004138834 AA	20040715	US20010896570	20010629
US2004138835 AA	20040715	US20030666398	20030919
US2004162642 AA	20040819	US20020208924	20020731
US2004172207 AA	20040902	US20030734387	20031212
US2004183522 AA	20040923	US20040803411	20040318
US2004186670 AA	20040923	US20030613410	20030703
US2004193329 AA	20040930	US20040752467	20040105
US2004229578 AA	20041118	US20040843256	20040511
US2005039040 AA	20050217	US20040813369	20040330
US2005065743 AA	20050324	US20040892837	20040716
US2005131583 AA	20050616	US20040998396	20041129
US2005138432 AA	20050623	US20050049402	20050202
US2005144437 AA	20050630	US20040999534	20041130
US2005206530 AA	20050922	US20050083909	20050318
US2006052958 AA	20060309	US20050252259	20051017
US2006056370 AA	20060316	US20050122380	20050504
US2006066455 AA	20060330	US20050122411	20050504
US2006241880 AA	20061026	US20060333822	20060117
US2006271244 AA	20061130	US20060497218	20060731
US2007055889 AA	20070308	US20030647560	20030825
US2007136010 AA	20070614	US20070652968	20070112
US2007236359 AA	20071011	US20050274705	20051114
US5650936 A	19970722	US19940369849	19941230
US5828576 A	19981027	US19970810358	19970303
US6694270 BB	20040217	US20020068431	20020206
US6751562 BA	20040615	US20010814436	20010322
US6751562 C1	20110301	US20010814436	20010322
US6792337 BB	20040914	US20010024896	20011217
US6944555 BB	20050913	US20010896570	20010629
US6961641 BA	20051101	US20000723564	20001128
US6988025 BB	20060117	US20030627244	20030724
US6990395 BB	20060124	US20030689895	20031021
US7010438 BB	20060307	US20030734387	20031212
US7072779 BB	20060704	US20050252259	20051017
US7089089 BB	20060808	US20040892837	20040716
US7127328 BB	20061024	US20040998396	20041129
US7174258 BB	20070206	US20030613701	20030703
US7174261 BB	20070206	US20040803411	20040318
US7188003 BB	20070306	US20040752467	20040105
US7216043 BB	20070508	US20030340374	20030109
US7248977 BB	20070724	US20030613611	20030703
US7248978 BB	20070724	US20050049402	20050202
US7251570 BB	20070731	US20050122380	20050504
US7321316 BB	20080122	US20050122411	20050504
US7412338 BB	20080812	US20050083909	20050318
US7415725 BB	20080819	US20030647560	20030825
US7417558 BB	20080826	US20040843256	20040511
US7644290 BB	20100105	US20040813369	20040330
US7734380 BB	20100608	US20030666398	20030919
US7761910 BB	20100720	US20040999534	20041130
US8587452 BB	20131119	US20050274705	20051114
WO04061462 A1	20040722	WO2003US39702	20031212
WO04061462 B1	20040923	WO2003US39702	20031212
WO04099723 A1	20041118	WO2004CA00705	20040511
WO05008181 A2	20050127	WO2004US23006	20040716
WO05008181 A3	20050714	WO2004US23006	20040716
WO05091958 A2	20051006	WO2005US06944	20050304
WO05091958 A3	20060615	WO2005US06944	20050304
WO06056858 A1	20060601	WO2005IB03515	20051123
WO06059195 A1	20060608	WO2005IB03509	20051123
WO06119477 A2	20061109	WO2006US17327	20060504
WO06119477 A3	20070412	WO2006US17327	20060504
WO06119477 C1	20080529	WO2006US17327	20060504
WO06119478 A2	20061109	WO2006US17328	20060504
WO06119478 A3	20070426	WO2006US17328	20060504

Priority:

US19940369849	19941230	CA19952148076	19950427	US19970810358	19970303
US20000723564	20001128	US19970798723	19970212	CA19952148076	19950427
US20020271367	20021015	US20020271368	20021015	US20020406854P	20020829
US20020208924	20020731	US20020068431	20020206	US20010896570	20010629
US20010814436	20010322	US20010024896	20011217	US20030613701	20030703
US20020271167	20021015	US20030613611	20030703	US20030613410	20030703
US20030647560	20030825	US20030666398	20030919	US20030455832P	20030319
US20030689895	20031021	US20030627244	20030724	US20030340374	20030109
US20030469766P	20030512	US20030459182P	20030331	US20030459152P	20030331
US20020436187P	20021223	US20030488700P	20030718	US20030488700P	20030715
US20040813369	20040330	CA20042532984	20040716	WO20051B03509	20051123
WO2006US17327	20060504	US20050122380	20050504	US20040843256	20040511
US20070652968	20070112	US20050049402	20050202	WO2006US17328	20060504
US20050122411	20050504	US20040999534	20041130	US20040998396	20041129

US20060497218	20060731	US20060333822	20060117	US20050083909	20050318
WO2003US39702	20031212	US20040892837	20040716	WO2005US06944	20050304
US20040803411	20040318	US20040752467	20040105	US20050252259	20051017
US20030734387	20031212	WO2004US23006	20040716	WO2004CA00705	20040511
US20040554188P	20040318	CA20062540774	20060320	US20050274705	20051114

Assignee(s): (std): BLACKETT ANDREW W ; C D POWER MEASUREMENT LTD DBA ; FORTH J B ; CUMMING DANIEL A ; CD POWER MEASUREMENT LTD ; FORTH BRADFORD J ; CHIVERS DAVID A ; LIGHTBODY SIMON H ; HUBER BENEDIKT T ; HANCOCK MARTIN A ; FORTH J BRADFORD ; JONKER RENE T ; HYATT GEOFFREY T ; HARDING STEWART J ; HAIGHT ERIC K ; GUNN COLIN N ; KINGHAM BRIAN R ; HOWE ANTHONY J ; HANCOCK MARTIN ; POWER MEASUREMENT LTD ; MARR DARRIN G ; WYNANS ARTHUR B ; MANSEY BERNARD C ; TAYLOR AARON J ; TEACHMAN MICHAEL E ; MACFARLANE I R ; RANSOM DOUG S ; RICCI MARC ; SHEPPARD JASON ; RANSOM DOUGLAS S ; VAN GORP JOHN C ; NAKAGAWA BRIAN T ; LOEWEN DANIEL N ; HENNEBERRY SCOTT M ; LINDSAY HUGH T ; CD POWER MEASUREMENT LIMITED

Assignee(s): ETHERIDGE HAL E ; HART RONALD G ; GASPER MARCUS ; GILES DAVID W ; KI CHUEN SHAN SIMON ; POWER MEASUREEMENT LTD ; RANSOM DOUGLAS STEPHEN ; LOUCKS GREGORY RICHARD ; TEACHMAN MICHAEL EDWARD ; WALL DANIEL J ; YEO JEFFERY W ; DRAVNIKS OLAF O W ; CHIVERS DAVID ARTHUR ; KOSTER THERESA M ; HIRSCHBOLD MARKUS F ; FORTH J ; C D POWER MEASUREMENT LTD DBA POWER MEASUREMENT LTD ; C D POWER MEASUREMENT LTD

Inventor(s): (std): BLACKETT ANDRES W ; BLACKETT ANDREW W ; CHIVERS DAVID A ; CHIVERS DAVID ARTHUR ; COWAN PETER C ; CUMMING DANIEL ; CUMMING DANIEL A ; CUMMING DANIEL ALAN ; DRAVNIKS OLAF O W ; FORTH J B ; FORTH J BRADFORD ; GASPER MARCUS ; GILBERT BRYAN J ; GILES DAVID W ; ETHERIDGE HAL E ; FORTH BRADFORD J ; GUNN COLIN N ; HAIGHT ERIC K ; HAIGHT ERICK K ; HANCOCK MARTIN ; HANCOCK MARTIN A ; HARDING STEWART J ; HART RONALD G ; HENNEBERRY SCOTT M ; HIRSCHBOLD MARKUS F ; HOWE ANTHONY J ; HUBER BENEDIKT T ; HYATT GEOFFREY T ; JONKER RENE T ; KI CHUEN SHAN SIMON ; KINGHAM BRIAN R ; KOESTER THERESA M ; KOSTER THERESA M ; LIGHTBODY SIMON H ; LINDSAY HUGH T ; LOEWEN DANIEL N ; LOUCKS GREGORY R ; LOUCKS GREGORY RICHARD ; MACFARLANE I R ; MACFARLANE I ROSS ; MANSEY BERNARD C ; MARR DARRIN G ; NAKAGAWA BRIAN T ; RANSOM DOUG S ; RANSOM DOUGLAS S ; RANSOM DOUGLAS STEPHEN ; RICCI MARC ; SIMON H LIGHTBODY ; STER THERESA M K ; SHEPPARD JASON ; SHEPPARD JASON D ; TAYLOR AARON J ; TEACHMAN MICHAEL E ; TEACHMAN MICHAEL EDWARD ; VAN GORP JOHN C ; WALL DANIEL J ; WYNANS ARTHUR B ; YEO JEFFERY W ; YEO JEFFREY W

Inventor(s): WYNANS ARTHUR ; THERESA M K 247 STER ; VAN GORP JOHN ; TEACHMAN MICHAEL ; STEWART J HARDING ; TAYLOR AARON ; SCOTT M HENNEBERRY ; RANSOM DOUGLAS ; RANSOM DOUG ; MARTIN A HANCOCK ; MICHAEL E TEACHMAN ; NAKAGAWA BRIAN ; MARKUS F HIRSCHBOLD ; MARR DARRIN ; MANSEY BERNARD ; MACFARLANE I ; LINDSAY HUGH ; LIGHTBODY SIMON ; KOSTER THERESA ; KINGHAM BRIAN ; J ; J BRADFORD FORTH ; JONKER RENE ; HUGH T LINDSAY ; HYATT GEOFFREY ; HUBER BENEDIKT ; HOWE ANTHONY ; HIRSCHBOLD MARKUS ; HENNEBERRY SCOTT ; HART RONALD ; HARDING STEWART ; HAL E ETHERIDGE ; HAIGHT ERIC ; FORTH J ; GUNN COLIN ; DRAVNIKS OLAF OW ; ERIC K HAIGHT ; ETHERIDGE HAL ; DARRIN G MARR ; DOUGLAS S RANSOM ; CHIVERS DAVID ; BLACKETT ANDREW ; AARON J TAYLOR ; ARTHUR B WYNANS ; BENEDIKT T HUBER ; BERNARD C MANSEY

Agent(s): GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIETAET; FINNIE PETER JOHN; BRINKS HOFER GILSON AND LIONE PML; BRINKS HOFER GILSON AND LIONE/PML; BRINKS HOFER GILSON AND LIONE; BRINKS HOFER GILSON AND LIONE/PML, INDIANAPOLIS OFFICE; BRINKS HOFER GILSON AND LIONE PML INDIANAPOLIS OFFICE; WORKMAN NYDEGGER, (F/K/A WORKMAN NYDEGGER AND SEELEY); WORKMAN NYDEGGER F K A WORKMAN NYDEGGER AND SEELEY; KATZ JAMES L; WORKMAN NYDEGGER; BRINKS GILSON AND LIONE

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: SYSTEM ARCHITECTURE FOR REMOTE ACCESS AND CONTROL OF ENVIRONMENTAL MANAGEMENT

Abstract: Source: US2001020251A **fault** tolerant system by which individual components of a server are monitored and controlled through independent, programmable microcontrollers interconnected through a microcontroller network. An external agent can control and monitor the microcontrollers by extending the interconnection network beyond the physical server. The extension to the interconnection network converts protocols between media, and directs the microcontrollers and the state managed by the microcontrollers. Intervention of the server operating system software is not required and is not utilized for the access and control operations. A remote interface board provides the interface between the microcontroller network and an external modem that communicates with a remote client computer. The remote interface board also provides for connection to a local client computer.

Classifications:

International (IPC 8-9): F16D3/227 G05D23/00 G06F1/00 G06F1/20 G06F1/26 G06F11/00 G06F11/07 G06F11/16 G06F11/20 G06F11/273 G06F11/30 G06F11/32 G06F11/34 G06F13/00 G06F13/38 G06F13/40 G06F21/00 G06F9/445 G06F9/46 H02P7/285 H04L12/12 H04L12/24 H04L12/26 H04L12/28 H04L12/40 H04L12/56 H04L29/06 H04L29/08 H04L29/12 H04L29/14 H05K5/00 H05K7/20 (Advanced/Invention); G06F1/00 G06F11/20 G06F11/32 G06F11/32 G06F3/06 H04L29/08 (Advanced/Non-invention); G06F1/00 G06F1/20 G06F1/26 G06F11/00 G06F11/07 G06F11/16 G06F11/20 G06F11/273 G06F11/30 G06F11/32 G06F11/34 G06F13/38 G06F13/40 G06F21/00 G06F9/445 H02P7/18 H04L12/12 H04L12/24 H04L12/26 H04L12/40 H04L12/56 H04L29/06 H04L29/08 H04L29/12 H04L29/14 H05K7/20 (Core/Invention); G06F1/00 G06F3/06 H04L29/08 (Core/Non-invention)

International (IPC 1-7): G06F13/00 E06F13/00 F04B41/06 G01R31/08 G05D23/00 G06F1/00 G06F1/16 G06F1/24 G06F1/26 G06F1/28 G06F1/30 G06F1/32 G06F11/00 G06F11/00 G06F11/00 G06F11/00 G06F11/07 G06F11/10 G06F11/16 G06F11/30 G06F11/34 G06F13/00 G06F13/14 G06F13/36 G06F13/38 G06F13/40 G06F15/16 G06F15/163 G06F9/445 G06Z13/10 H01H35/00 H02H3/05 H02H3/05 H03K19/003 H03K19/003 H04B1/74 H04L1/00 H04L1/22 H05K5/00 H05K7/20

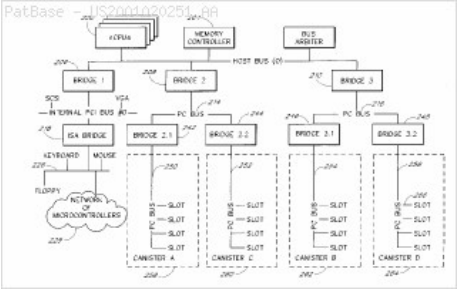
CPC: H04L12/403 H04L47/621 H04L41/0654 H04L41/0869 G06F11/3068 G06F11/327 G06F11/30 G06F11/324 G06F9/547 H04L12/40071 H04L12/413 H04L12/2856 H04L12/2898 G06F11/079 G06F13/4068 G06F2213/0024 G06F11/3031 G06F11/3044 G06F11/2268 Y02B60/165 H04L1/069 Y02B60/1228 Y02B60/1235 Y02B60/1275 Y02B60/32 G06F11/349 G06F2201/835 H04L67/1002 H04L67/1095 H04L69/40 G06F13/409 H04L1/0659 H04L49/9073 H05K7/1492 H05K7/207 H05K7/20736 G06F11/2005 G06F11/2007 G06F11/2012 G06F11/3027 H04L29/12009 H04L43/10 H04L61/00 H04L2029/06054 H05K7/20836 H04L47/125 G06F11/2002 G06F11/2017 H04L41/08 G06F9/4413 G06F11/2033 G06F11/2046 G06F11/2097 H04L41/0843 H04L49/901 H04L49/9057 H04L41/0809 G06F11/3089 G06F11/0751 G06F11/1482 G06F11/2089 G06F2201/85 H04L12/4013 H04L41/0668 H04L41/0866 G06F11/0745 G06F11/1658 G06F11/2023 G06F11/2035 H04L1/0663 H04L41/0856 G06F11/0709 G06F11/0757 G06F11/3048 H04L43/0805 G06F11/203 G06F11/2038 H04L29/12047 H04L61/15 H04L29/06 G06F11/20 H04L12/40195 H04L29/12839 H04L41/0816 H04L45/58 H04L61/6022 G06F11/0775 G06F11/1443 G06F11/3034 G06F11/0787 H04L12/40032 H04L1/042 H04L41/0681 H04L41/0886 H04L43/0811 H04L2012/40215 G06F9/44521 G06F11/2015 G06F11/2736 G06F11/3055 G06F13/385 H02P7/285 H04L12/2602 H04L12/2697 H04L1/0803 H04L43/00 H04L43/06 H04L43/50 G06F11/3013 G06F11/3024 H04L41/082 Y02B60/33 H04L49/9063 G06F11/0766 G06F11/2294 G06F11/3041 G06F11/3051 G06F13/4081 H04L12/40169 H04L41/06 H04L41/0806 F04D27/004 F04D25/166 G06F21/31 H04L49/90 H05K7/20727 G06F11/3093 G06F9/4411 G06F11/0772 G06F11/3072 H05K7/20209 G06F11/0784 H04L43/065 G06F1/20 G06F1/206 G06F1/26 G06F3/0601 G06F11/0748 G06F11/0769 G06F11/0793 G06F11/3006 G06F11/3058 G06F11/3065 G06F11/328 G06F11/3466 G06F11/3476 G06F11/3495 G06F13/4027 G06F21/305 G06F2003/0692 G06F2201/86 H04L12/12 H04L41/0213 H04L41/0826 H04L41/0836 H04L41/12 H04L41/22 H04L43/045 H04L43/0817 H04L43/0823 H04L43/106 H04L43/16 Y02B60/34 Y10T307/766 Y10T307/832 Y10T307/858 Y10T307/937

European: F16D3/227 G06F1/00N5A2 G06F1/20 G06F1/20T G06F1/26 G06F11/07P1A G06F11/07P1K G06F11/07P1L G06F11/07P2 G06F11/07P4 G06F11/07P4A G06F11/07P4B G06F11/07P4C G06F11/07P4F G06F11/07P4G G06F11/07P6 G06F11/14A8T G06F11/14S1 G06F11/16D G06F11/20 G06F11/20C2 G06F11/20C4 G06F11/20M G06F11/20P12 G06F11/20P2 G06F11/20P2M G06F11/20P2S G06F11/20P4 G06F11/20P6 G06F11/20U G06F11/20A9 G06F11/273S G06F11/30A1 G06F11/30A11 G06F11/30A12 G06F11/30A13 G06F11/30A3 G06F11/30A6 G06F11/30A7 G06F11/30A8 G06F11/30A9 G06F11/30C G06F11/30D G06F11/30E G06F11/30R G06F11/30R1 G06F11/30R2 G06F11/30S G06F11/30S1 G06F11/32S G06F11/32S6 G06F11/34T G06F11/34T10 G06F11/34T4 G06F13/38A2 G06F13/40D5 G06F13/40E2 G06F13/40E2H G06F13/40E4 G06F21/30A G06F21/31 G06F9/445L G06F9/44A4 G06F9/44A4A G06F9/54P H02P7/285 H04L12/12 H04L12/24B1 H04L12/24C2 H04L12/24D H04L12/24D3 H04L12/24D4 H04L12/24E1 H04L12/24E1A H04L12/24E1A1 H04L12/24E1B1 H04L12/24E1B2 H04L12/24E1C1 H04L12/24E4B H04L12/24E5 H04L12/24E5A H04L12/24F3 H04L12/26M H04L12/26M2 H04L12/26M3A2 H04L12/26M4 H04L12/26M4B H04L12/26T H04L12/28P1 H04L12/28P1D3 H04L12/403 H04L12/40A4 H04L12/40F3 H04L12/40R H04L12/40R1C H04L12/413 H04L29/06 H04L29/06C8A H04L29/08N9A H04L29/08N9R H04L29/12A H04L29/12A2 H04L29/12A9D11 H04L29/14 H04L41/04A H04L41/06 H04L41/06C1A H04L41/06C2 H04L41/08A H04L41/08A1 H04L41/08A1A H04L41/08A2A H04L41/08A2B H04L41/08A4A H04L41/08B2 H04L41/08C H04L41/08C1 H04L41/12 H04L41/22 H04L43/00 H04L43/06B H04L43/08C H04L43/08D H04L43/10 H04L43/10B H04L43/50 H04L45/58 H04L47/12B H04L47/62B H04L49/90 H04L49/90C H04L49/90P H04L49/90Q H04L49/90Q1A H04L61/00 H04L61/15 H04L61/60D11 H05K7/14S4F H05K7/20B90 H05K7/20R90 H05K7/20S10B H05K7/20S10C H05K7/20S90 S06F11/07P10 S06F11/07P2 S06F11/07P2A1 S06F11/20C S06F11/20C2 S06F11/20C6 S06F11/20K S06F11/20P12 S06F11/20P2S S06F11/20P4 S06F11/20S4 S06F11/22L S06F11/22R S06F11/30 S06F11/30E S06F11/32S4 S06F11/34T12 S06F11/34T4 S06F201/835 S06F201/850 S06F201/860 S06F213/0024 S06F3/06A S06F3/06D T04L12/24A2 T04L12/24D T04L12/24E T04L12/24E1A T04L12/24E1A1 T04L12/24E1B1 T04L12/24E1B2 T04L12/24E1B3A T04L12/24E1B3D T04L12/24E5 T04L12/24E6C T04L12/24F3 T04L12/26M2A T04L12/26M2B T04L12/26M2B2 T04L12/26M3A T04L12/26M3A1 T04L12/26M3A2 T04L12/26M4 T04L12/26M4B T04L12/26M7 T04L12/40M T04L12/40S1 T04L29/06C8A T04L29/08N9A T04L41/02B T04L41/06 T04L41/06C T04L41/06C1 T04L41/06E T04L41/08 T04L41/08A1 T04L41/08A1A T04L41/08A2A T04L41/08A3A T04L41/08A3D T04L41/08C T04L41/08D3 T04L41/22 T04L43/04A T04L43/06 T04L43/06B T04L43/08A T04L43/08C T04L43/08D T04L43/08E T04L43/10 T04L43/10B T04L43/16 T05K999/99 Y02B60/12H Y02B60/12J2 Y02B60/12L Y02B60/32 Y02B60/33 Y02B60/34

US: 165/80.3 236/1.00E 236/1E 307/116 307/126 307/130 307/139 360/5 361/679.4 361/679.41 361/686 361/695 361/731 370/216 370/217 370/254 370/409 388/827 388/840 395/182.03 395/283 395/822 395/828 395/837 395/838 395/866 395/892 4/10 4/11 4/3 417/3 417/42 417/45 709/299 709/300 709/322 702/187 702/188 709/105 709/203 709/208 709/208S 709/217 709/223 709/224 709/224P 709/224S 709/225 709/235 709/239 709/300 710/10 710/100 710/100.104 710/101 710/102 710/103 710/104 710/126 710/128 710/129 710/130 710/15 710/17 710/18 710/19 710/20 710/260 710/300 710/301 710/302 710/302P 710/305 710/305P 710/306 710/306P 710/310 710/312 710/313 710/314 710/362 710/46 710/5 710/52 710/53 710/62 710/72 710/727.4 710/73 710/74 710/8 711/145 713/1 713/100 713/100S 713/2 713/300 713/310 713/320 713/324 713/330 713/340 713/400 714/1 714/10 714/11 714/13 714/13P 714/13S 714/14 714/23 714/24 714/25 714/25P 714/3 714/30 714/31 714/32 714/37 714/38 714/38.13 714/39 714/4 714/4.1 714/4.100S 714/4.11 714/4.12 714/4.120P 714/4.4 714/4.5 714/4.500P 714/42 714/43 714/44 714/46 714/47 714/47.2 714/47.200P 714/47.3 714/47P 714/48 714/48P 714/4P 714/4S 714/5 714/5.1 714/5.11 714/51 714/57 714/7 714/7P 714/E11.007 714/E11.007S 714/E11.008 714/E11.008S 714/E11.015 714/E11.015S 714/E11.024 714/E11.025 714/E11.025S 714/E11.026 714/E11.067 714/E11.071 714/E11.073 714/E11.073S 714/E11.078 714/E11.08 714/E11.094 714/E11.094S 714/E11.173 714/E11.173S 714/E11.174 714/E11.174S 714/E11.179 714/E11.179S 714/E11.184 714/E11.184 714/E11.188 714/E11.188S 714/E11.2 714/E11.200S 714/E11.201 714/E11.204 715/5 718/105 719/310

Family:

Publication number	Publication date	Application number	Application date
US2001020251 AA	20010906	US20010815596	20010323
US2001052042 AA	20011213	US20010885597	20010619
US2001056554 AA	20011227	US20010879587	20010611
US2002042896 AA	20020411	US20010911884	20010723
US2003009613 AA	20030109	US20010016296	20011030
US2003126496 AA	20030703	US20020287554	20021101
US2004153786 AA	20040805	US20030675917	20030929
US2004210701 AA	20041021	US20040808220	20040323
US2005229024 AA	20051013	US20050124769	20050509
US2005229025 AA	20051013	US20050124823	20050509
US2005229026 AA	20051013	US20050124847	20050509
US2005229027 AA	20051013	US20050124864	20050509
US2005229028 AA	20051013	US20050124867	20050509
US2006206649 AA	20060914	US20060417943	20060503
US2007101193 AA	20070503	US20060586282	20061025
US2010146346 AA	20100610	US20090640681	20091217
US2013073110 AA	20130321	US20120620275	20120914
US2014115404 AA	20140424	US20130059348	20131021
US5892928 A	19990406	US19970943072	19971001



US5962933 A	19991005	US19970942216	19971001
US5987554 A	19991116	US19970942413	19971001
US5990582 A	19991123	US19970942447	19971001
US6052733 A	20000418	US19970940302	19971001
US6073255 A	20000606	US19970942068	19971001
US6105151 A	20000815	US19970942407	19971001
US6122746 A	20000919	US19970943076	19971001
US6122758 A	20000919	US19970942222	19971001
US6134668 A	20001017	US19970942320	19971001
US6134673 A	20001017	US19970942318	19971001
US6134678 A	20001017	US19970942573	19971001
US6138250 A	20001024	US19970942070	19971001
US6145098 A	20001107	US19970942347	19971001
US6148355 A	20001114	US19970941268	19971001
US6163825 A	20001219	US19990275906	19990324
US6163849 A	20001219	US19970943077	19971001
US6163853 A	20001219	US19970942221	19971001
US6170028 BA	20010102	US19970942459	19971001
US6170067 BA	20010102	US19970942384	19971001
US6173346 BA	20010109	US19970942458	19971001
US6179486 BA	20010130	US19970962963	19971001
US6182180 BA	20010130	US19970942382	19971001
US6189109 BA	20010213	US19970942215	19971001
US6192434 BA	20010220	US19970942311	19971001
US6195717 BA	20010227	US19970942223	19971001
US6202111 BA	20010313	US19970942465	19971001
US6202160 BA	20010313	US19970942410	19971001
US6208616 BA	20010327	US19970942169	19971001
US6219734 BA	20010417	US19970942069	19971001
US6243773 BA	20010605	US19970942408	19971001
US6243838 BA	20010605	US19970942168	19971001
US6243838 C1	20141112	US19970942168	19971001
US6247079 BA	20010612	US19970942282	19971001
US6247080 BA	20010612	US19970942306	19971001
US6247898 BA	20010619	US19970940301	19971001
US6249828 BA	20010619	US19970942336	19971001
US6249834 BA	20010619	US19970942404	19971001
US6249885 BA	20010619	US19970942448	19971001
US6253334 BA	20010626	US19970941995	19971001
US6266721 BA	20010724	US19970942160	19971001
US6269412 BA	20010731	US19970942381	19971001
US6269417 BA	20010731	US19970942462	19971001
US6272648 BA	20010807	US19970942409	19971001
US6282673 BA	20010828	US19970942164	19971001
US6292905 BA	20010918	US19970942815	19971002
US6304929 BA	20011016	US19970942457	19971001
US6314525 BA	20011106	US19970943379	19971002
US6324608 BA	20011127	US19970943044	19971001
US6330690 BA	20011211	US19970942405	19971001
US6332202 BA	20011218	US20000686254	20001011
US6338150 BA	20020108	US19970942402	19971001
US6338150 C1	20131008	US19970942402	19971001
US6341322 BA	20020122	US19990258095	19990225
US6363497 BA	20020326	US19970942411	19971001
US6418492 BA	20020709	US19970941970	19971001
US6484226 BB	20021119	US20010885597	20010619
US6499073 BA	20021224	US19970942309	19971001
US6523131 BA	20030218	US20000658333	20000908
US6526333 BA	20030225	US19970941267	19971001
US6598173 BA	20030722	US20000686527	20001011
US6604207 BB	20030805	US20010815596	20010323
US6681342 BB	20040120	US20010911884	20010723
US6681342 C1	20130819	US20010911884	20010723
US6697963 BA	20040224	US20000708333	20001107
US6701453 BB	20040302	US20010879587	20010611
US6742069 BB	20040525	US20010016296	20011030
US6895526 BB	20050517	US20020287554	20021101
US7065600 BB	20060620	US20040808220	20040323
US7263570 BB	20070828	US20060417943	20060503
US7370225 BB	20080506	US20050124847	20050509
US7370226 BB	20080506	US20050124864	20050509
US7444537 BB	20081028	US20050124769	20050509
US7444550 BB	20081028	US20050124867	20050509
US7451343 BB	20081111	US20050124823	20050509
US7552364 BB	20090623	US20030675917	20030929
US7669064 BB	20100223	US20060586282	20061025
US8468372 BB	20130618	US20090640681	20091217
US8566624 BB	20131022	US20120620275	20120914

Priority:

US19970046326P	19970513	US19970046327P	19970513	US19970046311P	19970513
US19970046491P	19970513	US19970047003P	19970513	US19970046490P	19970513
US19970046397P	19970513	US19970047016P	19970513	US19970046416P	19970513
US19970942160	19971001	US19970942336	19971001	US19970943072	19971001
US19970942216	19971001	US19970942413	19971001	US19970942447	19971001
US19970940302	19971001	US19970942068	19971001	US19970942407	19971001
US19970943076	19971001	US19970046398P	19970513	US19970046312P	19970513
US19970942222	19971001	US19970942320	19971001	US19970942318	19971001
US19970942573	19971001	US19970942070	19971001	US19970942347	19971001
US19970941268	19971001	US19970943077	19971001	US19970942459	19971001
US19970942384	19971001	US19970942458	19971001	US19970962963	19971001
US19970942382	19971001	US19970942215	19971001	US19970942311	19971001
US19970942223	19971001	US19970942465	19971001	US19970942410	19971001
US19970942169	19971001	US19970942069	19971001	US19970942408	19971001

US19970942168	19971001	US19970942306	19971001	US19970940301	19971001
US20010815596	20010323	US20010885597	20010619	US20010879587	20010611
US20020287554	20021101	US19990275906	19990324	US19970942404	19971001
US19970942448	19971001	US19970941995	19971001	US19970942381	19971001
US19970942409	19971001	US19970942164	19971001	US19970942815	19971002
US19970942457	19971001	US19970942405	19971001	US20000686254	20001011
US19990258095	19990225	US19970941970	19971001	US19970942309	19971001
US19970941267	19971001	US20000686527	20001011	US20000708333	20001107
US20050124769	20050509	US20050124823	20050509	US20050124847	20050509
US20050124864	20050509	US20050124867	20050509	US19970942411	19971001
US19970943379	19971002	US20000658333	20000908	US19970942221	19971001
US19970942282	19971001	US19970942462	19971001	US20060417943	20060503
US20040808220	20040323	US20010016296	20011030	US19970943044	19971001
US20060586282	20061025	US20030675917	20030929	US20010911884	20010723
US19970942402	19971001	US20090640681	20091217	US20120620275	20120914
US20130059348	20131021				

Assignee(s): (std): AGNETA DON ; AMADAHL CARLTON G ; AMDAHL CARLTON G ; JOHNSON KARL S ; CHRABASZCZ MICHAEL ; HENDERSON MICHAEL G ; FINDLAY BRUCE ; SHEIKH TAHIR Q ; NGUYEN KEN ; WALLACH WALTER A ; REED JOHN M ; PAPA STEPHEN E J ; SCHIRO DON ; SMITH DENNIS H ; MICRON ELECTRONICS INC ; MICRON TECHNOLOGY INC ; 3COM CORP ; PAPA STEPHEN E ; ROUND ROCK RES LLC

Assignee(s): ROUND ROCK RESEARCH LLC ; PAPA STEPHEN EJ ; MICON ELECTRONICS INC ; MICRON ELECTRONICS ; MEI CALIFORNIA INC ; KHALILI MEHRDAD ; MAHALINGAM MALLIKARJUNAN ; HEWLETT PACKARD CO ; HEWLETT PACKARD DEVELOPMENT CO LP

Inventor(s): (std): JOHNSON KARL ; JOHNSON KARL S ; KHALILI MEHRDAD ; LIU JI HWAN ; MAHALINGAM MALLIKARJUNAN ; NGUYEN KEN ; NOURI AHMAD ; AGNETA DON A ; AMADAHL CARLTON G ; AMDAHL CARLTON G ; CHRABASZCZ MICHAEL ; PELLICER THOMAS J ; REED JOHN M ; SHEIKH TAHIR Q ; WALLACH WALTER A ; WALLACH WALTER AUGUST ; SMITH DENNIS H ; SCHIRO DON ; PAPA STEPHEN E J ; MAHALINGHAM MALLIKARJUNAN ; HENDERSON MICHAEL G ; FINDLAY BRUCE ; AGNETA DON ; PAPA STEPHEN E

Inventor(s): PAPA STEPHEN EJ ; SMITH DENNIS ; WALLACH WALTER ; HENDERSON MICHAEL ; AMDAHL CARLTON ; PAPA STEPHEN

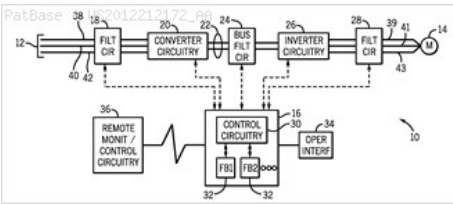
Agent(s): KNOBBE MARTENS OLSON AND BEAR LLP; GAZDZINSKI AND ASSOCIATES PC

Title: MODULAR LINE-TO-GROUND **FAULT** IDENTIFICATION

Abstract: Source: US2012212172A The present invention relates generally to systems and methods for detecting ground **faults** (i.e., line-to-ground **faults**) in **electrical** power conversion systems. In particular, the embodiments described herein include a common mode **voltage** booster module configured to calculate a common mode **voltage** boost factor and a common mode **voltage** boost function based on a plurality of **voltage** commands for the system. The common mode **voltage** boost factor and/or the common mode **voltage** boost function may be applied to the **voltage** commands to generate boosted **voltage** commands which, when applied to an inverter or converter, source **current** indicative of ground **faults** in the system. More specifically, the common mode **voltage** boost factor may be multiplied by a common mode **voltage** calculated by a common mode **voltage** calculator and summed with the **voltage** commands. In addition, the common mode **voltage** boost function may be summed with the **voltage** commands after the **voltage** commands have been summed with the common mode **voltage** boost factor.

Classifications:

International (IPC 8-9): G01R31/02 H02H3/16 H02H7/08 H02J4/00 H02P23/00 (Advanced/Invention);
G01R31/42 (Advanced/Non-invention)
CPC: G01R31/025 G01R31/42
European: G01R31/02C2 S01R31/42
US: 318/434 318/805 318/805P 323/318 323/318S 361/42 361/47



Family:

Publication number	Publication date	Application number	Application date
CN102645607 A	20120822	CN201210041229	20120221
EP2490032 A2	20120822	EP20120156290	20120221
US2012212172 AA	20120823	US20110031454	20110221
US8319466 BB	20121127	US20110031454	20110221

Priority:

US20110031454 20110221

Assignee(s): (std): KERKMAN RUSSEL J ; ROCKWELL AUTOMATION TECH INC ; TALLAM RANGARAJAN ; VALDEZ CARLOS RODRIGUEZ

Assignee(s): ROCKWELL AUTOMATION TECHNOLOGIES INC

Inventor(s): (std): VALDEZ CARLOS RODRIGUEZ ; TALLAM RANGARAJAN ; RODRIGUEZ VALDEZ CARLOS ; RANGARAJAN TALLAM ; KERKMAN RUSSEL J

Agent(s): GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER; FLETCHER YODER PC; ALEX R; JOHN M

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Title: MODEL-BASED **FAULT** DETECTION SYSTEM FOR ELECTRIC MOTORS

Abstract: the present invention relates to a model-based **fault** detection system and method for monitoring and predicting maintenance requirements of electric motors. Since the method and system of the present invention is software based and utilizes data obtained from non-intrusive measurements, implementation costs are significantly less than prior art maintenance methods. The system comprises computer means coupled to sensors which provide continuous real-time information of the input **voltage** and **current** and motor speed. The system and method utilize a multivariable experimental modeling algorithm to obtain a mathematical description of the motor. The algorithm compares the modeled result with a measured result and quantifies the comparison in terms of a residual which is generated by subtracting the respective signals. A diagnostic observer analyzes the residual and determines if the motor is **fault** free or operating in a manner other than **fault** free. Upon detection of the impending **fault**, the diagnostic observer evaluates the measured variables of the motor, determines the deviation from the reference value and develops a diagnosis of the likely failed or failing component. Another embodiment of the present invention is particularly useful in the manufacture of fractional horsepower electric motors and especially in the performance of quality control testing.

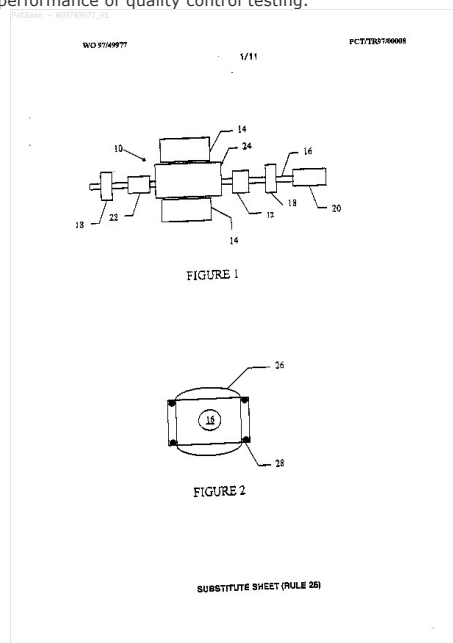
Classifications:

International (IPC 8-9): G01M15/00 G01M15/02 G01M19/00 G01R31/34 G06F19/00 G07C3/14 H02K15/00 (Advanced/Invention); G01M H02P (Subclass/Invention)

International (IPC 1-7): G01M15/00 G01M19/00 G01R31/34 G06F19/00 G07C3/14 H02K15/00

CPC: G01M13/045

European: G01M13/04 G01M13/04B G01M15/00



Family:

Publication number	Publication date	Application number	Application date
AT289681 E	20050315	AT19970927586T	19970620
AU199732017 A1	19980114	AU19970032017	19970620
BRPI9710152 A	20000111	BR1997PI10152	19970620
CA2260773 AA	19971231	CA19972260773	19970620
CA2260773 C	20020910	CA19972260773	19970620
CA2356538 AA	19971231	CA19972356538	19970620
CA2356538 C	20050823	CA19972356538	19970620
CN1143126 C	20040324	CN19971097451	19970620
CN1233325 A	19991027	CN19971097451	19970620
CZ295659 B6	20050914	CZ19980004308	19970620
CZ9804308 A3	20050112	CZ19980004308	19970620
DE69732569 D1	20050331	DE19976032569	19970620
DE69732569 T2	20060126	DE19976032569T	19970620
EP0909380 A1	19990421	EP19970927586	19970620
EP0909380 B1	20050223	EP19970927586	19970620
HU223725 B1	20041228	HU19990003554	19970620
HU9903554 AB	20000228	HU19990003554	19970620
HU9903554 AC	20000529	HU19990003554	19970620
IL127686 A0	19991028	IL19970127686	19970620
IL127686 A1	20010430	IL19970127686	19970620
JP2000513097 T2	20001003	JP19980502852T	19970620
KR20000022198 A	20000425	KR19987010616	19981224
PL331205 A1	19990705	PL19970331205	19970620
RU2155328 C1	20000827	RU19990101059	19970620
SI9720042 A	19991231	SI19970020042	19970620
SK179098 A3	20000214	SK19980001790	19970620
TR9600527 A2	19980121	TR19960000527	19960624
TR9802541 T2	19990222	TR19980002541T	19970620
WO9749977 A1	19971231	WO1997TR00008	19970620

Priority:

TR19960000527 19960624 CA19972260773 19970620 TR19980002541 19970620
WO1997TR00008 19970620

Assignee(s): (std): AR ELIK A S ; AR ELIK AS ; ARAELIK A S ; AHMET DUYAR ; ARCELIK AS ; ARCELIK S A ; ARCHELYK A SH ; DUYAR AHMET ; OSMAN TUGRUL DURAKBASA ; EVREN ALBAS ; SERAFETTINOGLU A HAKAN ; DUJAR AKHMET ; ARCHELYK ASH ; TUGRUL DURAKBASA OSMAN

Assignee(s): DUYAR AHMET ISTAMBUL ; A HAKAN SERAFETTINOGLU ; ARCELIK SA ; SERAFETTINOGLU A ; ARCELIK S A ISTANBUL ; ALBAS EVREN ; ARAELIK AS ; ARCELIK A S ; ARCELIK A S TUZLA ; ARCELIK ANONIM SIRKETI

Inventor(s): (std): SERAFETTINOGLU A HAKAN ; SERAFETTINOGLU AHAKAN ; SERAFETTINOGLU HAKAN ; TUGRUL DURAKBASA OSMAN ; SHERAFETTINOGLU A KHAKAN ; SERAFET TINOGLU A HAKAN ; DUYAR A ; DURAKBASHA OSMAN TUGRUL ; DURAKBASE O T ; DURAKBASA OSMAN TUGRUL ; DURAKBASA OSMAN T ; DURAKBASA O T ; DUJAR AKHMET ; ALBAS EVREN ; ALBAS EHVREHN ; ALBAS E ; A DUYAR ; A HAKAN SERAFETTINOGLU ; AHMET DUYAR ; DURAKPASA OSMAN TUGRUL ; DUYAR AHMET ; E ALBAS ; EBREN ALBAR ; EVREN ALBAS ; O T DURAKBASA ; OSMAN TUGRUL DURAKPASA ; OSMAN TUGRUL DURAKBASA ; OT DURAKBASE ; SERAFETTINOGLU A HAKAN ; OSMAN TUGRUL DARAKBASA

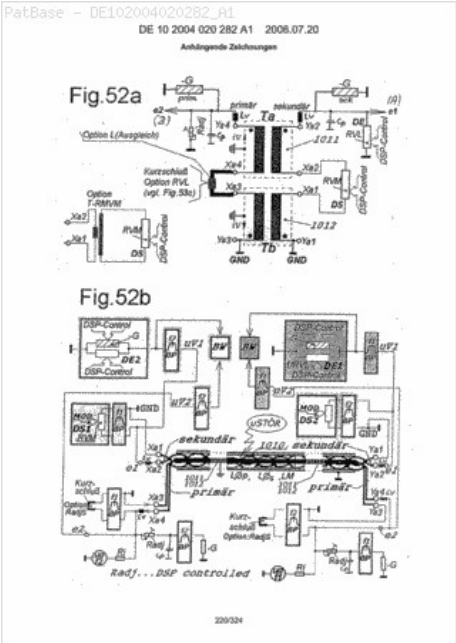
Inventor(s): OSMAN TUGRUL DURAKBASA ; SERAFETTINOGLU A ; O T DURAKBASE

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CH CN CU CZ DE DK EE ES FI FR GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK MN MW MX NL NO NZ PL PT RO RU SD SE SG SI SK SZ TJ TM TR TT UA UG US

Title: IMPEDANCE OR ADMITTANCE CIRCUIT OHMIC LOSS MEASURING METHOD, INVOLVES FEEDING **CURRENT** PORTION INTO MEASURING IMPEDANCE/ADMITTANCE OF CIRCUIT AS POWER SOURCE TO REDUCE IDEAL CONDUCTIVE VALUE THAT REFERS TO CIRCUIT INDUCTIVITY/CAPACITANCE

Abstract: The method involves feeding a **current** portion into measuring impedance/admittance of a circuit as a power source to reduce ideal conductive value of the impedance/admittance in proportion to ohmic loss of the impedance. The **current** portion is fed as a **current** drain in the impedance/admittance to increase the value. The value refers to a circuit inductivity or capacitance and to transformed impedance or admittance. Independent claims are also included for the following: (1) a method for coding measurement values; (2) an arrangement for measuring ohmic loss in impedance or admittance circuit; (3) a method for semi-automatic or fully automatic transport as well as for evaluation and addressing of goods; and (4) a shopping trolley for executing a method for semi-automatic or fully automatic transport as well as for evaluation and addressing of goods.

Classifications:
International (IPC 8-9): G01R27/02 (Advanced/Invention);
G01R27/02 (Core/Invention)
CPC: G01D5/00 G01R27/26
European: G01D5/00 G01R27/26



Family:

Publication number	Publication date	Application number	Application date
DE102004020282 A1	20060720	DE200410020282	20040426

Priority:			
DE20031018619	20030424	DE20031020114	20030506
DE20031021505	20030513	DE20031022045	20030515
DE20031027270	20030617	DE20031042538	20030915
DE20031047067	20031009	DE20031048033	20031015
DE20031050430	20031029	DE200410016969	20040406
		DE20031021504	20030513
		DE20031022737	20030520
		DE20031046051	20031003
		DE20031048360	20031017
		DE200410020282	20040426

Assignee(s): (std): KOLLER ROMAN
Inventor(s): (std): KOLLER ROMAN

Title: Method and apparatus for detection, classification and reduction of internal **electrical faults** in alternating **current** propulsion machinery using synchronous detection scheme

Abstract: Source: US6064172A A winding **fault** detection system provides classification and identification of winding **faults** or winding malfunctions. The **fault** detection system provides signals to individual electronic switches for segmented primary windings each having an **electrical** phase and grouped into sub-phases which are individually switch into or out of an excitation supply or isolated through the electronic switching in response to signals from the winding **fault** detection system. Each primary winding forms an **electrical** member which includes a stator having a poly-phase winding, and there is a secondary **electrical** member magnetically coupled with the stator. Each primary has magnetic field sensors which detect phase angle and magnitudes of radial components of air gap flux by magnetic measurement probes between each secondary **electrical** member and each primary **electrical** member and derives an **electrical** signal for a component of air gap flux contributing to electromagnetic torque at each position of each stator's periphery. Additionally, the system instantaneously stores data continuously derived from the magnetic sensors and determines a hierarchy of **fault** detection schemes.

Classifications:

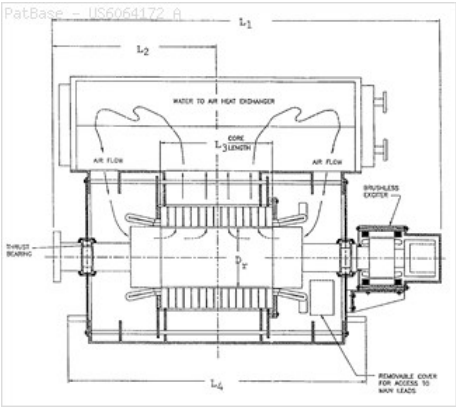
International (IPC 8-9): G01R31/06 G01R31/34 (Advanced/Invention)

International (IPC 1-7): G01R31/06 G01R31/34 H02P1/46

CPC: G01R31/346

European: G01R31/34C

US: 318/434 318/490 318/716 324/546 361/23



Family:

Publication number	Publication date	Application number	Application date
CA2308043 AA	20011111	CA20002308043	20000511
CA2308043 C	20050104	CA20002308043	20000511
GB200011180 A0	20000628	GB20000011180	20000509
GB2362275 A1	20011114	GB20000011180	20000509
GB2362275 B2	20031231	GB20000011180	20000509
US6064172 A	20000516	US19970798250	19970211

Priority:

US19970798250 19970211 GB20000011180 20000509 CA20002308043 20000511

Assignee(s): (std): POWER SUPERCONDUCTOR APPLIC CO ; POWER SUPERCONDUCTOR APPLIC IN

Assignee(s): POWER SUPERCONDUCTOR APPLICATION INC ; POWER SUPERCONDUCTOR APPLICATIONS CO ; UNITED STATES NAVY ; POWER SUPERCONDUCTOR APPLICATIONS CORP ; KUZNETSOV STEPHEN B ; NAVY SECRETARY OF UNITED STATES OF AMERICA

Inventor(s): (std): KUZNETSOV STEPHEN B

Inventor(s): STEPHEN B KUZNETSOV

Title: Method and device for inspecting laminated iron cores of electrical machines for interlamination shorts

Abstract: Source: US2003057961A The present invention relates to a method, an apparatus and a computer program for inspecting laminated iron cores (1) of electrical machines for interlamination shorts, in which the laminated iron core (1) is magnetized by means of an auxiliary winding, and the iron surface is scanned by means of at least one measurement coil arrangement (2) with a downstream measurement device. In this case, unique and quantifiable localization of interlamination shorts is achieved by using both the phase (8) and the amplitude (7) of the electrical signal which is induced in the at least one measurement coil arrangement (2), in combined form.

Classifications:

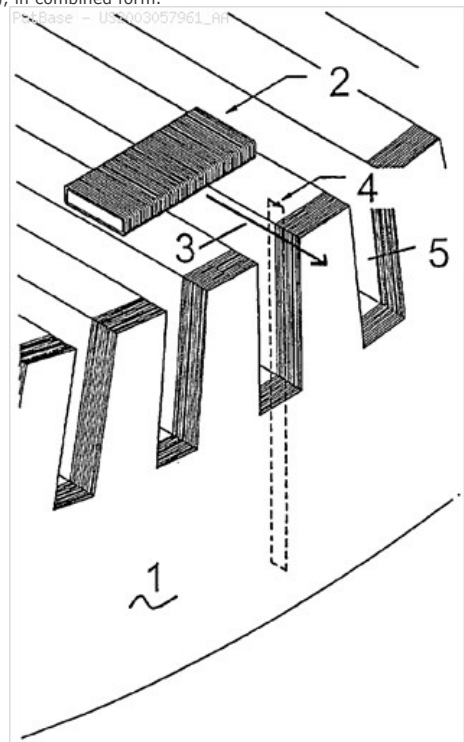
International (IPC 8-9): G01N27/90 G01R31/02 G01R31/34 (Advanced/Invention);
G01R31/02 (Advanced/Non-invention);
G01N27/90 G01R31/02 G01R31/34 (Core/Invention);
G01R31/02 (Core/Non-invention)

International (IPC 1-7): G01N27/90 G01N33/12 G01R31/02 G01R31/06 G01R31/34

CPC: G01N27/9046 G01R31/025 G01R31/34

European: G01N27/90C G01R31/34 S01R31/02C2

US: 324/233 324/242 324/521 324/545 324/545P



Family:

Publication number	Publication date	Application number	Application date
CA2463590 AA	20040322	CA20022463590	20020923
CA2463590 C	20101130	CA20022463590	20020923
DE50207214 D1	20060727	DE20025007214	20020923
EP1430297 A1	20040623	EP20020801973	20020923
EP1430297 B1	20060614	EP20020801973	20020923
ES2266633 T3	20070301	ES20020801973T	20020923
PT1430297 T	20061130	PT20020801973T	20020923
US2003057961 AA	20030327	US20020147085	20020517
US6815957 BB	20041109	US20020147085	20020517
WO03036287 A1	20030501	WO2002IB03914	20020923

Priority:

US20010324061P 20010924 CH20020000586 20020405 WO2002IB03914 20020923
US20020147085 20020517

Assignee(s): (std): ALSTOM SWITZERLAND LTD ; ALSTOM TECHNOLOGY LTD ; HOBELSBERGER MAX ; KIRCHHOFF INGO ; NODWELL ERIC ; POSEDEL ZLATIMIR

Assignee(s): ALSTOM (SWITZERLAND) LTD ; ALSTOM LTD

Inventor(s): (std): POSEDEL ZLATIMIR ; NODWELL ERIC ; KIRCHHOFF INGO ; HOBELSBERGER MAX

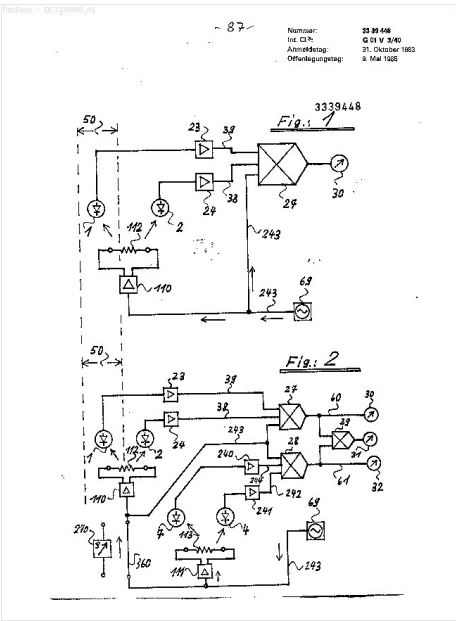
Inventor(s): ERIC NODWELL ; INGO KIRCHHOFF ; MAX HOBELSBERGER ; ZLATIMIR POSEDEL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: Measuring and locating device for measuring and locating anomalies in the terrestrial magnetic field

Abstract: Source: DE3339448A1 Published without abstract.

Classifications:
International (IPC 8-9): G01R33/02 G01V3/40 (Advanced/Invention);
G01R33/02 G01V3/40 (Core/Invention)
International (IPC 1-7): G01R33/02 G01V3/40
CPC: G01R33/02 G01V3/40
European: G01R33/02 G01V3/40



Family:

Publication number	Publication date	Application number	Application date
DE3339448 A1	19850509	DE19833339448	19831031
DE3402562 A1	19850801	DE19843402562	19840126

Priority:

DE19833339448 19831031 DE19843402562 19840126

Assignee(s): (std): MERSMANN LUDGER

Assignee(s): MERSMANN LUDGER 5445 KOTTENHEIM DE

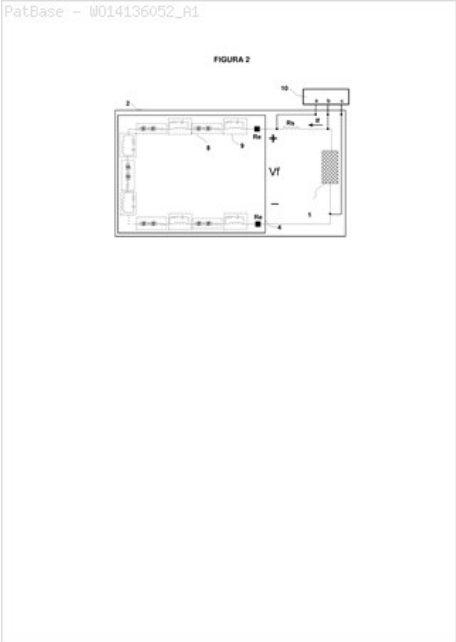
Inventor(s): (std): MERSMANN LUDGER

Inventor(s): MERSMANN LUDGER 5445 KOTTENHEIM DE

Title: METHOD AND SYSTEM FOR THE DETECTION AND DIAGNOSIS OF FAULTS IN ELECTRIC MACHINES WHEN IN OPERATION

Abstract: The present invention discloses a method for the detection and diagnosis of faults in electric machines when in operation. The method comprises: i) simultaneously acquiring a current signal and a voltage signal associated with the winding of the electric machine; ii) defining a set of vectors whose components are DC and/or AC values at different levels of separation and amplification of the current and voltage signals; iii) simultaneously acquiring a current signal and a voltage signal associated with an emulated fault; iv) defining a set of vectors whose components are DC and/or AC values at different levels of separation and amplification of the current and voltage signals associated with an emulated fault; v) identifying variations in the components of the vectors; vi) comparing vectors having variations in their components with respect to the emulated fault vectors; vii) analysing the variations and comparisons in order to detect whether there is at least one type of fault; and viii) reporting the presence or absence of at least one type of fault in the electric machine. The present invention further discloses a system for carrying out the method, comprising: i) a module for obtaining the current and voltage signals associated with the winding of the electric machine; ii) a fault emulation module; iii) a module for sensitizing signals by separating DC and/or AC levels and amplifying the resulting signal; iv) a memory unit for storing data relating to the DC and/or AC values; and v) a module for processing, analysis and reporting the status of the machine.

Classifications:
International (IPC 8-9): G01R31/34 H02P9/00 (Advanced/Invention)
CPC: G01R31/343



Family:

Publication number	Publication date	Application number	Application date
CO7050216 A1	20140910	CO20130044020	20130305
WO14136052 A1	20140912	WO20141B59431	20140304

Priority:

CO20130044020 20130305

Assignee(s): (std): EMPRESAS PUBLICAS DE MEDELLIN E S P ; UNIV NAC DE COLOMBIA
Assignee(s): EMPRESAS PUBLICAS DE MEDELLIN ESP ; UNIVERSIDAD NACIONAL DE COLOMBIA
Inventor(s): (std): MESA BETANCUR GUILLERMO LEON ; JIMENEZ MEJIA RAUL ESTEBAN
Agent(s): NAVARRO ROMERO GUILLERMO ANDRES ET AL
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW