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VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

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Intellectual Property Rights



By

Faculty/Students



Prepared by:

Dr. Pasula Naresh

**VNR VIGNANA JYOTHI INSTITUTE OF
ENGINEERING & TECHNOLOGY**
(An Autonomous Institution)
Bachupally, Nizampet(S.O), Hyderabad-90
Department of Electrical and Electronics Engineering

**Summary Sheet of Intellectual property
rights (Patents)**

Academic years	No's
CAY (2022-23)	1
CAYm1 (2021-22)	8
CAYm2 (2020-21)	3
CAYm3 (2019-20)	-
CAYm4 (2018-19)	2

VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution)

Bachupally, Nizampet(S.O), Hyderabad-90

Department of Electrical and Electronics Engineering

2022-23 (CAY)

S. No.	Names of the faculty members	Title of the Patent	File Number	Status of the Patents/Books/Book chapters
1.	Mrs. R. Geshma Kumari Dr. Pasula Naresh Dr. A Ezhilarasi Mrs. P. Geethanjali	Coupled Inductor based DC-DC Boost Converter	Application No. 202241045623	Under examination

2021-22 (CAYm1)

S. No.	Names of the faculty members	Title of the Patent	File Number	Status of the Patents/Books/Book chapters
1.	Dr. Pasula Naresh Mrs. P. Geethanjali Mr. D.S.G. Krishna Mrs. R. Geshma Kumari	Multi-Branch Resonant Converter Based DC Power Supply for Diversified Applications	Application No.202141033947	Compliance to examiners report is submitted. The present status in Amended stage.
2.	Dr. Ajay Kumar Kaviti Mr. Akkala Siva Ram Dr. P. Naresh Dr. Venkata A Surapaneni	Submerged nanoporous micro hotspot structure for solar desalination and method of preparation	Application No.202241003900	Compliance to examiners report is submitted. The present status in Amended stage.
3.	Dr. Venu Yarlagadda Mr. Sivaji Bandi Dr. D.Ravi Kumar Dr.Giriprasad Ambati Dr.EShiva Prasad	Method and Implementation for mitigating Voltage Sag and swell in distributed system with Under Voltage /Over Voltage Relay based Compensators	Application No.202141039969	Published on 10/09/2021

4.	Dr. Venu Yarlagadda Dr. Giriprasad Ambati Mr. Lakshminarayana Gadupudi Dr.D.Ravi Kumar Mr. Sivaji Bandi	A Novel FACTS (Flexible Alternating Current Transmission Systems) Device Gate Turn off Thyristor Controlled Static Shunt Compensator” (GCSSC) to Enhance Power System Stability and Power Transfer Capability of Both Transmission and Distribution Systems	Application No.202141045365	Published on 15/10/2021
5.	Dr. M Balasubbareddy Dr.P.Venkata Prasad Dr.Nireekshana Turaka	System For Mitigating Circulating Current In Type Modular Multilevel Converter (Mmc)	Application No. 202141049019	Published on 05/11/2021
6.	Dr.M.Ranjit Dr.V.Ramesh Babu Dr.J.Srinivasa Rao Dr.T.Nireekshana	Advanced Non Centric PWM (Pulse Width modulated) method to Eliminate Common Mode Voltage inDual Inverter Fed Open-End Induction Motor Drives	Application No.202241004719	Published on 04/02/2022
7.	Dr. Venu Yarlagadda Ms. Annapurna Karthika Garikapati Mr. B.Devulal Mr. Anjan Boorugu Dr. Chava Sunil Kumar Dr. A. Ganga Dinesh Kumar Dr. Kovelamudi Sharmila Rudramamba	A Series Capacitive Compensation Technique with Design Based Iterative Algorithm for Mitigation of Ferranti Effect in EHV and UHV Power Transmission Systems	Application No. 202241027437	Published 27/05/2022
8.	V. Baby Dr. S. Nagini K. Jhansi Laksmi Bai Dr. Sagar Yeruva G. Yashwanth B. Janaki Ram A. Rikhila	Virtual Mom Responsive Baby Monitoring Toy	Application No. 202141020965	Published 11/06/2021

	Dr. D. N. Vasundhara N. V. Sailaja 1a. Madhavi			
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2020-21 (CAYm2)

S. No.	Names of the faculty members	Title of the Patent	File Number	Status of the Patents/Books/Book chapters
1.	Dr. Venu Yarlagadda Dr. Nireekshana Turaka Dr. Giri Prasad Ambati Dr. Srinivasa Rao Jalluri Dr. Shiva Prasad Edara Dr. Bhavani Jupalli Mr. Sasi Kumar Gedela Mr. Devulal Bhukya Mr. Sivaji Bandi	Self- Excited Synchronous Generator (Sesg) Without D.C Excitation	Application No.202141010194	Published on 19/03/2021
2.	Dr. Rajashekar Patil Dr. Bharath V G Devaraj E R Vara Prasad Kaviti Dr. Shaik Dilkush Dr J Viswanatha Rao Dr Girish D P Dr. Manjunath Gowda M.R Kiran Gowd	Development of Megawatt Wind Turbine for Optimal Management of Smart Agricultural Farms	Application No.2021101573 (Australian Patent)	Published on 27-03- 2021
3.	Dr. K. Sudha Rani, Dr. R. Manjula Sri, Dr.T.Nireekshana, Dr. Shuchi Tiwari, Mrs.K.Mani Kumari, Dr. N. Sandhya, Dr.Mangathayaru, Mr.K. Vijay Chandra,	Motorized Ankle Foot Driven Customized Prosthetic Leg with Exoskeleton	Application No.202141016519	Published on 23/04/2021

	Mr.Naregalkar Akshay, Dr.A.Giri Prasad			
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2019-20 (CAYm3)

S. No.	Names of the faculty members	Title of the Patent	File Number	Status of the Patents/Books/Book chapters
Nil				

2018-19 (CAYm4)

S. No.	Names of the faculty members	Title of the Patent	File Number	Status of the Patents/Books/Book chapters
2.	Dr. M. Ramamoorthy, Dr. G. S. Raju, Dr. K. Anuradha Dr. Ravi Kumar	A Passive Filter Configuration to Reduce THD Produced by Non-Linear Loads	2029/CHE/2011 Dated: 21-12-2012	First report received on 25-05-18 and compliance to examiners report is submitted on 25-02-19. The present status in Amended stage.
2.	Dr. M. Ramamoorthy, Dr. G. S. Raju, Dr. K. Anuradha, Mr. G. Sasi Kumar Mr. A. A. Rajeshwar	A DC-To-DC Converter Configuration by Soft Switching Devices	2028/CHE/2011 Dated: 21-12-2012	First report received on 29-05-18 and compliance to examiners report is submitted on 28-02-19. The present status in Amended stage.

(54) Title of the invention : Coupled Inductor based DC-DC Boost Converter

<p>(51) International classification :H02M0003158000, H02M0003156000, H02M0003157000, H03M0003000000, H01F0027280000</p> <p>(86) International Application No :PCT// Filing Date :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad – 500 090, Telangana State, India Nizampet ----- Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Mrs. R Geshma Kumari Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad 500 090 Telangana State, India. Nizampet ----- 2)Dr. Naresh Pasula Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad 500 090 Telangana State, India. Nizampet ----- 3)Dr. A Ezhilarasi Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet(S.O), Hyderabad 500 090 Telangana State, India. Nizampet ----- 4)Mrs. P Geetanjali Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet(S.O), Hyderabad 500 090 Telangana State, India. Nizampet -----</p>
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(57) Abstract :

A coupled inductor-based DC-DC boost converter (1) comprising a gate driver (2), coupled inductor (3), MOSFET IRFP2907 (4), diode RHR30120 (5), capacitor (6), arduino for pulse generation (7). The converter (1) having two winding tightly coupled inductor (3) having ≈ 0.99 coupling factor are used for low ripple and low leakage, that provides galvanic isolation. The converter (1) provides 9% duty cycle one can get nearly 10 gain which is very high and has the least number of devices and losses with high efficiency. The proposed converter operated in two modes, a) non-shoot through state b) shoot through state.

No. of Pages : 19 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/05/2022

(21) Application No.202241027437 A

(43) Publication Date : 27/05/2022

(54) Title of the invention : A Series Capacitive Compensation Technique with Design Based Iterative Algorithm for Mitigation of Ferranti Effect in EHV and UHV Power Transmission Systems

<p>(51) International classification :H02H0009040000, H04L0012280000, H02J0003240000, C02F0001680000, H02J0050800000</p> <p>(86) International Application No :PCT// Filing Date :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (VNRVJIET) Address of Applicant :VNRVJIET VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Nizampet -----</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. VENU YARLAGADDA Address of Applicant :EEED,VNRVJIET VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Hyderabad -----</p> <p>2)Ms. ANNAPURNA KARTHIKA GARIKAPATI Address of Applicant :EEED,VNRVJIET VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Hyderabad -----</p> <p>3)Mr. B.DEVULAL Address of Applicant :EEED,VNRVJIET VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Hyderabad -----</p> <p>4)Mr. ANJAN BOORUGU Address of Applicant :EEED,VNRVJIET VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Hyderabad -----</p> <p>5)Dr. CHAVA SUNIL KUMAR Address of Applicant :EEED,BVRIET College of Engineering for Women, Rajiv Gandhi Nagar, Hyderabad- 500090, Telangana State, India Hyderabad -----</p> <p>6)Dr. A. GANGA DINESH KUMAR Address of Applicant :EEED, Malla reddy Engineering College for Women , Maisammaguda, Dhulapally,(P.O) Secundrabad Hyderabad- 500100, Telangana State, India Hyderabad -----</p> <p>7)Dr. KOVELAMUDI SHARMILA RUDRAMAMBA Address of Applicant :H&SD,VNRVJIET VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Hyderabad -----</p>
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(57) Abstract :

Currently all FACTS devices are aiming at improvement in power transmission system performance. A simple, robust and flexible device has been invented for further in continuation of research in power sector. Current invention related to series capacitive compensation, which is novel technique has been discovered. This simple device is used to get rid of all complexity in control of various FACTS devices can be avoided and can be effectively implement it in practical systems and is most use full in all no load and loading conditions of Electric Transmission Systems. The novel invention related to implementation of series capacitive compensation, which is novel technique has discovered in order to avoid the complexity of FACTS devices and their control. This simple device is used to get rid of all complexity in control of various FACTS devices can be avoided and can be effectively implement it in practical systems.

No. of Pages : 11 No. of Claims : 3

(54) Title of the invention : Coupled Inductor based DC-DC Boost Converter

<p>(51) International classification :H02M0003158000, H02M0003156000, H02M0003157000, H03M0003000000, H01F0027280000</p> <p>(86) International Application No :PCT//</p> <p>Filing Date :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA</p> <p>Filing Date :NA</p> <p>(62) Divisional to Application Number :NA</p> <p>Filing Date :NA</p>	<p>(71)Name of Applicant : 1)VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad – 500 090, Telangana State, India Nizampet ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mrs. R Geshma Kumari Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad 500 090 Telangana State, India. Nizampet ----- 2)Dr. Naresh Pasula Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad 500 090 Telangana State, India. Nizampet ----- 3)Dr. A Ezhilarasi Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet(S.O), Hyderabad 500 090 Telangana State, India. Nizampet ----- 4)Mrs. P Geetanjali Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet(S.O), Hyderabad 500 090 Telangana State, India. Nizampet -----</p>
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(57) Abstract :

A coupled inductor-based DC-DC boost converter (1) comprising a gate driver (2), coupled inductor (3), MOSFET IRFP2907 (4), diode RHR30120 (5), capacitor (6), arduino for pulse generation (7). The converter (1) having two winding tightly coupled inductor (3) having ≈ 0.99 coupling factor are used for low ripple and low leakage, that provides galvanic isolation. The converter (1) provides 9% duty cycle one can get nearly 10 gain which is very high and has the least number of devices and losses with high efficiency. The proposed converter operated in two modes, a) non-shoot through state b) shoot through state.

No. of Pages : 19 No. of Claims : 8

(54) Title of the invention : Advanced Non Centric PWM (Pulse Width modulated) method to Eliminate Common Mode Voltage in Dual Inverter Fed Open-End Induction Motor Drives

(51) International classification :H02M0007538700, H02M0001120000, H02P0027060000, H02P0021000000, G01R0031340000

(86) International Application No :PCT//
Filing Date :01/01/1900

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

1)Dr.M.Ranjit

Address of Applicant :VNRVJIET VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India -----

2)Dr.V.Ramesh Babu**3)Dr.J.Srinivasa Rao****4)Dr.T.Nireekshana**

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

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4)Dr.T.Nireekshana

Address of Applicant :VNRVJIET VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India -----

(57) Abstract :

The advantages of Asynchronous machines made them so popular in present industry over other machines. Especially, the voltage source inverter (VSI) fed asynchronous drive is preferable for variable speed. Various PWM techniques are used to get the control over the output voltage and frequency of VSI. The conventional VSI suffers with the drawbacks of poor quality output and the larger magnitude of Common Mode Voltage (CMV) which results flow of huge currents through the motor bearings leading to the reduction of efficiency and life span of the motor. Therefore, a new configuration is developed. It is known as Open-End Winding Induction Motor. Various space vector based PWM techniques are implemented in the past to eliminate the CMV. But all those methods not eliminate the CMV completely and to improves the quality of output voltage along with elimination of CMV is done. The same is verified by implementing the prototype model.

No. of Pages : 18 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202141033947 A

(19) INDIA

(22) Date of filing of Application :28/07/2021

(43) Publication Date : 06/08/2021

(54) Title of the invention : Multi-Branch Resonant Converter Based DC Power Supply for Diversified Applications

(51) International classification	:H02J0007350000, H02M0007480000, F15B0021140000, H02M0003240000, A61B0005030000	(71) Name of Applicant : 1)VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Telangana India
(31) Priority Document No	:NA	(72) Name of Inventor :
(32) Priority Date	:NA	1)Dr. Pasula Naresh
(33) Name of priority country	:NA	2)P. Geethanjali
(86) International Application No	:PCT//	3)D.S.G. Krishna
Filing Date	:01/01/1900	4)R. Geshma Kumari
(87) International Publication No	: NA	
(61) Patent of Addition to Application	:NA	
Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

DC-DC Power supplies with diversified modes of operation will always attracts attention of industrialist and researchers. Resonant converters type DC-DC based DC power supplies are popular for load independent constant current(CC)/constant voltage(CV)/constant power (CP) to charge energy storage systems. These power supplies are limited to one or, at worst case two of above said modes of operation. A multi-branch resonant converter-based DC-DC power supply that can deliver power in all three modes irrespective of load dynamics is proposed. A detailed mathematical analysis has been carried to reach out the conditions CC, CV and input constant power (ICP) modes of operation. One can select the mode of operation on tuning the switching frequency of H-Bridge inverter. The versatility of power supply is validated mathematically, coding, simulation and with hardware prototype for different load conditions.Regardless of loading the power supply remained rigid and efficient in each of the mentioned modes.

No. of Pages : 13 No. of Claims : 4



Australian Government

IP Australia

CERTIFICATE OF GRANT INNOVATION PATENT

Patent number: 2021101573

The Commissioner of Patents has granted the above patent on 12 May 2021, and certifies that the below particulars have been registered in the Register of Patents.

Name and address of patentee(s):

Dr. Rajashekar Patil, Professor of Mechanical Engineering, Flat No. D 701, Kolte Patil Raaga Apartments, Bidharahalli Hobli, Kannur, Bangalore 562149 India

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Dr N Jagadeesh, Assistant Professor of Automobile Engineering, P E S College of Engineering Mandya Karnataka 571401 India

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Kiran Gowd M.R, Assistant Professor, Department of Mechanical Engineering, Channabasaveshwara Institute of Technology, NH-206, Gubbi, Tumkur, Karnataka 572216, India

Title of invention:

DEVELOPMENT OF MEGAWATT WIND TURBINE FOR OPTIMAL MANAGEMENT OF SMART AGRICULTURAL FARMS

Name of inventor(s):

Rajashekar Patil, Kalpesh Sunil Kamble, N Jagadeesh, Bharath V G, Devaraj E, R Vara Prasad Kaviti, T CH Anil Kumar, Shaik Dilkush, J Viswanatha Rao, Girish D P, Manjunath Gowda M.R, Kiran Gowd M.R

Term of Patent:

Eight years from 27 March 2021



Dated this 12th day of May 2021

Commissioner of Patents

PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.



Australian Government

IP Australia

CERTIFICATE OF GRANT INNOVATION PATENT

NOTE: This Innovation Patent cannot be enforced unless and until it has been examined by the Commissioner of Patents and a Certificate of Examination has been issued. See sections 120(1A) and 129A of the Patents Act 1990, set out on the reverse of this document.

Patent number: 2021101573



Dated this 12th day of May 2021

Commissioner of Patents

PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.

Extracts from the Patents Act, 1990

Sect 120(1A) Infringement proceedings in respect of an innovation patent cannot be started unless the patent has been certified.

Sec 128 Application for relief from unjustified threats

- (1) Where a person, by means of circulars, advertisements or otherwise, threatens a person with infringement proceedings or other similar proceedings a person aggrieved may apply to a prescribed court, or to another court having jurisdiction to hear and determine the application, for:
- (a) a declaration that the threats are unjustifiable; and
 - (b) an injunction against the continuance of the threats; and
 - (c) the recovery of any damages sustained by the applicant as a result of the threats.
- (2) Subsection (1) applies whether or not the person who made the threats is entitled to, or interested in, the patent or a patent application.

Sec 129A Threats related to an innovation patent application or innovation patent and courts power to grant relief.

Certain threats of infringement proceedings are always unjustifiable.

- (1) If:
- (a) a person:
 - (i) has applied for an innovation patent, but the application has not been determined; or
 - (ii) has an innovation patent that has not been certified; and
 - (b) the person, by means of circulars, advertisements or otherwise, threatens a person with infringement proceedings or other similar proceedings in respect of the patent applied for, or the patent, as the case may be; then, for the purposes of an application for relief under section 128 by the person threatened, the threats are unjustifiable.

Courts power to grant relief in respect of threats made by the applicant for an innovation patent or the patentee of an uncertified innovation patent

- (2) If an application under section 128 for relief relates to threats made in respect of an innovation patent that has not been certified or an application for an innovation patent, the court may grant the application the relief applied for.

Courts power to grant relief in respect of threats made by the patentee of certified innovation patent

- (3) If an application under section 128 for relief relates to threats made in respect of a certified innovation patent, the court may grant the applicant the relief applied for unless the respondent satisfies the court that the acts about which the threats were made infringed, or would infringe, a claim that is not shown by the applicant to be invalid.

Schedule 1 Dictionary

certified, in respect of an innovation patent other than in section 19, means a certificate of examination issued by the Commissioner under paragraph 101E(e) in respect of the patent

(54) Title of the invention : MOTORIZED ANKLE FOOT DRIVEN CUSTOMIZED PROSTHETIC LEG WITH EXOSKELETON

<p>(51) International classification :A61F0002500000, A61F0002600000, A61F0002640000, A61F0002780000, A61H0003000000</p> <p>(31) Priority Document No :NA</p> <p>(32) Priority Date :NA</p> <p>(33) Name of priority country :NA</p> <p>(86) International Application No :NA</p> <p>Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number:NA</p> <p>Filing Date :NA</p> <p>(62) Divisional to Application Number :NA</p> <p>Filing Date :NA</p>	<p>(71)Name of Applicant : 1)VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (VNRVJIT) Address of Applicant :Bachupally road Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Telangana India</p> <p>(72)Name of Inventor : 1)Dr.K.SUDHA RANI 2)Dr. R.MANJULA SRI 3)Dr.T.NIREEKSHANA 4)Dr. SHUCHI TIWARI 5)K.MANI KUMARI 6)Dr. N. SANDHYA 7)Dr. N. MANGATHAYARU 8)K.VIJAY CHANDRA 9)NAREGALKAR AKSHAY 10)Dr.A.GIRIPRASAD</p>
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(57) Abstract :

A prosthetic leg with 3D printing technology saves 70% of costs, incorporating innovative designs with high precision and low wastage. As the design is input from laser scanner, the measurements can be stored for further use and can be replicated. They can be transferred to the place of manufacturing and the patient can rest in his/her place. The device has detachable components such as an artificial leg and exoskeleton. This design can be utilized for people with multiple disabilities, people with amputated lower leg can use this as an artificial leg. The ankle exoskeleton can be utilized for people who survived after stroke, paralysis, and people whoever have weak limbs. People who have problem of lower limb amputation cum walking disability due to paralysis or stroke can be used as both artificial leg with ankle exoskeleton.

No. of Pages : 12 No. of Claims : 2

पेटेंट कार्यालय
शासकीय जर्नल

**OFFICIAL JOURNAL
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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202141049019 A

(19) INDIA

(22) Date of filing of Application :27/10/2021

(43) Publication Date : 05/11/2021

(54) Title of the invention : SYSTEM FOR MITIGATING CIRCULATING CURRENT IN TYPE MODULAR MULTILEVEL CONVERTER (MMC)

<p>(51) International classification :H02M0007483000, G05B0013040000, G01D0018000000, H02J0003380000, G06F0008380000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)Chaitanya Bharathi Institute of Technology (Autonomous) Address of Applicant :Gandipet, Hyderabad ----- - Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Dr. M Balasubbareddy Address of Applicant :Associate Professor, Department of Electrical and Electronics Engineering, Chaitanya Bharathi Institute of Technology (Autonomous), Gandipet, Hyderabad, Telangana 500075 ----- 2)Dr. P.Venkata Prasad Address of Applicant :Professor, Department of Electrical and Electronics Engineering, Chaitanya Bharathi Institute of Technology (Autonomous), Gandipet, Hyderabad, Telangana 500075 ----- 3)Dr.Nireekshana Turaka Address of Applicant :Associate Professor, EEE Department VNR Vignana Jyothi Institute of Engineering and Technology, Vignana Jyothi Nagar, Bachupally, Hyderabad-500 090 ----- -</p>
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(57) Abstract :

The main purpose of this present invention is to mitigate the circulatory current by designing a controller device in type Modular Multilevel Converter (MMC). The main design of our invention discloses the system for mitigating circulating current in type MMC. In this method, the gain encoder is deciding the range of gain and passes the value to the optimization framework. The state matrix estimator evaluates whether the given gain value is correct or not. After that, the looped error estimator estimates the present error and previous error for measuring the accuracy of the predictions. Subsequently, the controller design set the predicted gain value in MMC. Also, the optimization framework reduces the circulating current based on the estimation. Then, the solar panels absorb the light from the sunlight turns it into electricity, and transmits the electricity to the DC utility (Load). [To be published with Figure.2]

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202141010194 A

(19) INDIA

(22) Date of filing of Application :11/03/2021

(43) Publication Date : 19/03/2021

(54) Title of the invention : SELF - EXCITED SYNCHRONOUS GENERATOR (SESG) WITHOUT D.C EXCITATION

(51) International classification	:H02P0101150000, H02K0019160000, H02P0101100000, H02P0009100000, F03D0007020000	(71)Name of Applicant : 1)VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (VNRVJIET) Address of Applicant :Bachupally road VignanaJyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Telangana India
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(33) Name of priority country	:NA	2)Dr. Nireekshana Turaka
(86) International Application No	:NA	3)Dr .Giri Prasad Ambati
Filing Date	:NA	4)Dr.Srinivasa Rao Jalluri
(87) International Publication No	: NA	5)Dr. Shiva Prasad Edara
(61) Patent of Addition to Application Number:	NA	6)Dr.Bhavani Jupalli
Filing Date	:NA	7)Mr. Sasi Kumar Gedela
(62) Divisional to Application Number	:NA	8)Mr. Devulal Bhukya
Filing Date	:NA	9)Mr. Sivaji Bandi

(57) Abstract :

Self excited synchronous generator (SESG) without D.C Excitation is provided. The typical behavior of the Three Phase Synchronous Generator is observed in the laboratory, when a Capacitor of Sufficient rating is connected across 5Kva Synchronous Generator output terminals which are run at its synchronous speed using a DC Shunt Motor. MG set is run at 1500RPM and the D.C Excitation to the generator is removed and 2KVAR Capacitor is connected across phase-R and the neutral. Synchronous Generator is working as a 1-ph Self Excited Synchronous Generator (1-Ph SESG). When the same Generator is connected with a 5KVAR Capacitor then it is working as a 3-ph Self Excited Synchronous Generator (3-Ph SESG). The machine is simulated for various ratings with proper design of Capacitor bank using Simulink model. These Self excited synchronous generator are suited for remote rural regions and are robust in construction with lesser maintenance and low in costs.

No. of Pages : 19 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202141039969 A

(19) INDIA

(22) Date of filing of Application :03/09/2021

(43) Publication Date : 10/09/2021

(54) Title of the invention : Method and Implementation for mitigating Voltage Sag and swell in distributed system with Under Voltage /Over Voltage Relay based Compensators

(51) International classification	:G06F0030367000, G06F0030200000, H02J0003000000, H02J0003060000, G05B0017020000	(71) Name of Applicant : 1)VNR Vignana Jyothi Institute of Engineering and Technology (VNRVJIET) Address of Applicant :VNRVJIET Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad- 500090, Telangana State, India Tamil Nadu India
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(86) International Application No	:PCT//	3)Dr.D RAVI KUMAR
Filing Date	:01/01/1900	4)Dr. GIRIPRASAD AMBATI
(87) International Publication No	: NA	5)Dr. E SHIVA PRASAD
(61) Patent of Addition to Application Number:	NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A distribution system is developed for the simulation study in the MATLAB Simulink environment and analyzed the simulation results in both loop models. The simulation of voltage sags, swells and VFTOTMs in gas insulated system equivalent circuit Simulink model have been performed. The under voltage as well as over voltage relay based compensator models have been implemented in both open loop as well as closed loop modes.. This method of mitigation of voltage sags, swells and VFTOTMs have been simulated and the analyzed the results. The simulation results show that the said method is quiet effective in mitigating the PQ issues. Voltage sags, swells and VFTOTMs have been obtained without compensation equipment. Secondly these PQ issues have been mitigated with open loop control of compensation equipment and lately over voltage and under voltage relay based closed loop control have been implemented and mitigated the PQ problems

No. of Pages : 20 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202141045365 A

(19) INDIA

(22) Date of filing of Application :06/10/2021

(43) Publication Date : 15/10/2021

(54) Title of the invention : A Novel FACTS (Flexible Alternating Current Transmission Systems) Device Gate Turn off Thyristor Controlled Static Shunt Compensator” (GCSSC) to Enhance Power System Stability and Power Transfer Capability of Both Transmission and Distribution Systems

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(51) International classification	:H02J 3/00	
(86) International Application No	:PCT//	
Filing Date	:01/01/1900	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A Flexible A.C Transmission Systems device Gate Turn off Thyristor Controlled Static Shunt Compensator (GCSSC) is provided for improvement of power system performance. This is a as Gate Turn off Thyristor (GTO) controlled static shunt compensator used to connect in parallel with load. This controller rapidly varies the shunt susceptance using conduction angle control of GTO's with gate pulse generator. This rapid control of susceptance leads to control of injected reactive power by the device thereby enhancing terminal voltage and power transfer through the transmission or distribution lines. The turn off capability of the device made it compatible to power system requirements like other shunt type FACTS Devices viz. Static Var Compensator (SVC) and Static Synchronous Compensator (DSTATCOM). The simulation is performed with distribution systems of 11kv system and 230v systems, feeding RL loads through short transmission line. This device is compatible with all types of static shunt FACTS Devices.

No. of Pages : 12 No. of Claims : 3

(54) Title of the invention : VIRTUAL MOM RESPONSIVE BABY MONITORING TOY

(51) International classification	:G08B0021020000, A63H0033000000, G06N0005040000, G06N0020000000, G09B0019000000	(71)Name of Applicant : 1)VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY Address of Applicant :Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad, Telangana, 500 090, India Telangana India
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Filing Date	:NA	4)Dr. SAGAR YERUVA
(87) International Publication No	: NA	5)G. YASHWANTH
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(57) Abstract :

ABSTRACT VIRTUAL MOM RESPONSIVE BABY MONITORING TOY • The virtual mom is a responsive baby monitoring toy used to reduce the stress on working mothers. As working mothers find it tedious to manage both work and taking care of the baby, this toy helps them monitor the baby when they're at work. It's a smart toy, equipped with sensors to track different movements /actions of the baby/infant. Trained Deep Learning models and some sensor data help in interpreting the movements/actions of the baby. The inferences made by the sensors are sent to a server through Wi-Fi, from where the mobile application can access and display them. The mobile application acts as the two-way communicator which conveys the moods and actions of the baby to the mother and then returns the chosen style of response from the mother to the toy. The toy provides a provision for the mother to either speak to the baby or play pre-recorded audio clips or play music which makes the baby feel relaxed. The response received from the mother's end is then processed and the toy performs the required action to calm the baby. When the mother is at work, she can observe the kidTMs activities. Some working parents employ babysitters and caretakers to take care of their children while theyTMre away. Sometimes these caretakers donTMt perform their duty genuinely and using this toy, parents can also monitor how the caretakers are behaving with the child. The mother can also send a response whenever she wants to talk and engage the baby, hence making virtual parenting possible, and successful. Fig.2. Circuit Diagram

No. of Pages : 10 No. of Claims : 6