

LIST OF PATENTS

Patents: [06 Filed- 2 granted, 04 Under Examination]

of Electrical Engineering Department, College of Engineering Pune

Sr. No.	Patent Title	Authors	Patent Details	Publication Date
1	A solar Photovoltaic thermal collector system	R.S. Kulkarni, S.S. Dambhare, Nitant Mate, D. B. Talange	202221007041, E-106/399/2022/MUM Date.10/02/2022	Provisional patent is filed Date.10/02/2022
2	Rotor structures for permanent magnet synchronous motors	B. N. Chaudhari , R. T. Ugale	Patent. Appl. No. 569 / MUM / 2012, Application date 02/03/2012	Patent no 327030, Date of grant 9/12/2019
3	Hybrid excited rotor structures for line start permanent magnet synchronous motors	B. N. Chaudhari, R. T. Ugale, S. Baka	Patent. Appl. No.3621/MUM/2012, Dec.26, 2012	Indian Patent No.374267, Patent Grant date- 11/08/2021
4	Economic test set up for EV motor testing using innovative coupling	Mayank Bhalerao, Vispi Karkaria, Pranali Wankhede, V. L. Kokate, A. P. Deshpande, R. M. Holmukhe, P. B. Karandikar	Patent Appl No. 2019/21020439A	07/06/2019
5	An Outer rotor Permanent Magnet Polyphase Transverse Flux Machine	Bhalchandra N. Chaudhari, Priyanka Bastawade, R. T. Ugale	Patent. Appl. No. 201821014397, Date-16/04/2018	Published, Under Examination
6	An Outer Rotor Hybrid excited Polyphase Transverse Flux Machine	Bhalchandra N. Chaudhari, Bhavesh Rathod, Gautam Hawaldar, Priyanka Bastawade, R. T. Ugale	Patent. Appl. No. 201821014396, Date-16/04/2018	Published, Under Examination

Patent 1 - Under Examination

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G.A.R.6
[See Rule 22(1)]
RECEIPT

Docket No 7572

Date/Time 2022/02/10 13:07:02

To
TANNA CHIRAG

UserId: inkideepat

B - 72, 62,73 Pereira Nagar 7, Khopat

CBR Detail:

Sr. No.	Ref. No./Application No.	App. Number	Amount Paid	C.B.R. No.	Form Name	Remarks
1	202221007041	TEMP/E-1/8063/2022-MUM	1600	3394	FORM 1	A SOLAR PHOTOVOLTAIC-THERMAL COLLECTOR SYSTEM
2	E-106/399/2022/MUM	202221007041	0	----	FORM28	----

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
N-0000919846	Online Bank Transfer	1002220006916	1600.00	1475001020000001

Total Amount : ₹ 1600

Amount in Words: Rupees One Thousand Six Hundred Only

Received from TANNA CHIRAG the sum of ₹ 1600 on account of Payment of fee for above mentioned Application/Forms.

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(12) PATENT APPLICATION PUBLICATION

(21) Application No.569/MUM/2012 A

(19) INDIA

(22) Date of filing of Application :02/03/2012

(43) Publication Date : 22/06/2012

(54) Title of the invention : ROTOR STRUCTURES FOR PERMANENT MAGNET SYNCHRONOUS MOTOR

(51) International classification	:H02K 21/00	(71)Name of Applicant :
(31) Priority Document No	:NA	1)COLLEGE OF ENGINEERING
(32) Priority Date	:NA	Address of Applicant :COLLEGE OF ENGINEERING,
(33) Name of priority country	:NA	PUNE, WELLESLY ROAD, SHIVAJI NAGAR, PUNE - 411005,
(86) International Application No	:NA	MAHARASHTRA, INDIA.
Filing Date	:NA	(72)Name of Inventor :
(87) International Publication No	:N/A	1)CHAUDHARI BHALCHANDRA NEMICHAND
(61) Patent of Addition to Application Number	:NA	2)UGALE RAJARAM TUKARAM
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A magnet arrangement for a rotor of a permanent magnet motor (line start or electronically start), the rotor comprising one pair of radially aligned extended rotor slots subtending an angle at the center of a shaft of the motor; said arrangement is characterized by two pairs of circumferentially magnetized magnets having a proximal end and a distal end from the shaft of the motor, each of said magnets being placed in the extended rotor slot at a pre-determined distance from the periphery of the rotor; and a connecting magnet placed in close proximity to said pair and spaced apart from the shaft of the motor; each of said connecting magnets being adapted to extend between the proximal ends of said magnets of said pair.

No. of Pages : 32 No. of Claims : 10



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एकन्व/PATENTS | अभिकल्प/DESIGNS |
व्यापार चिह्न/TRADE MARKS | भौगोलिक
उपदर्शन/GEOGRAPHICAL INDICATIONS



सत्यमेव जयते

**भारत सरकार
GOVERNMENT OF INDIA**

Patent 2 - **Granted**

एकन्व कार्यालय / THE PATENT OFFICE
बौद्धिक सम्पदा भवन / I.P.O. BUILDING
एंटाप हिल/Antop Hill,
एस.एम.रोड/ S.M.Road,
मुंबई/ Mumbai- 400037
दूरभाष /Tel. No.: (091)(022) 2415365 1
फैक्स / Fax: 022-24130387
ई मेल/ Email: mumbai-patent@nic.in
वेबसाइट /Website: <http://ipindia.nic.in>

सं. \ No. 569/MUM/2012

दिनांक \ Dated the 09/12/2019

सेवा मे, \ To :

Address of Service:- R.K. DEWAN & CO. PODAR CHAMBERS, S. A. BRELVI ROAD, FORT, MUMBAI 400 001, MAHARASHTRA, INDIA
Email Id:- dewan@rkdewanmail.com

विषय :- पेटेंट आवेदन संख्या 569/MUM/2012 के संबंध में अधिनियम की धारा 43 के तहत पेटेंट अनुदान तथा पेटेंट रजिस्टर में प्रविष्टि की सूचना
Sub :- Intimation of the grant and recordal of patent under section 43 of the Act in respect of patent application no. 569/MUM/2012

महोदय/महोदया,
Sir/Madam,

आपको सूचित किया जाता है कि पेटेंट अधिनियम, 1970 की धारा 12 व 13 तथा उस आधार पर बने नियम के तहत उपर्युक्त पेटेंट आवेदन के परीक्षण [व 22/10/2019 को हुई सुनवाई] के उपरान्त एतद्वारा पेटेंट अनुदान किया जाता है। तथा पेटेंट अनुदान की प्रविष्टि 09/12/2019 को पेटेंट रजिस्टर में कर दी गयी है।

This is to Inform you that following the examination of above mentioned patent application under section 12 and 13 of The Patents Act, 1970 and Rules made thereunder [and hearing held on 22/10/2019] a patent is hereby granted and recorded in the Register of Patents on the 09/12/2019. The Patent Certificate is enclosed herewith.

पेटेंट संख्या \ Patent No	: 327030
आवेदक का नाम \ Name Of Applicant	: COLLEGE OF ENGINEERING
पेटेंट दिनांक \ Date of Patent	: 02/03/2012
पूर्विका तिथि \ Priority Date	: 02/03/2012
परीक्षण हेतु अनुरोध दाखिल करने की तिथि \ Filing date of Request for examination	: 12/03/2012
शीर्षक \ Title	: ROTOR STRUCTURES FOR PERMANENT MAGNET SYNCHRONOUS MOTOR
दावों की संख्या \ Number of claims	: Claims 1-10 filed on 28/06/2018.

उपर्युक्त पेटेंट के अनुदान का प्रकाशन अधिनियम की धारा 43 के तहत पेटेंट कार्यालय के आधिकारिक जर्नल में किया जाएगा।

The grant of above mentioned patent will be published in the Official Journal of the patent Office under section 43 of the Act.

पेटेंट अधिनियम 1970 यथा संशोधित पेटेंट (संशोधन) नियम, 2005/ पेटेंट नियम, 2003 यथा संशोधित पेटेंट (संशोधन) नियम, 2016 की धारा 142 की उप-धारा (4) के प्रावधानों के तहत उपरोक्त प्रविष्टि की तिथि से 3 माह के भीतर इस कार्यालय में नवीकरण शुल्क जमा किया जाना चाहिए।

The payment of renewal fee is required to be made at this office within three(3) months from the aforesaid date of recording according to the proviso in sub-section(4) of Section 142 of The Patents Act,1970, as amended by The Patents (Amendment) Act, 2005 / The Patents Rules, 2003 as amended by The Patents (Amendment) Rules, 2016.

Jeetendra Singh

(नियंत्रक पेटेंट)

Controller of Patents

टिप्पणी / Note :

1. संशोधित नवीकरण शुल्क हेतु कृपया महानियंत्रक पेटेंट, अभिकल्प एवं व्यापार चिह्न की आधिकारिक वेबसाइट www.ipindia.gov.in पर उपलब्ध पेटेंट (संशोधन) नियम 2016 की प्रथम अनुसूची (शुल्क) देखें।

For revised renewal fees kindly refer to the First Schedule (fees) of The Patents (Amendment) Rules 2016 available on the official website of Controller General of Patents, Designs and Trade Marks www.ipindia.gov.in

2. कार्यालय द्वारा पेटेंट प्रमाणपत्र की कोई भी कागजी प्रति अलग से जारी नहीं की जाएगी।

No hard copy of Patent Certificate shall be issued separately by the office.



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THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 Of The Patents Rules)

क्रमांक : 022106835
SL No :



पेटेंट सं. / Patent No. : 327030
आवेदन सं. / Application No. : 569/MUM/2012
फाइल करने की तारीख / Date of Filing : 02/03/2012
पेटेंटी / Patentee : COLLEGE OF ENGINEERING

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित ROTOR STRUCTURES FOR PERMANENT MAGNET SYNCHRONOUS MOTOR नामक आविष्कार के लिए, पेटेंट अधिनियम, १९७० के उपबंधों के अनुसार आज तारीख 2nd day of March 2012 से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled ROTOR STRUCTURES FOR PERMANENT MAGNET SYNCHRONOUS MOTOR as disclosed in the above mentioned application for the term of 20 years from the 2nd day of March 2012 in accordance with the provisions of the Patents Act, 1970.



अनुदान की तारीख : 09/12/2019
Date of Grant :

पेटेंट नियंत्रक
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, 2nd day of March 2014 को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note. - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 2nd day of March 2014 and on the same day in every year thereafter.

Patent 3 - Granted.

(12) PATENT APPLICATION PUBLICATION

(21) Application No.3621/MUM/2012 A

(19) INDIA

(22) Date of filing of Application :26/12/2012

(43) Publication Date : 15/02/2013

(54) Title of the invention : HYBRID EXCITED ROTOR STRUCTURES FOR PERMANENT MAGNET SYNCHRONOUS MOTORS

(51) International classification	:H02K21/00	(71)Name of Applicant :
(31) Priority Document No	:NA	1)COLLEGE OF ENGINEERING, PUNE
(32) Priority Date	:NA	Address of Applicant :WELLESLEY ROAD, SHIVAJI
(33) Name of priority country	:NA	NAGAR, PUNE- 411 005, MAHARASHTRA, INDIA
(86) International Application No	:NA	(72)Name of Inventor :
Filing Date	:NA	1)CHAUDHARI, BHALCHANDRA NEMICHAND
(87) International Publication No	: NA	2)UGALE, RAJARAM TUKARAM
(61) Patent of Addition to Application Number	:NA	3)BAKA SRINIVAS
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A Line Start Permanent Magnet Synchronous Motor comprises a stator; a rotor pair comprising a pair of rotor elements, the elements being a Field Wound Claw Pole (FWCP) rotor element having a field winding and a Line Start Permanent Magnet (LSPM) rotor element having permanent magnets configured thereon; and a controller adapted to Control field excitation of the Field Wound Claw Pole (FWCP) rotor element to provide hybrid excitation in conjunction with magnetic excitation of the permanent magnets of the Line Start Permanent Magnet (LSPM) rotor element. Such a configuration reduces the braking torque typically present in line start permanent magnet synchronous motors adjust power factor and improves the stability and power factor of the machine.

No. of Pages : 42 No. of Claims : 12

Patent 3- Granted



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पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 Of The Patents Rules)

क्रमांक : 022114380
SL No :



पेटेंट सं. / Patent No. : 374267
आवेदन सं. / Application No. : 3621/MUM/2012
फाइल करने की तारीख / Date of Filing : 26/12/2012
पेटेंटी / Patentee : COLLEGE OF ENGINEERING, PUNE

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित HYBRID EXCITED ROTOR STRUCTURES FOR PERMANENT MAGNET SYNCHRONOUS MOTORS नामक आविष्कार के लिए, पेटेंट अधिनियम, १९७० के उपबंधों के अनुसार आज तारीख 26th day of December 2012 से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled HYBRID EXCITED ROTOR STRUCTURES FOR PERMANENT MAGNET SYNCHRONOUS MOTORS as disclosed in the above mentioned application for the term of 20 years from the 26th day of December 2012 in accordance with the provisions of the Patents Act, 1970.



अनुदान की तारीख : 11/08/2021
Date of Grant :

पेटेंट नियंत्रक
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, 26th day of December 2014 को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note. - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 26th day of December 2014 and on the same day in every year thereafter.

(12) PATENT APPLICATION PUBLICATION

(21) Application No.201921020439 A

(19) INDIA

(22) Date of filing of Application :23/05/2019

(43) Publication Date : 07/06/2019

(54) Title of the invention : ECONOMIC TEST SET UP FOR EV MOTOR TESTING USING INNOVATIVE COUPLING

(51) International classification	:H02P 5/00	(71)Name of Applicant : 1)MAYANK J. BHALERAO Address of Applicant :PLOT NO.5, SR.NO. 55/3A GHULE NAGAR, PUNE,MAHARASHTRA,INDIA, PIN CODE: 411041 Maharashtra India
(31) Priority Document No	:NA	2)VISPI N. KARKARIA
(32) Priority Date	:NA	(72)Name of Inventor :
(33) Name of priority country	:NA	1)MAYANK J. BHALERAO
(86) International Application No	:NA	2)VISPI N. KARKARIA
Filing Date	:NA	3)PRANALI S. WANKHEDE
(87) International Publication No	: NA	4)V.L. KOKATE
(61) Patent of Addition to Application Number	:NA	5)A.P. DESHPANDE
Filing Date	:NA	6)R.M. HOLMUKHE
(62) Divisional to Application Number	:NA	7)PARASHURAM KARANDIKAR
Filing Date	:NA	

(57) Abstract :

ABSTRACT- Currently there are many practices for testing the various parameters of motors in field of engineering. The cost of automated set up is too high and becomes a difficulty for the small scale industries to afford it. Many a times the motors used in electric rickshaws are directly fit in the vehicle without being tested for is reliability. Moreover testing the motor mechanically is limited by the mounting dimensions of the motor that is a specific set up can be used for the specific mounting design and dimensions. The present invention solves the above mentioned problem. Motors of various kinds weather foot mounted or wall mounted can be tested for the various parameters such as Torque Vibrations RPM etc. Any motor of varied mounting dimensions can be easily tested by this set up. Thus the said invention proposes an easy and facile way to test motors used in electric vehicles as well as other kinds of primary usage motors.

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.201821014397 A

(19) INDIA

(22) Date of filing of Application :16/04/2018

(43) Publication Date : 18/10/2019

(54) Title of the invention : AN OUTER ROTOR PERMANENT MAGNET POLYPHASE TRANSVERSE FLUX MACHINE

(51) International classification	:H02K 1/27	(71)Name of Applicant :
(31) Priority Document No	:NA	1)COLLEGE OF ENGINEERING, PUNE
(32) Priority Date	:NA	Address of Applicant :WELLESLEY RD., SHIVAJINAGAR, PUNE 411005, MAHARASHTRA, INDIA Maharashtra India
(33) Name of priority country	:NA	(72)Name of Inventor :
(86) International Application No	:NA	1)BHALCHANDRA NEMICHAND CHAUDHARI
Filing Date	:NA	2)BHAVESH ATUL RATHOD
(87) International Publication No	: NA	3)GAUTAM VARSHA HAVALDAR
(61) Patent of Addition to Application Number	:NA	4)PRIYANKA MANDAR GOLATGAONKAR
Filing Date	:NA	5)RAJARAM TUKARAM UGALE
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

ABSTRACT AN OUTER ROTOR PERMANENT MAGNET POLYPHASE TRANSVERSE FLUX MACHINE An outer rotor permanent magnet polyphase transverse flux machine comprising: stator, with spatially distributed polyphase winding, with a shaft (7a); non-magnetic former (6a), axially fitted onto a stator shaft (7), and encircling shaft (7a); magnetic element axially disposed around said non-magnetic former (6); and a rotor (1a), surrounding said stator; wherein the arrangement of said magnetic element and said axially stacked elements (4a) facilitating: flux emerging out of teeth on disc (3a) attached to north pole of magnet (5a) on non-magnetic former (6a) to cross air gap between stator and rotor; entering the corresponding adjacent limb on the stacks of said elements (4a), on the rotor, axially traverse through stacks of elements (4a), and through the limb, across, on opposite axial end of stacks of elements (4a); and entering into the corresponding adjacent limb on said disc (3a) attached to south pole of magnetic element (5a) on stator (6a) .



No. of Pages : 54 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION

(21) Application No.201821014396 A

(19) INDIA

(22) Date of filing of Application :16/04/2018

(43) Publication Date : 18/10/2019

(54) Title of the invention : AN OUTER ROTOR HYBRID EXCITED POLYPHASE TRANSVERSE FLUX MACHINE

(51) International classification	:H02K 21/12	(71)Name of Applicant :
(31) Priority Document No	:NA	1)COLLEGE OF ENGINEERING, PUNE
(32) Priority Date	:NA	Address of Applicant :WELLESLEY RD., SHIVAJINAGAR,
(33) Name of priority country	:NA	PUNE 411005, MAHARASHTRA, INDIA Maharashtra India
(86) International Application No	:NA	(72)Name of Inventor :
Filing Date	:NA	1)BHALCHANDRA NEMICHAND CHAUDHARI
(87) International Publication No	: NA	2)PRIYANKA MANDAR GOLATGAONKAR
(61) Patent of Addition to Application Number	:NA	3)RAJARAM TUKARAM UGALE
Filing Date	:NA	4)BHAVESH ATUL RATHOD
(62) Divisional to Application Number	:NA	5)GAUTAM VARSHA HAVALDAR
Filing Date	:NA	

(57) Abstract :

ABSTRACT AN OUTER ROTOR HYBRID EXCITED POLYPHASE TRANSVERSE FLUX MACHINE An outer rotor hybrid excited polyphase transverse flux machine comprising: stator, with polyphase windings, spatially distributed, along its outer periphery, with a shaft; non-magnetic cylinder (9a) axially mounted on to a stator shaft (10a) and encircling said stator shaft (10a); magnetized magnet (6a);cat least one permanent magnet and an electromagnet, wherein axially magnetized cylindrical magnet (6a) is a permanent magnet and wherein electromagnet is formed by a cylindrical annulus (8a) made up of ferromagnetic material axially disposed about a stator body; a coil (5a) axially wound around said cylindrical annulus (8a), the combination forming a series hybrid combination comprising said permanent magnet and said electromagnet being coaxially placed adjacent to each other on said non-magnetic cylinder (9a); and stator discs (3a).



No. of Pages : 49 No. of Claims : 19