|  |  |  |
| --- | --- | --- |
| **FORM 1**  **THE PATENTS ACT, 1970**  **&**  **The Patents Rules, 2003**  **APPLICATION FOR GRANT OF PATENT**  **[See section 7,54&135 and rule 20(1)** | **(FOR OFFICE USE ONLY)**  **Application No:**  **Filing Date:**  **Amount of Fee Paid:**  **CBR No:**  **Signature:** | |
| 1. **APPLICANT(S)**  |  |  |  | | --- | --- | --- | | **Name** | **Nationality** | **Address** | | Dr.R.SURESH | INDIAN |  | | | |
| 1. **INVENTOR(S)**  |  |  |  | | --- | --- | --- | | **Name** | **Nationality** | **Address** | | 1.Dr.R.SURESH | INDIAN |  | | 2.Mr.N.MURUGESAN | INDIAN | 3/577 ,Gandhi Road , Ammayarkuppam , Pallipet Taluk , Thiruvallur District , Tamil nadu , India .  Pin No : 631301 | | | |
| 1. **TITLE OF THE INVENTION**   ULTIMATE WIND MILL | | |
| 1. **ADDRESS FOR CORRESPONDENCE OF APPLICANT/AUTHORIZED PATENT AGENT IN INDIA** |  | |
| 1. **PRIORITY PARTICULARS OF THE APPLICATION (S) FILED IN CONVENTION COUNTRY**  |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Country** | **Application Number** | **Filing Date** | **Name of the Applicant** | **Title of the Invention** | | INDIA |  |  | Dr.R.SURESH | ULTIMATE WIND MILL | | | |
| 1. **PARTICULARS FOR FILING PATENT COOPERATION TREATY (PCT) NATIONAL PHASE APPLICATION**  |  |  | | --- | --- | | **International application number** | **International filing date as allotted by the receiving office** | |  |  | | | |
| 1. **PARTICULARS FOR FILING DIVISIONAL APPLICATION**  |  |  | | --- | --- | | **Original (first) application number** | **Date of filing of Original (first) application** | |  |  | | | |
| 1. **PARTICULARS FOR FILING PATENT OF ADDITION**  |  |  | | --- | --- | | **Main application/patent number** | **Date of filing of main application** | |  |  | | |
| 1. **DECLARATION:** | |
| 1. **Declaration by the inventor (s)**   I/We, the above named inventor(s) is/are the true & first inventor(s) for this invention and declare that the application(s) herein is/are my/our assignee or legal representative.   * 1. Date.   2. Signature(s) :   3. Name(s) : Dr.R.SURESH | |
| 1. **Declaration by the applicant(s) in the convention country**   I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.   * 1. Date   2. Signature(s)   3. Name(s) of the signatory : Dr. R.SURESH | |
| 1. **Declaration by the applicant(s):**   I /We, the applicant(s) declares(s) that: Dr.R.SURESH   * + I am/we are in possession of the above –mentioned invention   + The provisional/complete specification relating to the invention is filed with this application.   + The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.   + There is no lawful ground of objection to the grant of the Patent to me/us.   + I am/we are the assignee or legal representative of true & first inventors.   + The application or each of the applications, particulars of which are given in Para-5 was the first application in convention country/countries in respect of my/our convention.   + I/We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/we drive the title.   + My/our application in India is based on international application under patent cooperation Treaty (PCT) as mentioned in Para-6.   + The application is divided out of my /our applications particulars of which are given in Para-7 and pray that this application may be treated as deemed to have been filed on -------------------- under sec.16 of the Act.   + The said invention is an improvement in or modification of the invention particulars of which are given in Para-8. | |

|  |
| --- |
| 1. **Following are the attachments with the application:**    1. Provisional specification/Complete specification   Abstract:  The main concept of this experiment is to produce electricity from wind flow with low frictional loss. When the air flows through the propeller connected to the armature, starts to rotate.When the armature rotate, the NdFeB magnets also tends to rotate that causes flux change with the stator coil. The emf flows with the direction of Flemings right hand rule.  There by the friction is very less between sharp point of rotor and slide. From my experiment 0.2 volts is obtained.  Methodology :   1. Flemmings right hand rule : (Generator) When the flux changes in the conductor linked with the coil ,emf is induced in it. While stretching our fore, middle, thumb fingers mutually perpendicular to each other, the fore finger indicates the direction of force, middle finger indicates the direction of current, thumb indicates the direction of motion. 2. Magnetic levitation : When same magnetic poles are positioned nearer to each other magnetic repulsion takes place and When opposite magnetic poles are positioned nearer to each other magnetic attraction takes place.   Design:  It consists of stator , rotor, propeller, blocker.  The stator model consists of permanent magnets which is used to levitate the armature equipped with neodymium magnets. Stator coil has 26 gauge copper coil of 1000 turns and placed at the middle of the armature.  The rotor model consists of ndfeb magnets with two permanent earth ring magnets with a sharp edge.  A self designed propeller is connected to the rotor that Operates at very low or high wind flow rates, Low starting torque is needed for the rotation.  Blocker is a glass slide placed at the end of armature to oppose the forces caused by wind and the stator magnetic field , that is the only thing to produce friction between the sharp edge and the slide.  Materials used :   1. Permanent magnets 2. NdFeB magnets 3. Ring magnets 4. Coil 5. slides 6. 30 LED 7. Propeller 8. DC motor   Conclusion :  Through this experiment we can gain more efficiency of power output and need not to pollute the environment, eco friendly , manpower is not needed, Less friction(loss), Operates at low wind flow rate, high efficiency, less internal resistance, occupies less space, maintenance free, less propeller length, less disturbance to migrating birds, gearings are not needed, rotates at high speed.     * 1. Complete specification (in conformation with the international application)/as amended before the international preliminary Examination Authority (IPEA), as applicable (2 copies), No. of pages---------- No of Claims -------------.   2. Drawings (in conformation with the international application)/as amended before the international Preliminary Examination Authority (IPEA),as applicable (2 copies), No. of sheets ------------   C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_132912.jpg  C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_132854.jpg   * 1. Priority documents   C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_124922.jpg C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_125014.jpg C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_125145.jpgC:\Users\muruges\Desktop\New folder (2)\IMG_20160729_125337.jpgC:\Users\muruges\Desktop\New folder (2)\IMG_20160729_125511.jpg  C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_125723.jpg  C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_125243.jpgC:\Users\muruges\Desktop\New folder (2)\IMG_20160729_125306.jpg  C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_125100.jpg C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_132100.jpgC:\Users\muruges\Desktop\New folder (2)\IMG_20160729_131925.jpg  C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_132005.jpgC:\Users\muruges\Desktop\New folder (2)\IMG_20160729_132053.jpg  ww  C:\Users\muruges\Desktop\New folder (2)\IMG_20160729_132927.jpgC:\Users\muruges\Desktop\New folder (2)\IMG_20160729_133012.jpg   * 1. Translation of priority document/Specification/International Search Report   2. Statement and undertaking on Form 3   3. Power of Authority   4. Declaration of inventorship on Form 5   5. Sequence listing in electronic form   6. ……………………………………   Fee Rs…………… in cash/cheque/Bank Draft bearing no ………………Date……….. on ……………. Bank.  I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated herein are correct and I/We request that a patent may be granted to me/us for the said invention.  Dated this……………..day of……………………20…….  Signature:  Name : |
| Note:-  \* Repeat boxes in case of more than one entry.  \*To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.  \*Tick(√)cross(x) whichever is applicable/not applicable in declaration in para-9.  \*Name of the inventor and applicant should be given in full, family name in the beginning.  \* Complete address of the inventor and applicant should be given stating the postal index no./code state and country.  \*Strike out the column which is/are not applicable  \*For fee: See First Schedule |

**FORM 2**

|  |
| --- |
| **THE PATENT ACT 1970 (39 of 1970) & The patents Rules, 2003**  **PROVISIONAL SPECIFICATION**  **(See section 10 and rule 13)** |
| * + 1. **TITLE OF THE INVENTION**   **ULTIMATE WIND MILL** |
| * + 1. **APPLICANT(S)**  |  |  | | --- | --- | | 1. **NAME** | Dr.R.SURESH | | 1. **NATIONALITY** | INDIAN | | 1. **ADDRESS** | ASSOCIATE PROFESSOR | |
| * + 1. **PREAMBLE TO THE DESCRIPTION**   The main concept of this experiment is to produce electricity from wind flow with low frictional loss. When the air flows through the propeller connected to the armature, starts to rotate.When the armature rotate, the NdFeB magnets also tends to rotate that causes flux change with the stator coil. The emf flows with the direction of Flemings right hand rule. |
| 1. **DESCRIPTION (Description shall start from next page.)**       It consists of stator , rotor, propeller, blocker.  **IMPLEMENT DETAILS :**   1. **Flemmings right hand rule : (Generator)** When the flux changes in the conductor linked with the coil ,emf is induced in it. While stretching our fore, middle, thumb fingers mutually perpendicular to each other, the fore finger indicates the direction of force, middle finger indicates the direction of current, thumb indicates the direction of motion. 2. **Magnetic levitation :** When same magnetic poles are positioned nearer to each other magnetic repulsion takes place and When opposite magnetic poles are positioned nearer to each other magnetic attraction takes place.   The stator model consists of permanent magnets which is used to levitate the armature equipped with neodymium magnets. Stator coil has 26 gauge copper coil of 1000 turns and placed at the middle of the armature.  The rotor model consists of ndfeb magnets with two permanent earth ring magnets with a sharp edge.  A self designed propeller is connected to the rotor that Operates at very low or high wind flow rates, Low starting torque is needed for the rotation.  Blocker is a glass slide placed at the end of armature to oppose the forces caused by wind and the stator magnetic field , that is the only thing to produce friction between the sharp edge and the slide. |
| **CLAIMS** (not applicable for provisional specification. Claims should start with the preamble----“I/We claim” on separate page)  - NA -  **UNIQUE FEATURES :** More efficiency of power output , Less friction(loss), Operates at low wind flow rate, high efficiency, less internal resistance, maintenance free, internal gearings are not needed, rotates at high speed.  **EXISTING APPROACH :** MORE FRICTION LOSS DUE TO INTERNAL SPEED UP GEARINGS.  **MY APPROACH :** TO REDUCE THE FRICTION LOSS.  **PROPOSAL DIFFERENCE ON ORIGINALITY :** APPLICABLE IN REAL LIFE  **COMPONENTS FOR TESTING :** multimeter,tacho meter, anemometer,CRO.  **PERFORMANCE :** HIGH EFFICIENT EVEN IN LOW WIND FLOW. |
| 1. **DATE AND SIGNATURE** (to be given at the end of last page of specification)   Given |
| 1. **ABSTRACT OF THE INVENTION** (to be given along with complete specification on separate page)   ANNEXURE – I |
| Note:-  \*Repeat boxes in case of more than one entry.  \*To be signed by the applicant(s) or by authorized registered patent agent.  \*Name of the applicant should be given in full, family name in the beginning.  \*Complete address of the applicant should be given stating the postal index no. /code, state and country. \*Strike out the column which is/are not applicable. |

**ANNEXURE - I**

**ABSTRACT**

Abstract

The main concept of this experiment is to produce electricity from wind flow with low frictional loss. When the air flows through the propeller connected to the armature, starts to rotate.When the armature rotate, the NdFeB magnets also tends to rotate that causes flux change with the stator coil. The emf flows with the direction of Flemings right hand rule.

There by the friction is very less between sharp point of rotor and slide. From my experiment 0.2 volts is obtained.

Methodology :

1. Flemmings right hand rule : (Generator) When the flux changes in the conductor linked with the coil ,emf is induced in it. While stretching our fore, middle, thumb fingers mutually perpendicular to each other, the fore finger indicates the direction of force, middle finger indicates the direction of current, thumb indicates the direction of motion.
2. Magnetic levitation : When same magnetic poles are positioned nearer to each other magnetic repulsion takes place and When opposite magnetic poles are positioned nearer to each other magnetic attraction takes place.

Design:

It consists of stator , rotor, propeller, blocker.

The stator model consists of permanent magnets which is used to levitate the armature equipped with neodymium magnets. Stator coil has 26 gauge copper coil of 1000 turns and placed at the middle of the armature.

The rotor model consists of ndfeb magnets with two permanent earth ring magnets with a sharp edge.

A self designed propeller is connected to the rotor that Operates at very low or high wind flow rates, Low starting torque is needed for the rotation.

Blocker is a glass slide placed at the end of armature to oppose the forces caused by wind and the stator magnetic field , that is the only thing to produce friction between the sharp edge and the slide.

Materials used :

1. Permanent magnets
2. NdFeB magnets
3. Ring magnets
4. Coil
5. slides
6. 30 LED
7. Propeller
8. DC motor

PROGRESS ON TESTING : the magnetic fiels intensity and coil turns and thickness is varied to give respective output voltage.i got 0.2 volts initially and finally i got 3.3 v.

RESULT :

There by the friction is very less between sharp point of rotor and slide (stator). From my experiment 3.3 volts is obtained after rectification.

INFRASTRUTURE REQ : a wind flow area of wind flow velocity 18kmph.

PROBLEMS : the device is needed to keep at high elevation for high wind flow velocity.

DIS ADVANTAGES : HIGH INITIAL COST, CONSTRUCTIONAL COMPLEXITIES IN PROTOTYPE.

RESEARCH – ON APPLICATION OF MAGNETIC FIELDS ON LEVITATION.

BUDGET ESTIMATE : RS-1000 (for my model)

Conclusion :

Through this experiment we can gain more efficiency of power output and need not to pollute the environment, eco friendly , manpower is not needed, Less friction(loss), Operates at low wind flow rate, high efficiency, less internal resistance, occupies less space, maintenance free, less propeller length, less disturbance to migrating birds, gearings are not needed, rotates at high speed.