



CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY

Criteria 3

Research, Innovations and Extension

Metric 3.4.3	Number of Patents published/awarded during the last five years
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Supporting Documents

1	E-copies of the Award Letters / Patents (Year : 2018-19)
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Faculty of Technology & Engineering

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :21/04/2017

(21) Application No.201721014279 A

(43) Publication Date : 26/10/2018

(54) Title of the invention : A SELF REGULATORY CLEANING SYSTEM FOR SOLAR PANEL

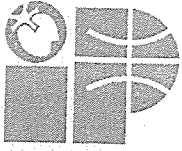
(51) International classification	:B01D	(71)Name of Applicant :
(31) Priority Document No	46/00	<u>1)Charotar University of Science & Technology</u>
(32) Priority Date	:NA	<u>Address of Applicant :CHARUSAT Campus, Changa, Ta:</u>
(33) Name of priority country	:NA	<u>Petlad, Dist: Anand - 388 421, Gujarat, India. Gujarat India</u>
(86) International Application No	:NA	(72)Name of Inventor :
Filing Date	:NA	<u>1)Upadhyaya Trushit Kirtikumar</u>
(87) International Publication No	:NA	
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Filing Date	:NA	
(62) Divisional to Application Number	:NA	
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(57) Abstract :

A self regulatory cleaning system for solar panel comprises a cleaning assembly (15) that includes plurality of spaced base plate (b1, b2, b3) being connected in orthogonal manner through hollow supporting members (7a,7b,7c), a cleaner drums (6) being rotatably supported between two successive base plate through drum shaft (18) for cleaning solar panel; driving members (17) for driving the cleaning assembly on the surface of solar panel and a control system being configured with RF remote control for operating cleaner drum (6) and driving member with the detection of dust on the solar panel. The cleaning assembly is carried by said driving member in forward and reverse direction according to detection of dust on the solar panel through the ultrasonic sensors. When user activate the front sided sensing means, the cleaning assembly will be moved in forward direction and will be moved in reverse direction with the activation of rear sensing means.

No. of Pages : 29 No. of Claims : 7

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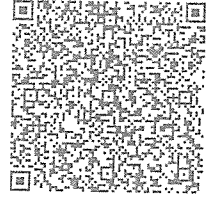
INTELLECTUAL
PROPERTY INDIA
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GEOGRAPHICAL INDICATIONS



सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 Of The Patents Rules)

क्रमांक : 022106128
SL No :



पेटेंट सं. / Patent No. : 322136
आवेदन सं. / Application No. : 1496/MUM/2013
फाइल करने की तारीख / Date of Filing : 23/04/2013
पेटेंटी / Patentee : CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित "NOVEL SYSTEM OF PHYTASE SUPPLEMENTATION IN AQUACULTURE" नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख 23rd day of April 2013 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 "NOVEL SYSTEM OF PHYTASE SUPPLEMENTATION IN AQUACULTURE" as disclosed in the above mentioned application for the term of 20 years from the 23rd day of April 2013 in accordance with the provisions of the Patents Act, 1970.



अनुदान की तारीख : 30/09/2019
Date of Grant :

OKSupta

पेटेंट नियंत्रक
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, 23rd day of April 2015को 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 23rd day of April 2015 and on the same day in every year thereafter.