# **Early Publication:**

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(19) INDIA		
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# (54) Title of the invention : DEVICE AND METHOD FOR TRAFFIC DATA ACQUISITION AND THEIR CONTROL SYSTEM

(51) International classification	:G08G1/0968, G08G1/01, G01S19/19	(71) <b>Name of Applicant :</b> <b>1)DR. JITEN SHAH</b> Address of Applicant :C-97, SMRUTI SOCIETY, NR.
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(32) Priority Date	:NA	VADODARA-390016 Gujarat India
(33) Name of priority country	:NA	2)DR. DIPANKAR DEB
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Filing Date	:NA	1)DR. JITEN SHAH
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(61) Patent of Addition to Application Number	:NA	3)JASHVI MEHTA
Filing Date	:NA	4)DEEP PATEL
(62) Divisional to Application Number	:NA	5)YASHWANT DADI
Filing Date	:NA	

(57) Abstract :

The present invention relates to device and method for traffic data acquisition for analysis and collision impact reduction. The present invention broadly relates to real time traffic data collection, collision warning as well as impact reduction to increase the overall road safety for the road users. It will have a wide variety of data from the cameras, GPS, various sensors and this beefed-up database can be used for a variety of traffic applications.

No. of Pages : 18 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

# (19) INDIA

(22) Date of filing of Application :09/12/2016

#### (43) Publication Date : 23/12/2016

# (54) Title of the invention : AUTOMATED SYSTEM FOR MITIGATED CLEANING OF SOLAR PANELS

(51) International classification:B08B6/0(31) Priority Document No:NA(32) Priority Date:NA(33) Name of priority country:NA(86) International Application No:NAFiling Date:NA(87) International Publication No: NA(61) Patent of Addition to Application Number:NAFiling Date:NA(62) Divisional to Application Number:NAFiling Date:NA(63) Patent of Application Number:NA(64) Patent of Addition to Application Number:NA(65) Divisional to Application Number:NA(66) Divisional to Application Number:NAFiling Date:NA(67) Date:NA	T DDR HTEN SHAH
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(57) Abstract :

The present invented system is light weight and performs cleaning in lateral direction (parallel to panels) with the brushes placed in longitudinal direction. The reason for such an arrangement is to perform the cleaning task in less possible time. With no guide rails and water/liquid it is easy to maintain and reduces the cost of establishment. The bot gets automatically charged and also functions without use of water/liquid for an entire solar farm. The system can also work by adjusting their angle with sensor to travel uninterruptedly, where the solar panels are provided with solar tracking system to adjust their angle automatically according to the available solar irradiance.

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(12) PATENT APPLICATION PUBLICATION

# (19) INDIA

(22) Date of filing of Application :12/12/2016

(43) Publication Date : 23/12/2016

# (54) Title of the invention : ROBOTIC DEVICE AND METHOD FOR AUTOMATED CLEANING OF WIND TURBINE BLADES

(51) International classification	·B08B1/00	(71)Name of Applicant :
(31) Priority Document No	:NA	1)DR. DIPANKAR DEB
(32) Priority Date	:NA	Address of Applicant :A-5, RADHE BUNGLOWS, NEAR
(33) Name of priority country	:NA	KHOKHRA CIRCLE, MAINAGAR EAST, AHMEDABAD
(86) International Application No	:NA	Gujarat India
Filing Date	:NA	(72)Name of Inventor :
(87) International Publication No	: NA	1)DR. DIPANKAR DEB
(61) Patent of Addition to Application Number	:NA	2)MRUNAL PATEL
Filing Date	:NA	3)HIMMAT SINGH
(62) Divisional to Application Number	:NA	4)DR. JITEN SHAH
Filing Date	:NA	

(57) Abstract :

The present invention is efficient and sustainable method for cleaning wind turbine blades in running condition so as to not affect the power generation during the cleaning operation. This system is composed of a light weight body and an efficient cleaning process, which includes separate robots for each blades with similar shape and weight. Each robot can clean a blade in a harmonious and parallel activity. Such a mechanized system would allow for uninterrupted power generation from the turbine while the cleaning process goes on unabated. Application of uniform pressure on the non-symmetric shape of the turbine blade is made possible by flexibility of suspension wheels used in robot. At the tip of the blade, the robot flips itself for reverse cleaning with the help of suspension wheels which now have perpendicular wheel-axis with respect to original position of the suspension wheels. Guidewheels help in smoothening the robot<sup>TM</sup>s movements.

No. of Pages : 23 No. of Claims : 9