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(54) Title of the invention : DESIGN & DEVELOPMENT OF AUTOMATED DUST CLEANING METHOD USING SOLAR TRACKER MOTOR

<p>(51) International classification :H02S0040100000, C08L0023080000, H02J0007350000, H02S0010000000, F24S0040200000</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 : <b>1)SWAMI VIVEKANANDA UNIVERSITY</b> Address of Applicant :Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barrackpore -----</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : <b>1)Mr. Sudip Das</b> Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barrackpore -----</p> <p><b>2)Dr. Pritam Kumar Gayen</b> Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barrackpore -----</p> <p><b>3)Mr. Abhishek Dhar</b> Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barrackpore -----</p> <p><b>4)Mr. Saurabh Adhikari</b> Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barrackpore -----</p> <p><b>5)Dr. Subhranil Som</b> Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barrackpore -----</p>
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(57) Abstract :

Solar energy is becoming one of the most important sources of renewable energy that is used by the major section of populations in the worlds but still there are many factors that hinders the use of solar panels in desert areas, one of the major problems is that of soiling which causes localized hotspots to develop in the panel and causes huge power loss. The other issue is that of microcracking which can develop due to thermal and mechanical stress in the solar panels. In deserts, the day time the temperature is very high and at night it is very low causing huge mechanical stresses and thus causing microcracks in the panel. The system that has been proposed here mitigates that problem and provides an effective solution. Continuous monitoring and health management system is one of the most important parts of solar power system. Lack of this monitoring may decrease the efficiency of the system and not gets proper extract power from the solar panel, specially in dust condition efficiency of the panel drastically change in day to day. It is utmost requirement to continuous monitoring and removing the dust from the solar panels as well as preventing its accumulation in a very economical way.

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