

PATENT GRANT
“SOLAR POWERED SPINNING WHEEL”

On 30/08/2019, a patent has been granted to MJCET for an invention titled “SOLAR POWERED SPINNING WHEEL” by the inventor Dr. A. Satyanarayana Reddy, Professor, MED. MJCET for the term of 20 years from 21st of October, 2014 in accordance with the provisions of the Patent Act, 1970. The inventor has been felicitated by the SUES management.

MJCET, Hyderabad has developed the automation technology through solar powered drive system. The technology package can be retrofitted to the manually operated charkha making it solar powered charkha. This technology is suitable for all types of conditions. Solar power system of larger capacity can be adopted to operate a greater number of machines. Physically challenged people can also operate it. More employment opportunities will be created in villages. It contributes in raising income of spinners and weavers and roll with economic revolution.

The components involved in retro-fitting of conventional charkha into Solar powered spinning wheel are: Solar panel, DC motor, Speed regulator, Solar charge controller and Solar batteries. Solar panel is installed to harvest the electric energy from sun light. Solar batteries are used to store the energy and supply the same during the night times and in poor day light situations. DC motor supplies smooth and uniform drive to the charkha. Variable speed control is used to regulate the machine speed. Belt and pulleys are used for power transmission. Solar charge controller device is used to distribute the electrical power to motor from battery and solar panel. The machine can be fitted with LED lights for working in the nights.

Charkha is fully operated with solar power at free of energy charges. Solar panel and charged solar batteries can support uninterrupted 24 hours of power supply. DC motor provides smooth and uniform machine operation. Varieties of thread sizes are made using variable speed drive. Solar power system supports the additional stand by machine. The main benefits are: Human efforts are substituted with solar power, productivity and earnings are enhanced, and thread quality is improved with minimum wastage of cotton.

Efforts are being carried out for the technology transfer of the solar spinning wheel, in this process, the team has approached industries to adopt this

technology as a part of their CSR activity and also, they have forwarded their proposal to NITI Aayog, which in turn advised to National Research Development Corporation (NRDC). A proposal has been submitted to NRDC in standard format. For the technology transfer a detailed brochure and video of the process have also been prepared.



The project was discussed by our Honourable Prime Minister Shri Narendra Modiji in "Mann Ki Baat" which was streamed live on 31st January 2016.



Solar powered Spinning Wheel



Felicitation of the Inventor—Dr. A.S. Reddy



Technology transfer team of solar spinning wheel