

Indian Patent for a Solar Water Distiller: A Big Achievement for ZHDC, A Significant Development for the Community

It is matter of great honour and pride for the entire family of Zakir Husain Delhi College that an **Indian Patent (no. 383711) for a Solar water distiller**, filed wide application no. **472/DEL/2013 by its four faculty members and ten students** has been granted and recorded in the Register of Patents on **December 04, 2021**. This is the first ever Patent awarded to the college in its long history of existence.

The interdisciplinary Innovation Project (ZH-101), titled “Feasibility Studies to improve quality of living and development of low cost efficient techniques to purify potable water: Case study with reference to villages of Ajmer (Rajasthan)” proposed jointly by the Physics, Chemistry and English departments was awarded to the college by the University of Delhi in the year 2012. The team comprised: Prof. Swati Arora (Physics), Prof Anuradha Marwah (English), Prof Samta Goyal (Chemistry) and Dr Mohammed Fahim Ansari (Physics) as Faculty Coordinators. The following were the student-researchers: Arshi Choudhry (Chemistry), Mohit Singh (Electronics), Jyoti Sharma (Chemistry), Priyanka (Chemistry), Priya Kaushik (Chemistry), Rajersh Mathur (Physical Sciences), Sudeep Kumar Dwivedi (Chemistry), Harsh Sharma (Physical Sciences), Saral Baweja (Chemistry) and Chandan Singh Bisht (Physical Sciences). Prof. R.P Tandon, the then Head of Department of Physics and Astrophysics, University of Delhi acted as the Mentor of the Project.

The team visited as many as six villages in and around Ajmer, Rajasthan during the summer of 2012 and collected samples from various sources of water like hand-pumps, wells, water bodies and ground water and analysed their quality. Students interacted with the rural populace there and also had a detailed discussion with the local youth who had been working on water problems. This was coordinated by the NGO, Ajmer Adult Education Association (AAEA), that is working in this area. A detailed report was compiled on this very fruitful exchange. Based on the assessment and availability of local resources, the idea of water purification using solar energy was developed and executed. From preliminary set-up, and subsequent modifications, the idea was finally translated into a prototype. A lot of brain-storming and technical guidance by the Mentor, Faculty Coordinators and Laboratory Staff helped students realise this prototype.

We sincerely hope that this technology will now be transferred to interested Industries for actual applications. Solar water distiller can make a qualitative difference to the quality of life of people living in areas where access to potable water is difficult and limited.

The entire research team expresses its gratitude to the University of Delhi for award of project which gave exposure to the students beyond classroom teaching. The Team would also like to acknowledge the Administration of Zakir Husain Delhi College for providing logistics support and space to carry out this project.

