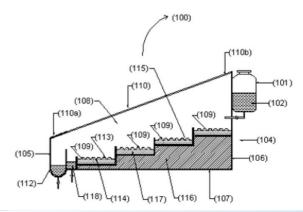






(IN402175)
Solar distillation apparatus



NEED

Freshwater scarcity affects millions worldwide. What if there was an efficient way to distill contaminated water using renewable solar energy, reducing dependency on power grids while purifying water?

TECHNOLOGY OVERVIEW

This solar-powered distillation apparatus efficiently purifies contaminated water using solar energy. It features a stepwise arrangement of solar absorber panels coated with copper oxide nanoparticles, ensuring high absorption, along with phase change materials to enhance performance.

TECHNOLOGY KEY FEATURES

1) Solar absorber panels with copper oxide nanoparticles. 2) Phase change material enhances efficiency. 3) Stepwise arrangement for optimized solar energy absorption. 4) Insulated design for thermal retention. 5) Excess water storage for continuous operation.

MARKET ANALYSIS

The global solar water distillation market is expected to grow at a CAGR of 5.6%, reaching \$12 billion by 2033. This growth is driven by increasing demand for sustainable water purification solutions and solar energy adoption. (Source: Market Research Future, 2023)

Target Industries

1) Water Purification Sector for off-grid purification solutions. 2) Renewable Energy Industry focusing on solar technologies. 3) Rural Development Programs aimed at providing clean water solutions in underserved regions.

AT A GLANCE

 SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 13 (Climate Action)

Read more here

Technology is available for licensing/ co-development.

Reach out to Prof. Deepak Chitkara, Coordinator, BITS Technology Enabling Centre,

BITS Pilani Contact Details: tec.bits@pilani.bits-pilani.ac.in, 91 1596-255913

