



विज्ञान एवं प्रौद्योगिकी विभाग DEPARTMENT OF **SCIENCE & TECHNOLOGY**



GRANTED (IN480801) Corrugated tube heat exchanger



NEED

Efficient heat exchangers are crucial in energy-intensive industries like desalination. Current systems face challenges such as poor thermal efficiency and maintenance issues. What if there was a design that maximized heat transfer while minimizing operational problems?

TECHNOLOGY OVERVIEW

The invention presents a corrugated tube falling-film heat exchanger, designed to enhance heat transfer efficiency. It includes multiple control valves and advanced features like brine collection and water level indicators, improving reliability and energy consumption.

MARKET ANALYSIS

The global heat exchanger market is projected to grow at a CAGR of 6.4% from 2023 to 2033, driven by demand in desalination, chemical processing, and HVAC sectors. (Source: Market Research Future, 2023)

Target Industries

1) Desalination plants; 2) Chemical processing plants requiring high-efficiency heat exchange systems; 3) HVAC companies seeking to improve energy efficiency in large-scale installations.

TECHNOLOGY KEY FEATURES

Corrugated heat exchange tubes, improved brine collection, thermal efficiency, steam condensation, control valves. level water indicators. enhanced energy consumption, desalination and industrial applications.

AT A GLANCE

 SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation, Infrastructure)

<u>Read more here</u>

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

