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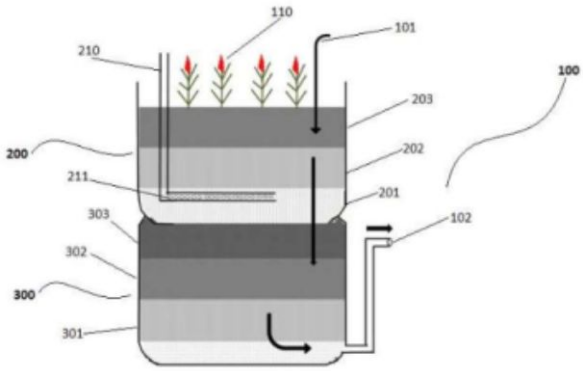
PENDING

(IN202311056366) Double-unit contiguous vertical flow constructed wetlands



NEED

Wastewater management is a critical challenge, especially for industries with high wastewater output. Effective, low-cost solutions are essential to improve water quality and enable water reuse in an eco-friendly manner. This patent addresses this need with a novel constructed wetland system.

TECHNOLOGY OVERVIEW

This double-unit vertical flow constructed wetland (VFCW) system efficiently treats wastewater by using a multi-layered filtration system with aeration and plant growth. The design ensures contaminants like ammonia, nitrates, and coliforms are removed, producing reusable water for industries.

TECHNOLOGY KEY FEATURES

The system integrates two units: a partially aerobic first unit with gravel and river sand layers, and an anaerobic second unit. Canna indica plants promote wastewater filtration while aeration and gravity flow improve efficiency. Produces 0.4KLD of reusable water.

Read more here

MARKET ANALYSIS

The global constructed wetlands market is growing at a CAGR of 6.2%, projected to reach $1.9B by 2033 (source: Research and Markets). Increasing water scarcity and stricter regulations boost the demand for low-cost, eco-friendly water treatment systems.

Target Industries

1) Wastewater treatment plant developers, 2) Municipalities with water treatment requirements, 3) Agriculture and industrial sectors needing water reuse systems.

AT A GLANCE

- SDG 6 (Clean Water and Sanitation), SDG 13 (Climate Action)

Technology is available for licensing/ co-development.

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