RECYCLABLE SORBENTS FOR WASTEWATER

UNIVERSITY OF PARDUBICE
FACULTY OF CHEMICAL TECHNOLOGY

TECHNOLOGY

The technology is focused on the recycling of process water, aqueous solutions or aqueous concentrates from the production and use of non-volatile dissociable organic substances using sorption. Sorption serves as a cleaning operation and uses easily recyclable sorbents that can be recycled and reused. The technology also allows the reductive decomposition of desorbed aqueous concentrates that are not biologically decradable.

FIELDS OF APPLICATION

- textile dye manufacturers
- dyeing plants using textile dyes
- pesticide manufacturers
- pharmaceutical manufacturers
- manufacturers of stabilizers and additives
- processing biomass

BENEFITS

- energy-efficient and financially demanding technology
- assessment and solution of the problem tailored to the customer
- without the need for costly investments for the recycling of process water

EXISTING TECHNOLOGIES ON THE MARKET

Conventional technologies are based on investment-intensive and operationally very demanding membrane separations or on the use of sorption on activated carbon.
The disadvantage is the formation of difficult-to-use aqueous concentrates of separated contaminants in the case of membrane techniques and saturated sorbent (in case of active carbon application), the recycling of which by steam stripping is not possible due to the low volatility of the contaminants.

Inventor:
doc. Ing. Tomáš Weidlich, Ph.D. and team

Contact person:
Ing. Petr Kalenda, Ph.D.
petr.kalenda2@upce.cz

Commercialization options:
Licensing

Patent situation:
Registered CZ utility model,
Filled CZ and EP patent application

T A
Č R