Energy-efficient wastewater treatment with novel membrane filter and unique flushing technology

Summary

Profile type	Company's country	POD reference
Technology offer	**Germany**	**TODE20230613001**
Profile status	**Type of partnership**	**Targeted countries**
PUBLISHED	**Commercial agreement with technical assistance**	**• World**
Contact Person	**Term of validity**	**Last update**
Rita Elste - Tomsone	**13 Jun 2023** **12 Jun 2024**	**13 Jun 2023**

General Information

Short summary

A German SME offers an innovative membrane technology for municipal and industrial wastewater treatment. The novel filter and flushing solution reduce the energy demand of the plants significantly up to 90%. Furthermore there are less space and less pre-treatment requirements. Partners are sought to integrate the technology in wastewater treatment projects and applications.

Full description

Membrane bioreactors (MBR) are wastewater treatment plants with membranes. They deliver 1000 times better water qualities than conventional wastewater treatment plants with only half the space required. The problem of MBR to date has been their high energy consumption for membrane flushing.

A German SME has developed a novel membrane filter with a unique flushing technology that radically reduces this energy demand (up to > 90%) with many other advantages (more compact, less pre-treatment, smaller equipment). Their new product has been optimized in all relevant aspects of MBR. It has several environmental and economic advantages and is a game changer for MBR technology. For the first time, the energy consumption for MBR is in the range of conventional wastewater treatment plants. Due to increasing energy prices, the payback period for the new membrane filters is less than 1.5 years. The new product provides an important contribution to solving the current problems of climate change, energy crisis and water scarcity.

The MBR filtration market is a highly attractive and fast growing market. The solution is suitable for municipal as well

as industrial applications. A proof of concept is running successfully and the German company is currently entering the market.

Partners are sought for commercial agreements with technical assistance to integrate the technology in wastewater treatment projects and applications.

Advantages and innovations

- All relevant aspects of MBR have been optimized.
- Short payback period
- Single-header BundleTube technology
- Unique flushing technology
- Less equipment required, smaller footprint, simplified design
- Unique and highly automated production process for single-header membrane elements
- Built2fit
- The company founders have many years of experience in MBR technology

Technical specification or expertise sought

Stage of development

Available for demonstration

Sustainable Development goals

- **Goal 6: Clean Water and Sanitation**
- **Goal 9: Industry, Innovation and Infrastructure**
- **Goal 11: Sustainable Cities and Communities**

IPR Status

IPR granted

Partner Sought

Expected role of the partner

Partners are sought to integrate the technology in wastewater treatment projects and applications:

- Engineering companies
- Plant constructors
- Sales partners

Type of partnership

Type and size of the partner

Commercial agreement with technical assistance

- **SME <=10**
- **SME 50 - 249**
- **SME 11-49**
- **Big company**

Dissemination

Technology keywords

- **10004001 - Industrial Water Treatment**
- **10004004 - Drinking Water**
- **10004002 - Municipal Water Treatment**
- **10004003 - Wastewater Recycling**

Market keywords

- **08004003 - Water treatment equipment and waste disposal systems**

Targeted countries

- **World**

Sector groups involved