

Water treatment:

New FLAMEC filter tackles liquids with high turbidity

FILTERPAR S.r.l, part of the Italian MOVENGINEERING group, has developed FLAMEC filter, a unit designed for the ultrafiltration and microfiltration of liquids with high turbidity.

In FLAMEC filter the liquid to be treated flows on the surface membrane with tangential flow at an adjustable speed. The tangential speed is defined in relation to the liquid characteristics.

The company adds that FLAMEC filter is produced in two versions: LT for treating low turbidity liquids and HT for the treatment of high turbidity liquids. This version can be also used also as a membrane bioreactor (MBR) in biological depuration processes.

Determining the dimensions of the ultrafiltration in the HT version requires specific preliminary tests on small samples of

liquids (20 litres) to define the specific flow ($l/m^2 \cdot h$) and the tangential speed. This is to optimise the ultrafiltration process and find the best compromise from a technical and economic point of view.

FLAMEC is designed to remove particles from liquids such as suspended solids, colloids, macromolecules, bacteria, organic and inorganic molecular aggregates. The ultrafiltration process significantly reduces the NTU (turbidity), SDI (Silt Index Density) and TOC (Total Organic Carbon) values.

MOVENGINEERING and its sister company FILTERPAR can supply single units or complete turnkey plants. Solutions for specific water treatment requirement are developed for bespoke water separation plants.

Polymers

MOVENGINEERING group is an engineering company with 25 years experience in industrial polymers and man-made fibre plants for polymer removal and the cleaning of mechanical parts and metallic filter elements covered with organic and inorganic substances. In 1997 FILTERPAR, one of the sister companies of MOVENGINEERING group, started to develop technologies for separation processes for water and industrial liquids. One important aim of these separation technologies is the reuse of the water in industrial processes.

MOVENGINEERING and FILTERPAR can offer complete plants, starting from the basic sedimentation process up to the finest water separation technology with reverse osmosis

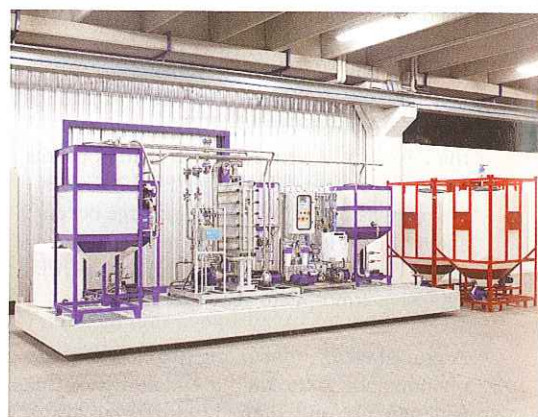


Figure 2: FLAMEC pilot plant.

treatment. Products used in these processes include:

- DIASET (diaphragms settler): static systems designed to accelerate the heavy particles sedimentation or light particles emersion processes in the liquids.
- MASFILT (mass filter): automatic machines for liquids treatment through granular masses.
- FLAMEC: ultrafiltration and microfiltration systems with polymeric flat sheet membranes.
- REVOS (reverse osmosis): nanofiltration and reverse osmosis systems with spiral membranes. ●

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Figure 1: FLAMEC filter.