

Energy Efficiency Division

Wastewater treatment plant - Membrane reactor

Save energy,
get profit





MEASUREMENT

The measurement campaign was conducted using an "on site" **pilot plant**, that allowed to verify the wastewater characteristics and the plant operating logic.



DATA ANALYSIS

In relation to the volumes and to the wastewater chemical/physical and microbiological characteristics, the best purifying solution was defined, setting as targets:

- Daily flow rate: 60 mc/d
- Removal efficiency:
 - COD: > 97%
 - Total surfactants: > 99%
- Installed power: 100 kW
- Minimum occupied surface



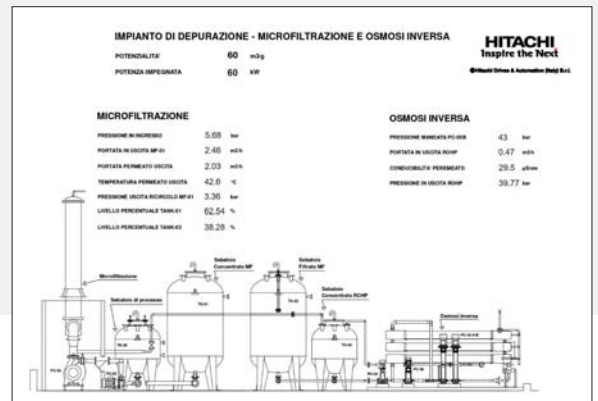
ACTION

The system created is composed of two modules: **Microfiltration** plus **Reverse Osmosis**. The automation used made it possible to remotely operate parameters by programming specific alarms according to customer requirements.



MONITORING

The processing efficiency is guaranteed by the **H-Vision** supervision: Hitachi's advanced cloud platform, consistent with Industry 4.0, which allows real-time control of all the system's function parameters and their correlation.



RESULTS

- Reduced volumes of wastewater discharged into the sewer: **-40%**
- Reduction of waste disposal costs: **-30%**
- Reuse of purified water into the production cycle

PAYBACK PERIOD < 3 Years