

Reuse of purified water
No chemicals
Low environment impact
Modular technology
Cost effective



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THE DEFINITIVE SOLUTION
for the treatment and recovery
of contaminated water
without discharging
based on
ECF[®] technology



Purity Srl has made the improvement of the "Environment System" its mission by focusing, with its customers, on the treatment of wastewater from industrial processes.

There are many factors that make this topic relevant:

- Increase in water supply costs
- Exponential increase in costs for treatment and for transferring to landfills
- Reduction of landfills authorized for collection and storage
- Reduction of the quantities that can be disposed in landfills
- Discharge limits increasingly challenging

To all that, a growing awareness that being "green" is now an important element of Marketing is added.

PURITY SOLUTION

In this context Purity Srl has developed a solution:

1. Able to solve complex purification problems
2. Quick pay back
3. Modular and scalable
4. Eco Friendly
5. Plug & Play and remotely controllable
6. Can be integrated with other wastewater purification processes



1-SOLVE COMPLEX PROBLEMS

In some industrial sectors, the problem of process water treatment is still difficult to solve.

Water purification in mechanical processing, leachate treatment in landfills, water remediation in the oil & gas sector and water purification in tanneries are very often complex and expensive.

Thanks to our technology we are able to offer a qualitatively and economically better solution than the existing ones.

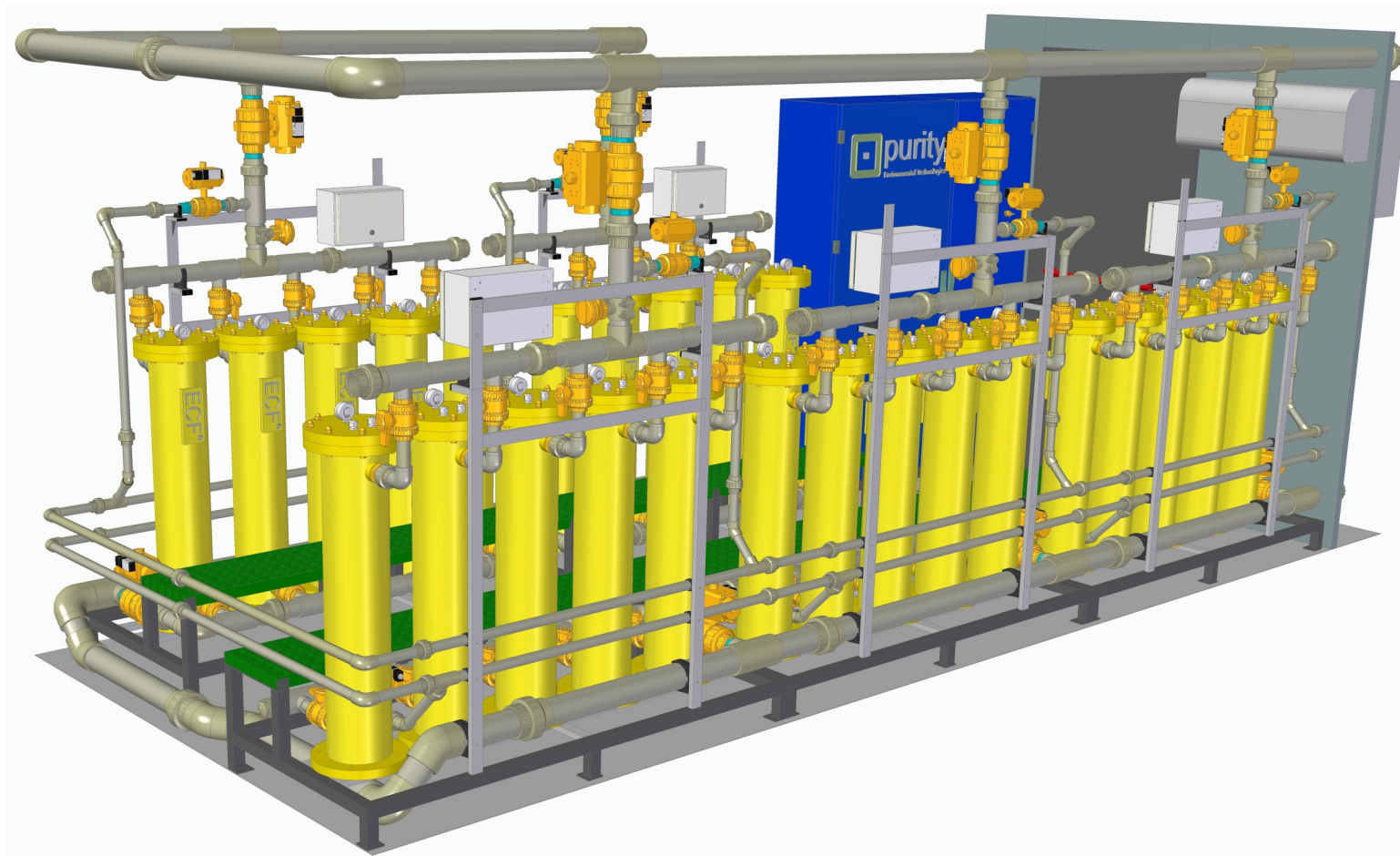
We are also experimenting with applications in other sectors such as the purification of water containing PFAS and of water coming from processing in the chemical and pharmaceutical sector.

2-QUICK PAY BACK

Our solution minimizes the main cost items of wastewater treatment to ensure overall savings of up to 80%. You can access the existing forms of incentives as they comply with the necessary requirements for "Industry 4.0".

3-MODULAR AND SCALABLE

Our plants are built in 20-foot containers, which are easily transportable, placeable and, if necessary, also stackable ready for commissioning in a few hours. With 12 square meters of space, you have the equivalent of the capacity of a traditional plant of 300-500 square meters.



4-ECO-FRIENDLY

No addition of chemicals, only electricity. Consequently, sludge production is strongly reduced.

5-PLUG & PLAY AND REMOTE CONTROLLED

The connection is very simple and fast: just connect the inlet pipe of the water to be purified, the outlet pipe of the purified water and the electric. ECF technology has the ability to dynamically adapt to fluctuations in incoming pollutant concentrations, thus ensuring process stability and efficiency.

Our plant is designed as a workplace, insulated and air-conditioned. Finally, it can be monitored and controlled remotely via "app".

6-INTEGRABLE WITH OTHER PROCESS

Purity system can be used to integrate an existing plant (for example to reduce a specific pollutant) or to replace it. We think that the treatment of wastewater must be consistent with the broader concept of circular economy: if it is necessary to use water in a production process, we try to reuse it several times, minimizing the overall environmental impact and the associated costs.

ECF TECHNOLOGY

Electroflotation process is based on the electrolytic treatment of an aqueous solution, in which a series of chemical and electrochemical reactions are triggered, associated with physical processes capable of favoring the transformation and subsequent removal of contaminants.



The geometry of the cell and that of the electrodes, their number, the material of which they are made and the sequence of placement depend on the particular characteristics of the wastewater to be treated and therefore are specifically calculated and designed according to each individual case as well as the power supply (RDD).

MAIN RESULTS

- COD and BOD significant reduction
- Heavy metals almost full removal
- Phosphates strong reduction
- Solvents significant reduction
- Oils removal with emulsion separation
- Sulphides, nitrites and cyanides significant reduction
- Bactericidal strong effect
- Hydrocarbons almost full removal



APPLICATION FIELDS

- Purification of wastewater from COD - BOD
- Drilling wastewater
- Vibratory finishing - Tumbling
- Painting - Metal phosphodegreasing
- Die casting - Emulsified oils
- Metal impregnation
- Wastewater polluted by algae and bacteria
- Landfill leachate
- Groundwater remediation
- Wastewater contaminated by solvents and hydrocarbons
- Pre-treatment for chemical-physical and/or biological plants

