



The Effluent Water Treatment and Purification Technology

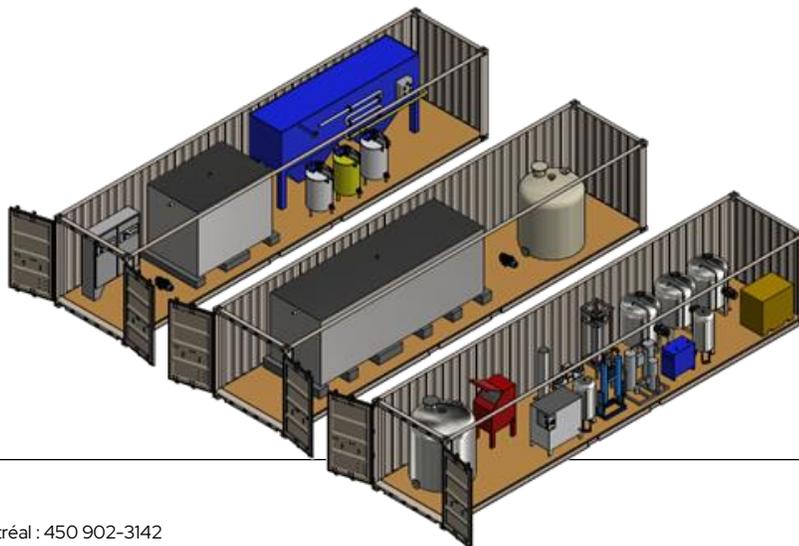
OUR SOLUTION IS CENTERED ON OPTIMIZING THE FOOTPRINT.

Industrial and Municipal Liquid effluents, including municipal wastewater, can be treated in areas or buildings with dramatically reduced footprints.

The present method and technology consists of supplying a compact plants for the treatment of a range of 3 to 40 m³/h (SCMPH) of waste effluent to produce, in certain application, a highly concentrated liquid(NPK) fertilizer. In our proprietary methodology the innovative hydrolysis and oxidation is a key player treatment, before the product is stage filtered and the resulting sludge may be transformed to useful products.

The process aims to treat liquid effluents from various industries in the form of wastewater. In order to treat 3 to 40 cubic meters per hour of the liquid effluents, the following equipment will generally be required:

- Custom DAF system to remove suspended material
- Custom Biological Filter to reduce BOD, COD, TSS together with Proprietary Hydrolysis and Oxidation systems which are the key components in the process and occupy ½ to ⅓ of the standard industry wide volume.
- The filtration system which combines Laminar, Multimedia and Fiber Filter to further remove suspended matter and sludge from the effluents in addition to Activated Carbon which will adsorb pollutants such as grease and odors, and further purify the water.
- Ozone Unit eliminating residual bacteria from the water.
- Purification System combining ultra and nano filtration.





THIS OVERALL SYSTEM PRESENTS THE FOLLOWING ADVANTAGES:

- Our process' outflow of effluents can be implemented in various sectors including agriculture, fish farming and food transformation, chemical plant, municipal waste water and industrial waste effluent depending on initial composition and output quality desired. As for the solid matter removed by filtration, it can be used as fertilizer depending on its composition and contamination level.
 - Our biological reactor which was the focus of our research and development over a number of years and can degrade a significantly higher proportion of organic matter for a given size, compared to traditional systems.
 - Oxygen diffusion system. Traditionally oxygen is injected and defused into oxidation tanks and to degrade organic matter with an efficiency of 30%. Up to 70% efficiency can be achieved with our system, with a dramatic effect on footprint.
- As an example, the technical objective can be to treat effluents from discharges from chemical or industrial production plants with the quantitative objective of treating 5 m³ / h, with a COD content of 22,000 mg / l, a BOD content of 6,800 mg / l and TSS at 2,200 mg / l, down to sewage wastewater or irrigation standards.
 - We can then design and tailor the specific biological reactor that meets our needs in an innovative manner, and permits us to meet the objectives in a very compact and cost effective manner.



Définitions:

- COD: chemical oxygen demand
- BOD: biological oxygen demand
- TSS: total suspended solid
- COD and BOD are units of measurement of the concentration of organic matter present in the effluent subject to the study.