

R.I.S.A. Srl

Ricerca Ingegneria Sviluppo Ambiente

Research

Engineering

Development

Environment

Research and scientific know-hows

- bench-top and pilot plants design and advanced analytic technologies know-how;
- studying the modeling and automation of water and waste water treatment;
- solving sanitary and environmental treatment problems, in particular controlling the biological section arrangement;
- treatment processes monitoring and survey.

Our mission

Collect, revise and understand data to provide modeling approaches supporting wastewater system planning and management.

We work globally, inside the client's company, to propose a turnkey assistance to the customer.

The team

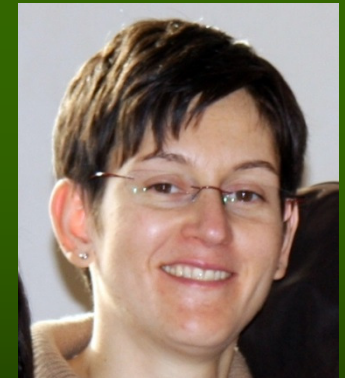
PhD Cristiano Roselli Della Rovere, engineer



PhD Ilaria Cimarosti, engineer

PhD Giada Rossi, biotechnologist

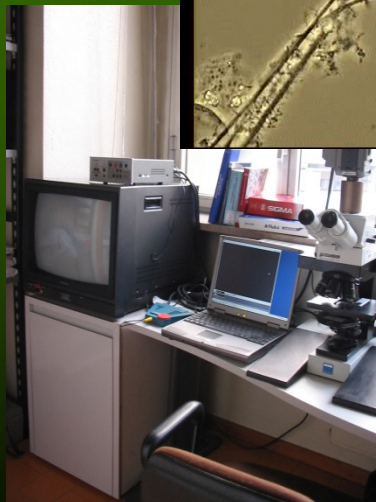
Prof. Daniele Goi, engineer



Activities

MONITORING

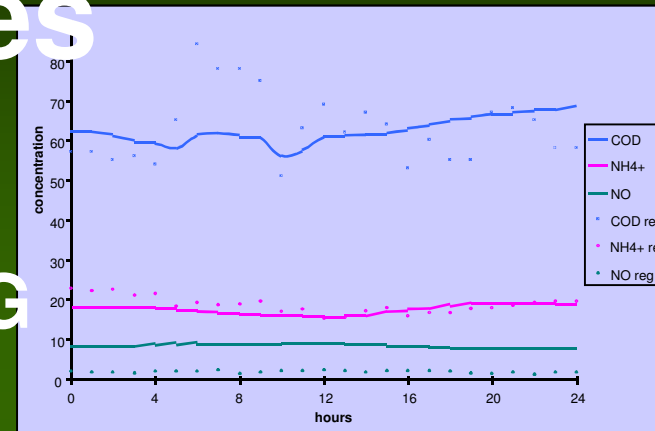
Wastewater sample collection, laboratory analyses, value revision.



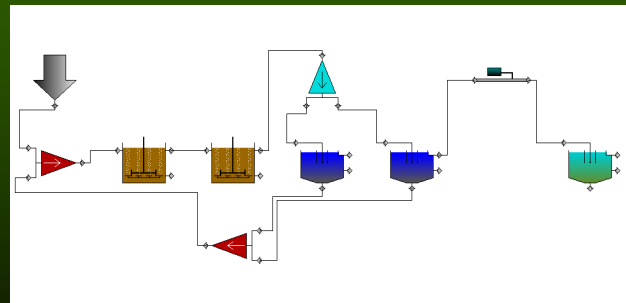
Activities



MODELING



Application of models characterizing microbiological, chemical and hydraulic processes of water and wastewater treatment plants.



Activities



MANAGEMENT

Management activities in wastewater treatment plants, from maintenance to upgrading interventions.



Activities

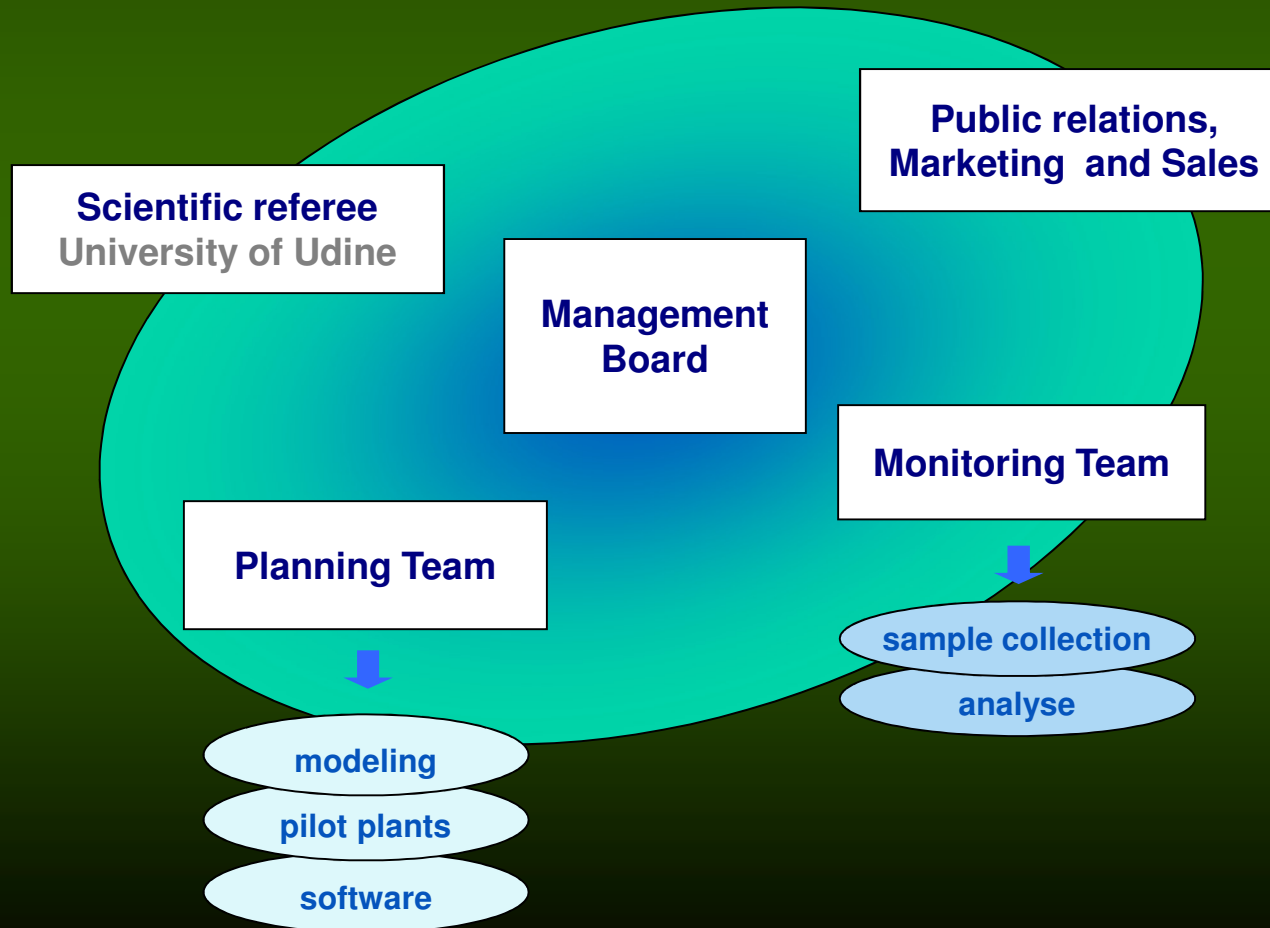


EDUCATION

Refresher and extension course organization for public and private operators.



Management Team





Partnerships



Passavant Impianti SpA

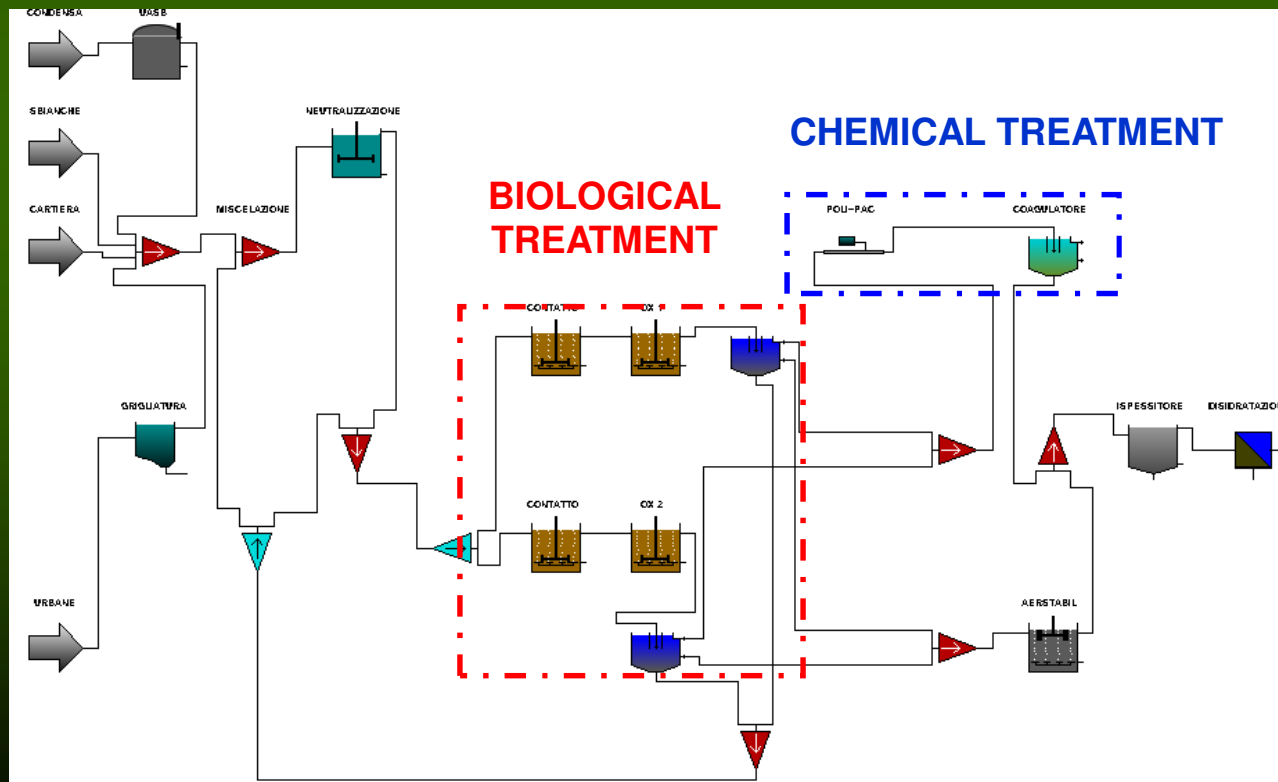
Based in Novate Milanese (Milan), it is a company leader in water, wastewater and sludge treatment since over 50 years.

The company's work runs the entire spectrum of water treatment and sludge recycling, for both residential and industrial waste.

RISA had a partnership with Passavant SpA to run one of its plants in north Italy.

The Plant

Industrial and civil waste water treatment plant



Simulation Model

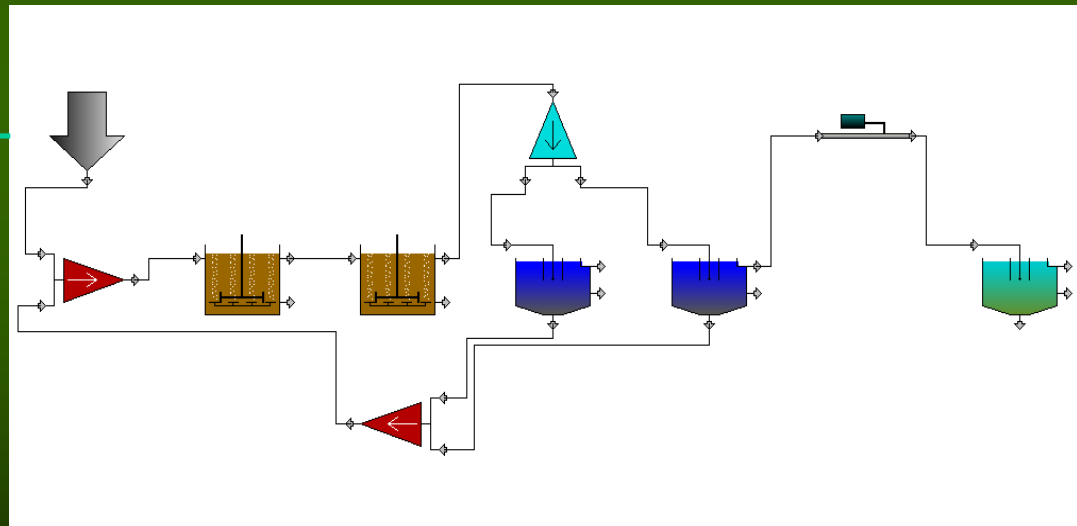
Modular system for wastewater treatment analysis

**Biological
treatment**

Input

Kinetic and
stoichiometric
parameters

Mod.ASM1



**Chemical
treatment**

Input

Output data from
secondary clarifier

THIRD TREATMENT MODELING

Chemical addition = chemeq model

Coagulator = primary clarifier

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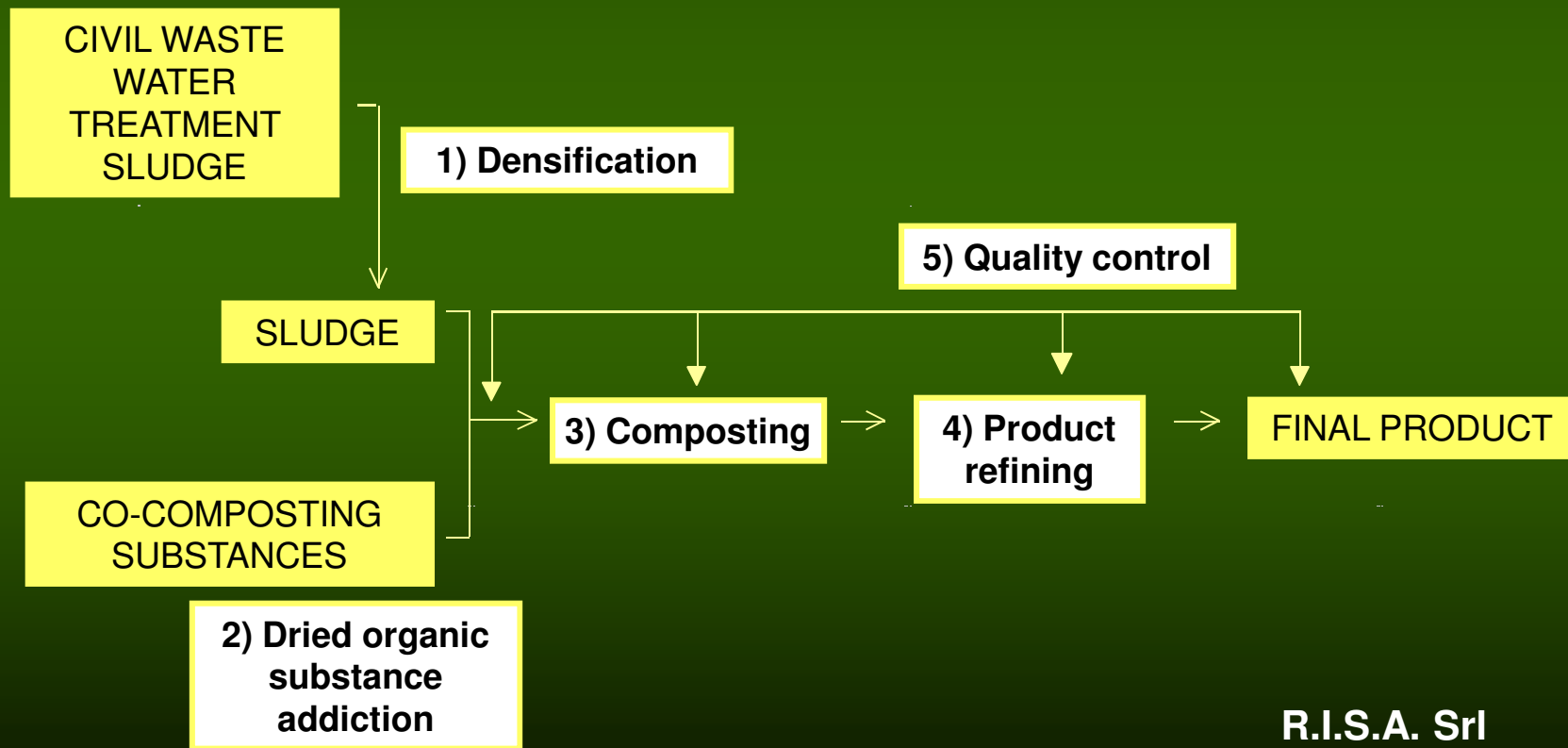
Acquedotto Poiana SpA

Based in Cividale del Friuli (Udine), it has been a leader in waterworks for over 90 years.

The company's work runs the entire spectrum of drinking water distribution and treatment.

RISA is currently having a partnership with Acquedotto Poiana SpA to model a composting plant.

Composting plant modeling



Management and research activities planning

STEP	MACHINERY	PLANT	RESEARCH ACTIVITY
1			Economical planning
2	<ul style="list-style-type: none">•pump-coclea•moisturer	Densification plant	
3	<ul style="list-style-type: none">•tractor		Co-composter substances characteristics analysis
4		Biocells	Process optimization
5	<ul style="list-style-type: none">•sieve•packing machine	Refining plant	
6			Quality parameters definition

AMGA - NET project

NET SpA and AMGA SpA are companies based in Udine.

NET SpA works on municipal solid waste collection and treatment.

AMGA SpA multiservices works on waterworks, water and wastewater treatment and other services.

AMGA - NET project

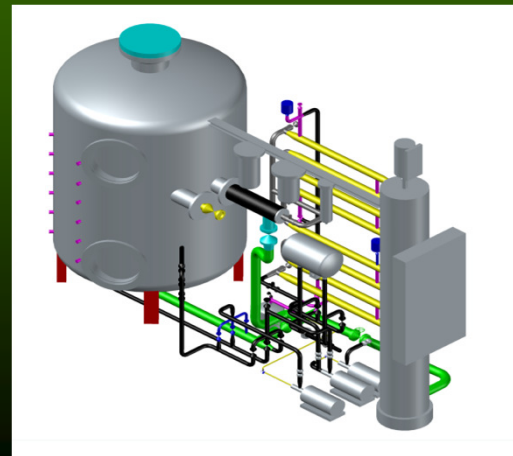
RISA is currently having a partnership with AMGA SpA and NET SpA to design and test an anaerobic co-digestion plant to convert FORSU and sewage sludge into biogas.

AMGA - NET project

Oversized
anaerobic
digestion
unit

FORSU
high
quantities
to treat

Opportunity
to treat
waste as a
resource



Anaerobic
digester pilot
plant

Objectives

- Design, realization and start up of a pilot plant.
- Reach pilot plant stationary condition to reproduce real digester working.
- Co-digestion step with various FORSU (fractions of organic material from municipal solid waste).
- Finding of limit conditions for optimal biomass metabolism.
- Pre-treatment test of matrices to be digested.

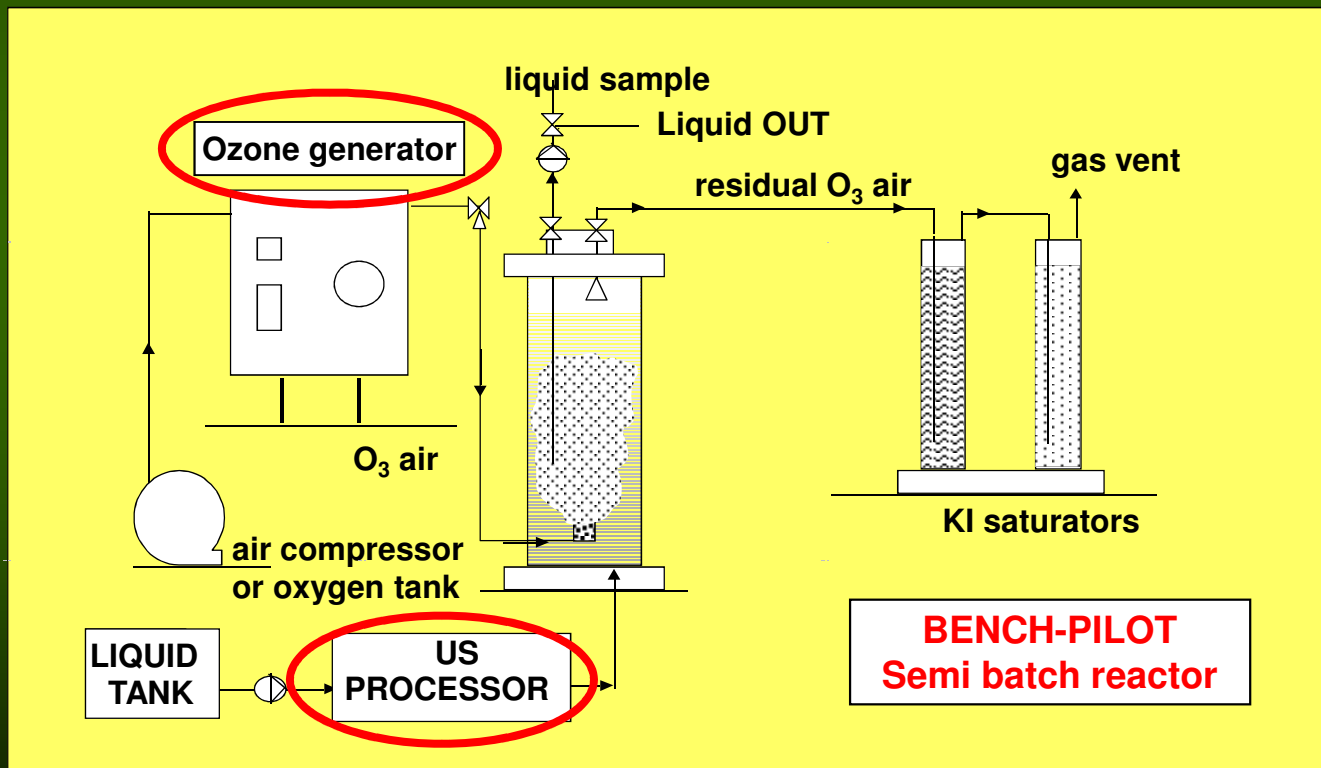
University of Udine

It is the scientific referee of the spin off project.

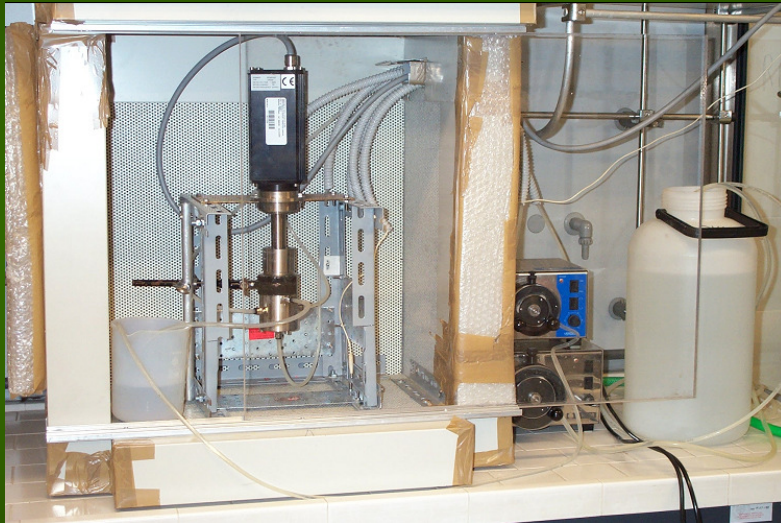
RISA has a partnership with the University of Udine to realize a pilot plan for wastewater treatment using US-ozone technology.

This innovating project could be object in the future of a patent application.

Modeling

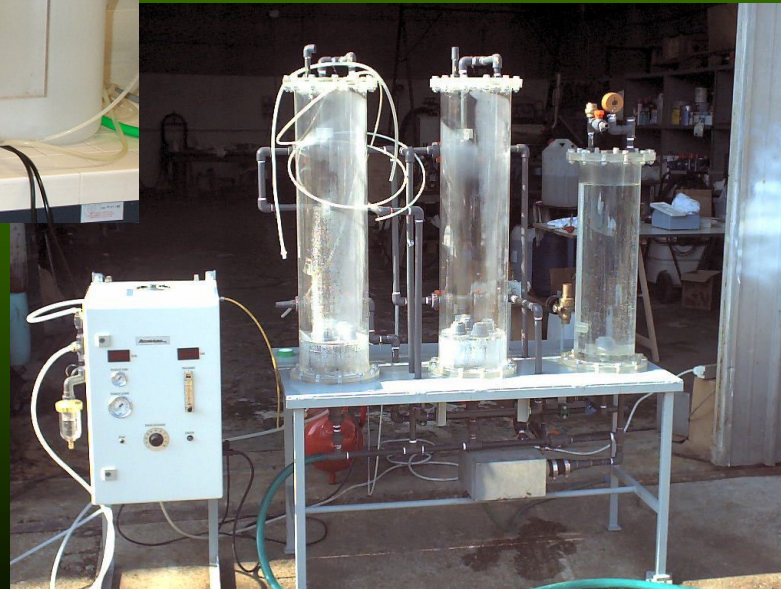


Bench-pilot

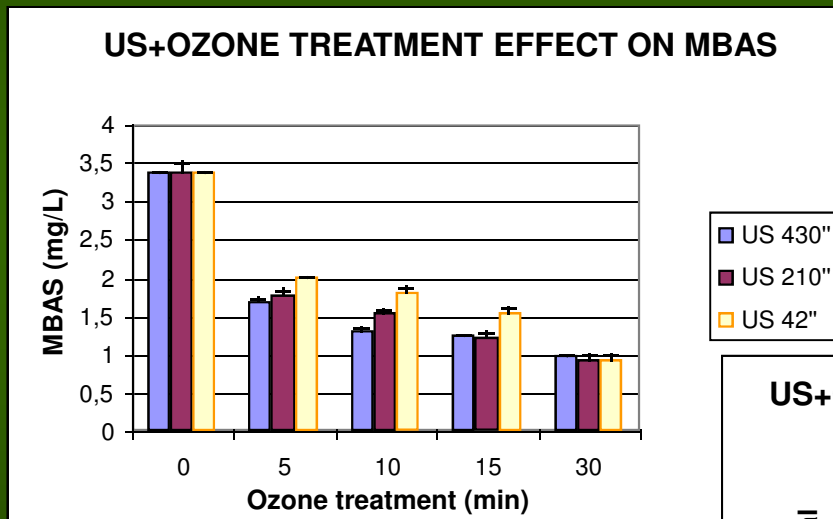


US processor
→ Cavitation
→ Water treatment

OZONE treatment
→ Disinfection
→ Hygiene
→ Sanitation

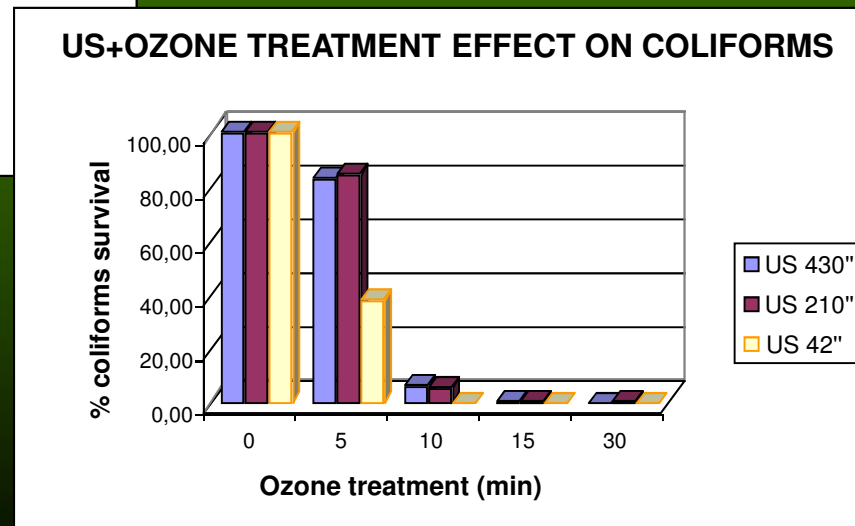


US-ozone combined treatment effect



Bacteria abatement

Detergents abatement



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CONTACTS

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