



CELDAR® TECHNOLOGY

Case history

N COMPOUNDS SPECIATION REMOVAL IN BIOGAS WASTEWATER

<i>Location</i>	<i>ITALY</i>
<i>PRODUCED WASTEWATER</i>	<i>20 cubic meter/hour</i>
<i>Typical problems in wastewater</i>	<i>Nitrites, Nitrates, Ammonia removal</i>

TREATMENT PRINCIPLES AND AIMS

To approach a complex **wastewater treatment plant**, the customer asked us to evaluate the **ELECTROCOAGULATION SYSTEM** for the **removal of NITROGEN COMPOUNDS** and to be able to drain the treated water into the sewer system.
Another option required was the **ZERO LIQUID DISCHARGE** and therefore the possibility of water **recycling** with the least amount of consumption possible.
This option is possible using an **ELECTROCOAGULATION PLANT** since no chemicals are used and therefore the physical and chemical characteristics of the water to be treated have little variation compared to the treated water.

The obtained results and working conditions are below

Type of electrodes tried during the lab tests	CELDAR Alloys Graphite Iron NET Stainless Steel low Chromium
Number of electrodes	20
Type of alloy	IRON NET
Volt applied	8
AMPERES	55
Reaction time	from 0 to 2 hours sampling
Temperature	38 °C
Final treatment	Flocculation

TIME Minutes	Nitrite ppm	Nitrate ppm	Ammonia ppm	Chloride ppm
0	636	584	560	568
30	191	65	397	520
60	41	6	298	472
90	23	2	147	340
120	0	0	70	274

