



CELDAR[®] TECHNOLOGY

Case history

FLUORIDES REMOVAL IN GLASS ETCHING INDUSTRY

Location	POLAND
PRODUCED WASTEWATER	20 cubic meter/hour
Typical problems in wastewater	High Fluorides, Sulphates,

TREATMENT PRINCIPLES AND AIMS

To install a **wastewater treatment plant**, the customer asked us to evaluate the **ELECTROCOAGULATION** for the **removal of Fluorides** 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 reusing the treated water 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

TYPICAL ANALYSIS PARAMETERS

Achieved results

PARAMETER	Unit	Starting	End	Reduction %
pH		2,8	7,6	
Conductivity	microSiemens	7240	7060	
TSS	ppm	380	5	98,7
COD	ppm	360	260	27,8
Sulphates	ppm	460	370	19,6
Fluorides	ppm	4900	11	99,8
ANIONIC TENSIDES	ppm	38	1	97,4

ELECTROCOAGULATION PROCESS PARAMETERS

Number of electrodes	20
Type of alloy	CELDAR
Volt applied	8
AMPERES	75
Reaction time	1,5 hour
Temperature	48 °C
Final treatment	Flocculation

