

Hidroambiente S.A.U.
Calle Mayor, 23 E, 1º
48930 Getxo (SPAIN)
T: +34 94 480 40 90 - F: +34 94 480 30 76
info@hidroambiente.es

Everblue Private Ltd.
B-402, Ganga Osian Square, Near LG Showroom,
Mankar Chawk, Wakad, Pune 411057 (INDIA)
T: +91 20 6473 1585
miturbe@everblueco.com

Hidroambiente S.A.U.
Rio Rihn 56 - 6ª Planta
Colonia Cuauhtemoc
06500 México D.F. (MEXICO)
T: +52 1 55 6811-6556 / +52 1 55 6732-1809
s.pascual@hidroambiente.es

www.hidroambiente.es



hidroambiente
elecnor group

| water treatment engineering services |

PETROCHEMICAL



Hidroambiente, an Elecnor Group subsidiary, was established in 1993 to deliver Water Treatment Solutions for the most demanding clients in the industrial and public markets.

We strive to meet our customer's satisfaction by addressing every stage in a water treatment project, from Design, Construction, Assembly, Commissioning, Operation & Maintenance to Technical Assistance.

Our Value Proposal is possible thanks to our highly professional, innovation-commitment and experienced staff.

Hidroambiente is strongly committed to the Environment, Quality, Safety, and Research, Development and Innovation and is certified in all these areas through a comprehensive Integrated Management System.

Our long-serving experience, countless references and prestige in the market together with the importance of our clients, encourage us to go on with this strategy.



SERVICES

- "Turn Key" Water Treatment Plants
- Equipment Manufacturing
- Supply of Materials
- "In house" Construction and Assembly
- Start-up Service
- Technological Adjustment and Upgrading
- Transfers and Revamping
- Basic Engineering Solutions
- Detail Engineering
- Technical Assessment on the Design of New Plants
- Water Networks Audits and Solutions

PROPIETARY DESIGN EQUIPMENT

- Clarifiers (light & heavy duty)
 - Bridges for gravity clarifiers
 - Static lamellar clarifiers
 - Dynamic lamellar clarifiers
 - Ultra high speed lamellar clarifiers
- Filtration equipment (Pressurized & Atmospheric)
 - Sand filters
 - Gravel filters
 - Activated carbon filters
 - Walnuts filters
- Dissolved Air Flotation (DAF)
 - Circular
 - Rectangular
- Ion exchange
 - Softening
 - Demineralization
- Skid mounted plants
 - Compact physical & chemical treatment equipment (mixing chamber + flocculation chamber + clarifier + filter in a single equipment)
 - Reverse osmosis
 - Micro-filtration
 - Nano-filtration
 - Ultra-filtration
 - Chemical injection
- Condensate / Feedwater Treatment
- Boiler Water Treatment
- Cooling Water Treatment
- Chlorination / Dechlorination
- Membrane Clean In Place
- Coagulant / Flocculant Feed
- Oil Skimmers
- API oil separators
- Degassers
- Hydrocyclons
- Desanders
- Polishers



TECHNOLOGIES

- Physical & Chemical Treatment
 - Coalesce units
 - CPI units
 - Removal of free oil
 - Removal of emulsified oil
 - Decarbonation
 - With lime
 - With resins + degasser
- Softening
 - With lime
 - With resins
- Demineralization
- Ultra-pure water production
- Micro-filtration (MF)
- Nano-filtration (NF)
- Ultra-filtration (UF)
- Reverse Osmosis (RO)
- Electro Deionization (EDI)
- Reversible Electro Dialysis (EDR)
- Condensate treatment (polisher systems)
 - In-place regeneration
 - Non in-place regeneration
 - Candle systems (with resins and diatom earth)
- Biologic Processes
 - COD and BOD Removal
 - Phosphorus removal
 - Ammonia removal
- Evaporation & crystallization of brine solutions
- Stripping systems
 - CO₂ removal
 - Ammonia removal
- Sludge treatment
 - Thickeners
 - Belt filters
 - Press filters
 - Sludge centrifuges
- Oxidation (chlorine, ozone, KMnO₄, H₂O₂...)
- Ultraviolet disinfection
- Odour treatment plants
 - Biologic processes
 - Chemical processes
 - Activated carbon



1. Solids Screening Systems

- Bivalve Electro Hydraulic Grabs
- Hydraulic Pincers
- Screens: Manual, Hydraulic, Automatic Cable, Automatic Chain, Automatic Circular, Filtering, Perforated Filtering, Basket, Static, Helicoidal & Vertical Helicoidal Conveyors
- Rotating Drums
- Chain & rotating discs Filters
- Spillways
- Conveyors
- Degritters
- Classifiers
- Grit washers





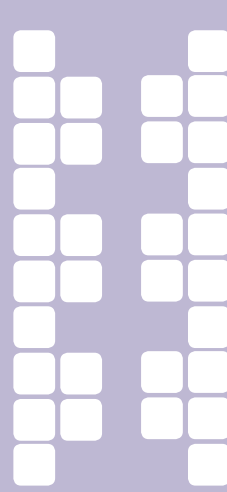
2. Clarification Technologies

- Static lamellar clarifiers with or without external sludge recirculation
- Solids Contact Clarifier with turbine
- Solids Contact Clarifier with external recirculation of sludge and thickening system incorporated

3. Media Filter System

- Gravel filters
- Sand filters
- Activated carbon filters
- Walnut filters
- Anthracite filters





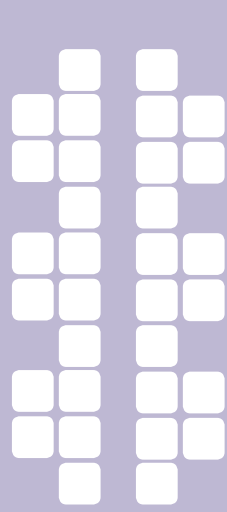
4. Cooling Systems

- Open circuit
- Closed circuit
- Contact cooling circuits for the iron and steel industry

5. Demineralization-Ion Exchange

- Separate bed co-current
- Separate bed counter current
- Packed beds
- Mixed beds
- Condensate polishing
- E.D.R.
- E.D.I.





6. Submerged Ultrafiltration Systems

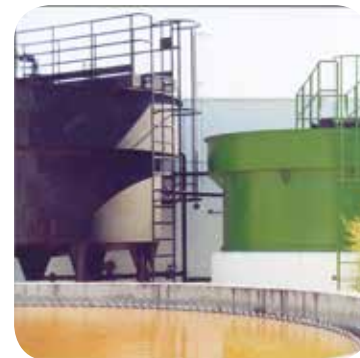
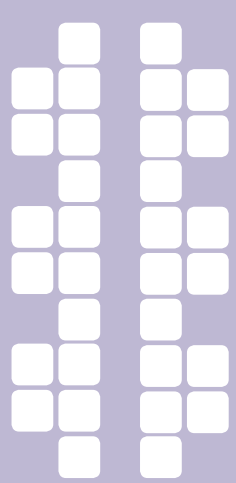
- Pressurized membrane packs
- Pressurized membrane systems
- Skid mounted plants
- Customized solutions



7. Reverse Osmosis & Desalination

- Sea water
- Brackish water
- High purity
- 1 Pass
- 2 Passes
- Single stage
- Multiple stages





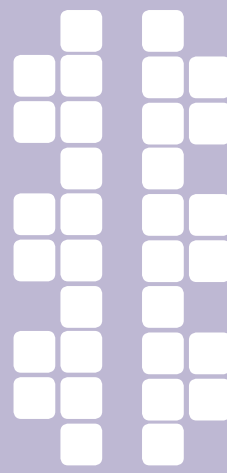
8. Oil Removal Technologies

- Floating oil skimmers
- Dissolved Air Flotation (DAF) units
- Corrugated Plate Interceptors (CPI)
- API oil separators
- Activated carbon filters
- Walnuts filters

9. Dissolved Air Flotation (DAF)

- Circular
- Rectangular
- In Concrete, in GRP, in Steel (Carbon, Stainless or Duplex)
- Sludge Thickening
- Clarification





10. Package Treatment Systems

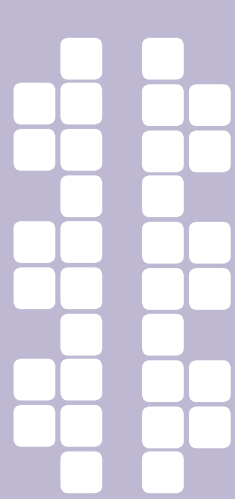
- Mixing chamber
- Flocculation chamber
- Clarifier or DAF unit
- Filtration
- Ultrafiltration
- Reverse Osmosis
- EDI



11. Biological Treatments

- Submerged Ultrafiltration (MBR)
- Sequential Batch Reactor (SBR)
- Moving Bed Biologic Reactors (MBBR)
- Denitrification – Nitrification Reactors (DN)





12. Sludge Treatment

- Sludge from Lime Decarbonization
- Make Up Primary Sludge
- Biological Treatments Sludge
- Coal Yards Sludge

- Static & Dynamic Thickeners
- Press Filters
- Belt Filters
- Centrifugal Filters
- Silos
- Belts & Screws Sludge Handling
- Thermal Drying



13. Odour Treatment

- Activated Carbon
- Biological Process
- Physico-Chemical Process





14. Chemical Injection Skids

These skids are designed to deliver concentrated reagents at specific volumes to ensure bulk concentrations in the main process line are maintained.

The pumping rate, dilution water flow rate and strength of the chemical can be monitored by on-line instrumentation if required.

Control of these parameters can be fully automatic on request.

They can be customized on request.

Applications:

- Physico-Chemical Treatments
- Neutralizations
- Cooling Systems
- Condensates Control

15. References

Oil Industry

Cepsa
Disa
Esergui
Galp
Meroil
PDVSA
Repsol
Fluor
GS
Intecsa Industrial
Itochu
Saipem
Técnicas Reunidas

Chemical Industry

Acideka
Arkema
Brilen
Cabot
Celanesse
Derivados del Flúor
Lascaray
Lurgi
Michelin
Nivea
Poliseda
Portland
Praxair
SABIC
Union Carbide

Energy

Acciona Energía
Çalik Enerji
Cobra
Duro Felguera
Electroingeniería
Iberdrola Ing. y Cons.
Inelectra
Initec Energía
Isolux Corsan
Sener
TSK
Almaraz Trillo
American Energy Society
Elcogas
Enel
ESB
Iberese
MPX
Unión Fenosa
Gas Natural

Food

Agrovic
Antonio Muñoz
Azucarera ACOR
Carrefour
Cervezas Damm
Coca Cola
Conservas Dardo
Conservas Ortiz
Copag
Delicass internacional
Ebro Agrícolas
Fruit Tech Natural
Iparlat
Mahou
Malvasia
Navarra Trout
Pepsico

Iron, Steel & Metals

Aluminium

ALCOA
Thyssen GUSS

Copper

ALSA
Outokumpu Copper Tubes

Ferroalloys

Ferroatlántica

Steel

ArcelorMittal:
Bergara, Olaberria, Madrid,
Sestao, Zaragoza
CAF
Condesa Fabril
Fundición Nodular
Gerdau:
Azkoitia, Basauri, Legazpi,
Reinosa, Vitoria/Gasteiz

Celsa:

Celsa Barcelona, Celsa Steel UK,
Global Steel Wire, Nervacero

Alfonso Gallardo:
Corrugados Azpeitia,
Corrugados Getafe

Riva:
Siderúrgica Sevillana

SIMEC:
Siderúrgica de Mexicali

SKS

Thyssen Mieres

Tubos Reunidos

Primetals

SMS-Sidernaval

Zinc

Asturiana de Laminados

Befesa

Hindustan Zinc

Pulp & Paper

Echazarreta
Ence
Smurfit

Others

Acciona
CABB
Cadagua
Cespa
DFB
Ferrovial
Gobierno Navarra
Grupo Antolín
Mercedes
Renault
SAV-DAM

