

Quantified environmental impacts

- ✓ Saving 70-100% dyeing water.
- ✓ Saving 60-15% dyeing electrolyte.
- ✓ Lower effluent salinity which also reduces the cost of the effluents discharge.



Benefits

The benefits of ECUVal system with respect to other technologies are the water and salts reuse which implies:



less cost in water



less cost in salt



less cost in taxes

Market replication

The ECUVal system is an independent module which can be used in other industrial sectors, such as:



Pharmaceutical



Automotive



Cosmetics

Carbon footprint

ECUVal system reduces the carbon footprint.



CONSORTIUM



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Electrochemical
techniques
combined with UV
irradiation for the
treatment and
reuse of textile
dyeing
wastewaters:
Industrial marketing



Water, treat to reuse

What?

The ECUVal project is a green business based on an innovative wastewater system which combines electrochemical techniques with UV irradiation for the treatment of dyeing textile wastewaters and the reuse of the treated effluents.

The aim of the ECUVal project is to introduce in the textile sector an eco-friendly technology which achieves significant savings on water and salts, so that the textile industry becomes more ecological and sustainable.

ECUVal system can also be applied in other industrial sectors which generate effluents containing salts and non biodegradable compounds.



Why?

The new environmental policies are focused on water recycling and reuse.

The ECUVal system is a new and eco-friendly technology as there is no other recycle-treatment which combines electrochemical and UV irradiation methods. In the ECUVal system the addition of reagents is not required as the electrolysis is carried out with the salts already contained in the effluent. The reuse step also reaches important savings on dyeing water and electrolyte.

How?

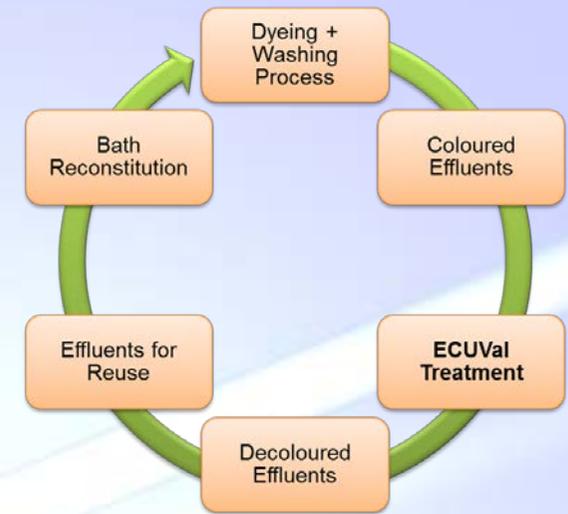
ECUVal system is constituted by an electrochemical cell and an UV source.

ECUVal system is applied to the exhausted dyebaths and washing effluents. The treated effluents are subsequently reused in new dyeing processes. Thus, ECUVal solves the problem of effluent colouration and enables the reuse of dyeing water and electrolyte. The wastewater salinity is also reduced.

Where?

ECUVal system is mainly addressed to treat effluents containing reactive dyes as they are non biodegradable and require the addition of high amounts of salts in the dyeing process.

An industrial prototype has been built and installed in the mill. Currently, the optimisation of wastewater treatment conditions in the textile industry are being carried out to demonstrate the viability of the technique.



Steps of the ECUVal process

