



ECoLoRO®

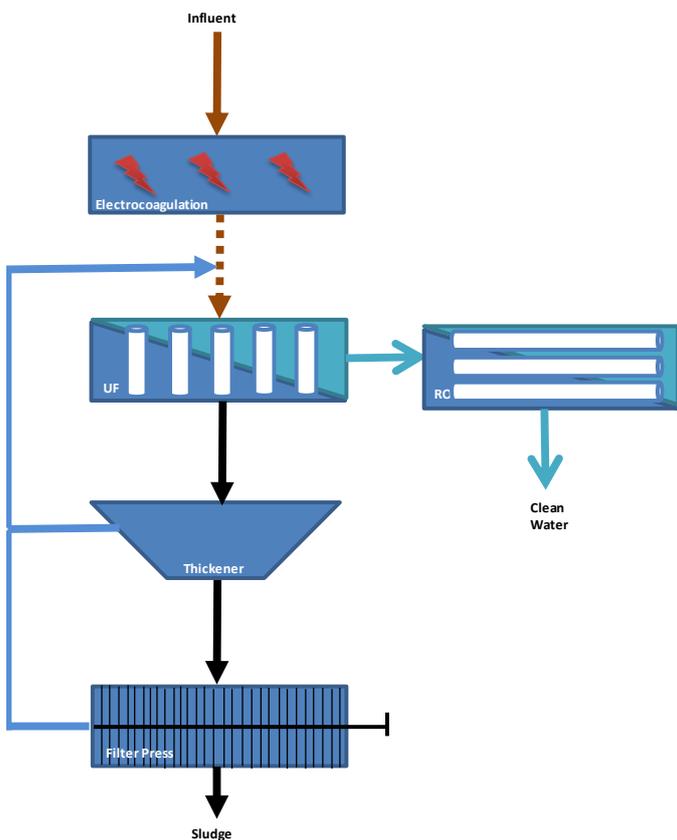
Color Removal and Waste Water Reuse in the Textile and Paper Industry

Textile industry wastewater treatment is a cause for concern due to its intense color and high COD, which makes it difficult to treat it by conventional treatment options. Also, many of the dyes used in the industry fall under the category of hazardous wastes and are known to be toxic to microorganisms and aquatic life forms.

At the same time many regions are tightening the regulation for discharge of Waste Water which means that the textile and paper producers have to look for new technologies in order to comply with the **environmental regulations regarding COLOR.**

Electrocoagulation

Electrocoagulation is the process to mobilize solids out of water by applying an electrical current to the system. Not only suspended solids can be removed, but also dissolved solids are forced out of the water by certain oxidation reactions. "Electrocoagulation utilizes direct current to cause sacrificial electrode ions to remove undesirable contaminants either by chemical reaction and precipitation or by causing colloidal materials to coalesce and then be removed by electrolytic flotation. The electrochemical system has proven to be able to cope with a variety of waste waters. These waste waters will be reduced to clear, clean, odorless and reusable water.



After electrocoagulation the water is treated by a filtration step removing the suspended solids. The filtered water can be reused. When required, the dissolved solids are removed in a succeeding reversal osmosis step to produce water with a high quality.

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The most important step of the EColoRO® process, is electrocoagulation.

Electrocoagulation removes from water:

- Metals and heavy metals
- Suspended solids
- Colloidal solids
- Color
- Dissolved solids
- Fat, oil, diesel, complex organics
- Bacteria, viruses

Electrocoagulation Provides The Following Benefits:

- No chemicals used
- Low investment cost
- Low operating cost
- Low maintenance
- Stable and reliable operation
- Applicable to many different waste water streams
- Applicable for multiple contaminants
- Lower sludge production



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