



Sculpt Wastewater to it's Origin



## Resource Reuse Technology

# Sculpt waste Resource to its Origin

An Environmentally stainable solution for waste caustic stream purification and concentration recovery system for reuse

Certified Company





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## OVERVIEW:

Large volumes of water are used in the textile industries for many purposes including washing, scouring, dyeing, printing, bleaching, and finishing cloth. These processes generate large amounts of waste water. While the requirement of fresh water for industrial uses has increased enormously, the supply remains unchanged. Moreover, due to the increasing cost of wastewater treatment and stricter government regulations imposed on wastewater disposal, demands for new technologies have become more urgent to recycle the waste ( water and auxiliary chemicals) economically and ecologically. In addition, textile effluent contains valuable substances that can be recovered. Similarly cleaning waste from Dairy industries and other also can be recovered and re used back sustainably.

## MEMBRANE FILTRATIONS:

Various separation techniques can be used to reclaim water, auxiliary chemicals, and energy such as membrane filtration, chemical precipitation, adsorption by activated carbon, and evaporation. However, membrane filtration is the only technique that separates the impurities from the water without the addition of chemicals.

## THE CHALLENGE- HOW MUCH IS YOUR CAUSTIC REALLY COSTING YOU ?

Caustic is used in the textile industry in two major applications : Purification of cellulosic fibers, to remove hemicellulose and other impurities from the fibers, to produce high purity cellulose, and higher quality dyeing and printing. The spent caustic, although still at high strength, cannot be reused in any of the plant operations due to the high concentration of contaminants. Hence, it is usually sent to the wastewater treatment plants, where in most cases it is neutralized with acid, increasing even more the costs of operation.



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## **BENEFITS Pure=OH<sup>®</sup> SYSTEM :**

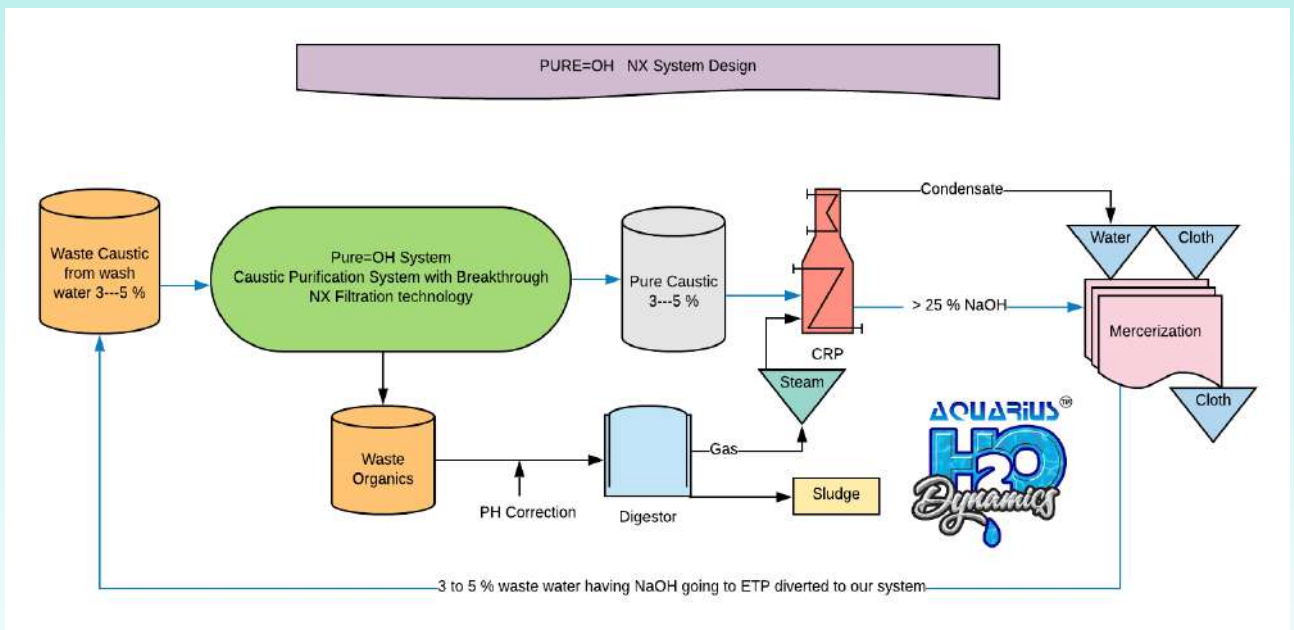
- Less spending on caustic and acid materials.
- Reduced waste treatment costs and effluent volumes
- Lower energy consumption by NX Hollow Fiber Membrane with Back washable future.
- Decreased wastewater TDS/Sodium
- Return of Investment is less than 400 Days.
- Waste Caustic stream after Mercerization washing bath drain of 3 % to 5 % will be purified by Pure=OH<sup>®</sup> system. Available in pre-designed custom configurations as per Industries need for various capacities with NX Filtration Modules, Netherlands.
- Concentrated size materials will be converted into Biogas for Fuel as CRP, plant, Which reduces great load on ETP and saves Energy in Aerobic Biodegradation.
- Pure Recovered Caustic of 3 % to 5 % by our system safely & than taken to Evaporation plant till 25 % to 35 % by CRP for reuse as per your need.
- By Pure=OH<sup>®</sup> system Efficiency of Evaporation Plant is increased greatly and also substantial savings in this system is evident and Purity of Caustic is best.
- AHDPL had Pilot plant based results design and manufacturing facility followed by strong service support ( NX Filtration, Netherlands ) and O&M services available at 24 x 7 and expertise to supply and run the Plant.



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## SYSTEM DESIGN TYPICAL



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