

Projects - Machinery - Engineering - Process Automation and Controls

## Applications of Ceramic Membrane Filtration Technology

- Clarification of fermentation broth by removing suspensions like mycelium, fragment of cells
- Purify the fermentation broth by removing proteins and polysaccharides
- Classification of processing stream by separating component of different molecular weights
- Remove bacteria to sterilize the fluid and High Temperature sterilization
- Remove proteins ,tannins, starch, colloids from plant and viscera solutions
- Refine& upgrade the final products by removing all suspensions before crystallization
- Act as a fine prefilter to reduce SDI for organic UF & NF spiral membranes
- Remove the oil from oily emulsion wastewater
- Decrease the COD and SS from seriously polluted liquid s
- Collect and concentrate the ultra fine solids (ie catalyzers ) in process liquid
- Desalination and purification for nanometer material products

## Examples of Industrial use ceramic membrane technology

### ■ BIOTECH & PHARMACEUTICAL

ANTIBIOTIC: Erythromycin, Cephalothin, Guanosine , Carnine, Erythromycin

FERMENT ORGANIC ACID: Lactic , Citric

AMINO ACID: Lysine ,Glutamic ,Threonine ,Aspartame, Glycin

VITAMIN : Vc, VB12,VB2

CHINA TRADITIONAL MEDICINE

ENZYME

BIOCHEMISTRY: Thymopetidum , Interferon Vaccine

NATURE PLANT EXTRACT: Puerarin,Soybean peptide ,Nature Color,Tea Polyphenol

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#### ■ WASTE WATER TREATMENT

Emulsion waste water in steel industry  
Oily water from Bankote Printing works  
Oily waste water in Auto industry  
Cutting and Degreasing fluids from machinery industry  
Alkaline and acid processing stream liquid  
Waste with pigment from printing&dyeing of High COD/BOD  
Heavy metal and radioactive substances sewage  
Electroplate wastes  
Grinding water micro-electronics

#### ■ FOOD AND BEVERAGE

Dairy : Foremilk, Buffer-Milk, Protein Standard, Whey  
Alcohol: Wine, Beer ,Fruit wine, Yellow wine  
Fruit & Vegetable Juice : Apple, Red berry, Pineapple  
Sugar: Cane, Beet, Starchy sugar  
Brewage :Soy, Vinegar  
Tea: Tea Beverage, Catechu  
Soy Bean: Peptide, Isoflavones, Polysaccharides  
Halobios Extract

#### ■ CHEMICAL INDUSTRY

Recovery and concentration of catalysts  
Ceramic Membrane Reactor  
Concentration of polymer suspensions and metal hydroxide solutions  
Desalination of products  
Cleaning and recycling of organic solvents

#### ■ WATER TREATMENT

Turbid Surface water  
Military Water Supply

Oil Rejection

#### ■ NEW MATERIAL

Purity and Desalination for nanometer material

