

W a s t e w a t e r



Industrial Wastewater Treatment and Sludge Dewatering

As populations continue to grow, the solids load into the Public Owned Treatment Works (POTW's) has increased and in some cases overwhelmed the capacity of the POTW's to adequately treat these incoming solids (waste stream). Many communities have implemented pretreatment programs under the guidelines of the National Pollutant Discharge Elimination System (NPDES). Local municipalities are tightening the rules making it harder to meet discharge permit requirements with existing treatment processes. Increased global focus on environmental stewardship has led many leading multi-national organizations to adopt policies that require all their affiliates, regardless of location, to adhere to a common, best practices policy for wastewater treatment, including recycling and discharge. Celatom® diatomaceous earth (DE) filtration offers a simple, flexible and economic solution to these changing requirements.

The current trend has POTW's pushing responsibility for solids reduction and water treatment upstream to source locations (industry). Below is a partial list of source locations for typical liquid wastes. Many other industries will soon be required to treat waste prior to discharge.

- Latex rubber waste
- Paint Manufacturing
- Steel mill waste
- Tannery waste
- Food Processing (BOD, COD, FOG)
- Pulp & Paper white water and sludge
- Board & ceiling tile white water and sludge
- Chemical processes
- Metal processing and finishing wastes
- Alum sludge from water & wastewater treatment



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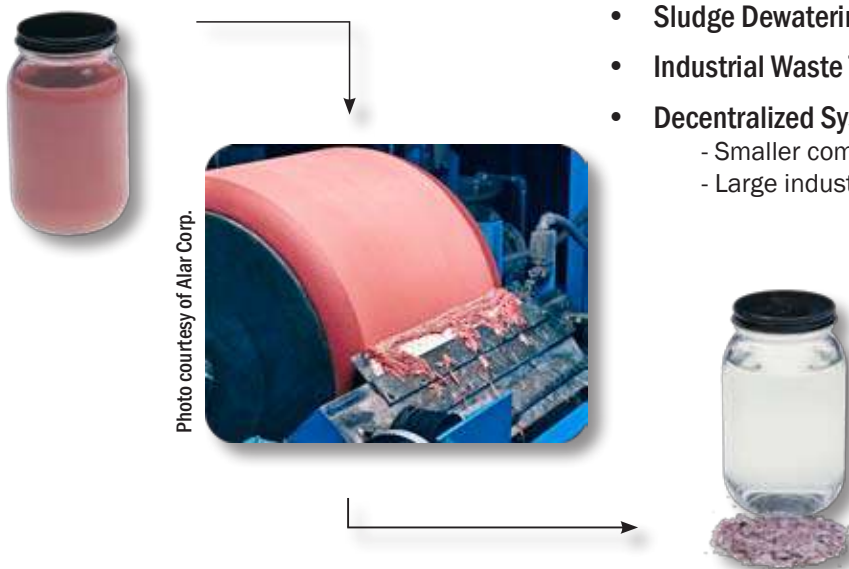
Solving Wastewater Discharge Problems with DE or Precoat Dewatering Technologies

Industrial wastewater treatment follows the same basic principles as POTW's but usually on a smaller scale. Requirements of wastewater discharge are defined under the Federal Pretreatment Program and approved by the EPA or State acting as the Pretreatment Approval Authority. Precoat filtration technology relies on mechanical liquid/solid separation principals. The precoat media forms a tortuous path that retains the solid contaminants and allows the clarified liquid to pass through the media into a receiver where it is then discharged as allowed by local NEPDS discharge permitting rules.

Celatom® DE and Perlite filtration media is offered in a variety of grades covering a wide spectrum of permeabilities allowing you to select the correct grade to fully optimize your wastewater treatment process. Precoat wastewater treatment technology with Celatom® products offer you flexibility, efficiency and simplicity to obtain the lowest dollar cost per unit treated while meeting all discharge permit requirements.

Celatom® DE filtration is applicable in several areas of wastewater treatment:

- Sludge Dewatering
- Industrial Waste Treatment
- Decentralized Systems (onsite & cluster)
 - Smaller communities
 - Large industrial complexes



Celatom® Products for Wastewater Treatment and Dewatering

Celatom Diatomite Products

Celatom Grades	Darcy
FW-12	0.85
FW-14	1.3
FW-18	1.7
FW-20	2.1
FW-40	3.2
FW-50	3.5
FW-60	5.0
FW-70	7.0
FW-80	12.0

Celatom Perlite Products

Celatom Grades	Darcy
CP-1200	0.8
CP-1400	1.2
CP-2000	2.1
CP-4000	2.6
CP-5000	3.0
CP-6000	3.5

Save Money

- Reduce or eliminate effluent discharge fines
- Reduce disposal costs of residuals by achieving higher solid percentage (up to 50% solids)

Produces high quality effluent

- Meet or exceed requirements of National Pollutant Discharge Elimination System (NPDES) permit program