

Primary Filtration with Hydrotech

Compact and flexible primary wastewater treatment

Successful Biological Treatment Starts Upstream

Primary treatment to control removal of nutrients and organic matter is crucial to an integrated wastewater treatment approach. Enhanced primary treatment significantly reduces the organic loading on downstream biological treatment processes while increasing solids that can be used for energy recovery. Hydrotech filters offer a compact, flexible and proven primary treatment solution with real advantages compared to other primary treatment technologies.



Bio-Energy Enhancement

Hydrotech primary filters can serve as a vital resource recovery tool for the capture of carbon for bio-methane production in anaerobic digestion. The high efficiency of primary sludge removal maximizes the energy recovery that can be obtained by digestion. Furthermore, Hydrotech's range of available filtration media and treatment strategies provide the flexibility to select and control the loading (BOD, COD and P) to biological treatment processes located downstream.

Compact Footprint

Hydrotech filters are a more compact solution for primary treatment. The footprint needed is significantly reduced compared to conventional primary settling by as much as 90% or more. This makes Hydrotech the ideal solution for projects where area is a constraint, and for all facilities to reduce civil construction costs.



■ Hydrotech Filtration ■ Conventional Clarifier

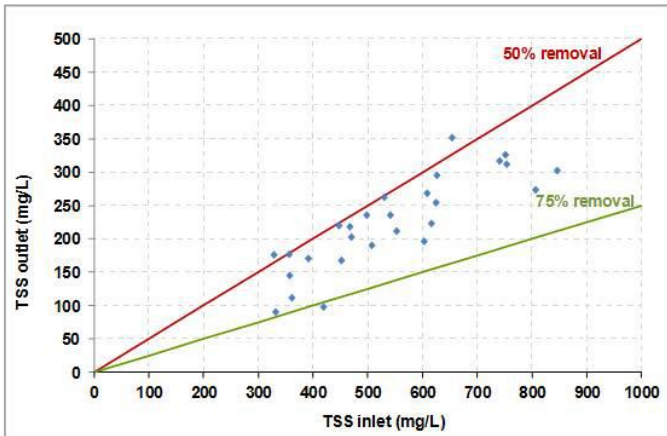
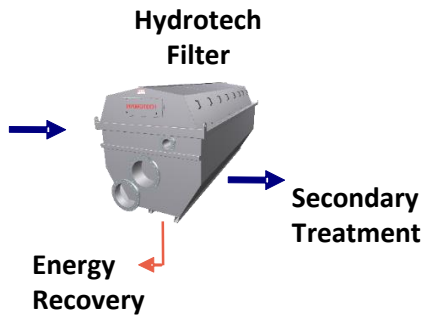


Proven Results

Since 2003, Hydrotech filters have been successfully used for several full-scale primary treatment installations with capacities ranging from 0.1 MGD to 65 MGD. In addition, many pilot trials have been conducted worldwide using Hydrotech for primary treatment. As a result, Hydrotech's primary treatment capabilities are well proven and documented.

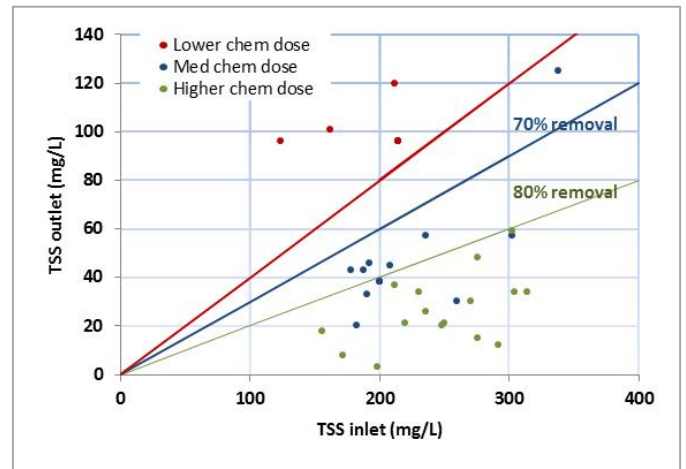
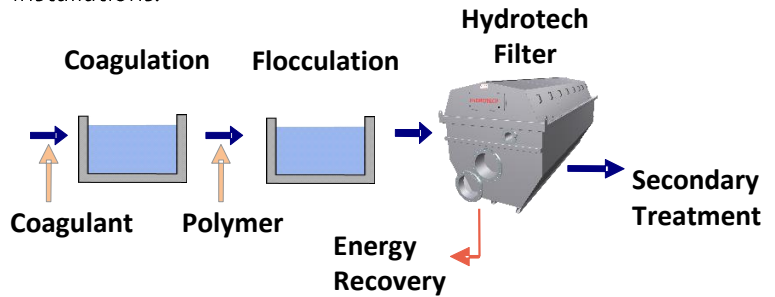
Results for Hydrotech Primary

Hydrotech filters have proven capable of achieving 50% to 75% TSS removal in both pilot trials and full-scale installations with no chemical pre-treatment.



Results for Hydrotech Primary with Chemical Pre-Treatment

When chemical pre-treatment (coagulation and/or flocculation) is added upstream, the filters have achieved up to 95% TSS removal in both pilot trials and full-scale installations.



Realizing the Advantages

- Compact (up to 90% less than conventional)
- Lower energy costs due to reduced load on secondary treatment
- Increased solids capture for energy recovery
- Flexibility to control organic load to biological treatment
- Easy to install, operate and maintain
- Can be used for a variety of applications (primary, wet weather, CSO/SSO, etc.)

Chemical pre-treatment provides the added benefit of the ability to reduce BOD, COD, and TP by up to 85% or more depending on the chemical dosage. This capability enables the WWTP to optimize and control the loading to secondary treatment.

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