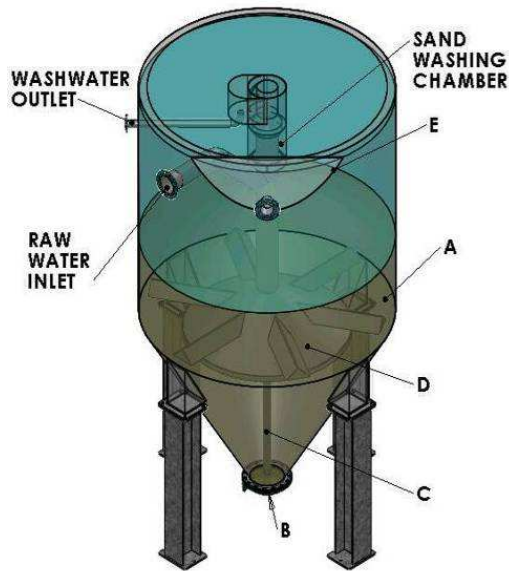


DYNAMIC SAND FILTRATION

A NEW SYSTEM OF CONTINUOUS SAND FILTRATION



PRINCIPLE OF OPERATION

The feed water is fed into the filter at the base of the active sand bed through the distribution ring (D).

It then flows upward through the downward moving sand bed where the solids are filtered out.

The clean filtrate exits the filter through the overflow weir (E). The continuous reject flow of washing water is discharged through a separate outlet.

The dirty sand is continuously removed from the active sand bed (A) thanks to the action of the air-lift pump (C). This pump draws the contaminated sand from the bottom (B) of the filter body.

A mixture of sand, dirty particles and water is transported upward through the air-lift pipe into the washing chamber at the top of the filter.



MAIN FEATURES AND BENEFITS

Absence of any mechanical moving parts

Unique continuous back-wash system using counter current variable velocity washing

Simple plant with no backwash water storage and backwash pumps

Higher suspended solids content in feed, high efficiency in removing fine solids

Colloidal particles efficiently removed through simple in-line dosage of coagulants

Coagulation, flocculation and filtration in one step thanks to the deep active bed

Very low pressure drop across the filter, gravity feed is possible in many instances

Easy maintenance thanks to the internal sand air-lift system



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| MODEL | Filter vessel Height (mm) | Filter vessel Diameter (mm) | Net filtration surface (m ²) | Sand bed height (m) |
|-------------|------------------------------|--------------------------------|---|------------------------|
| DSF 1.5/1 | 3000 | 1400 | 1.54 | 1.0 |
| DSF 1.5/1.5 | 3000 | 1400 | 1.54 | 1.5 |
| DSF 1.5/2 | 4000 | 1400 | 1.54 | 2.0 |
| DSF 3/1 | 3700 | 2000 | 3.14 | 1.0 |
| DSF 3/1.5 | 4200 | 2000 | 3.14 | 1.5 |
| DSF 3/2 | 4700 | 2000 | 3.14 | 2.0 |
| DSF 5/1 | 4150 | 2500 | 4.9 | 1.0 |
| DSF 5/1.5 | 4650 | 2500 | 4.9 | 1.5 |
| DSF 5/2 | 5150 | 2500 | 4.9 | 2.0 |
| DSF 6/1 | 4350 | 2700 | 5.9 | 1 |
| DSF 6/1.5 | 4850 | 2750 | 5.9 | 1.5 |
| DSF 6/2 | 5350 | 2750 | 5.9 | 2 |
| DSF 7/1 | 5650 | 3000 | 7.1 | 1 |
| DSF 7/1.5 | 6150 | 3000 | 7.1 | 1.5 |
| DSF 7/2 | 6650 | 3000 | 7.1 | 2 |



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TYPICAL APPLICATIONS

Pulp and Paper

Polishing of process waters for recycling

Oil Refining:

Oil removal from waste waters

WWTP:

Tertiary treatment; phosphorus removal

Iron and Steel

Oil and scale removal from cooling waters

Metal Finishing

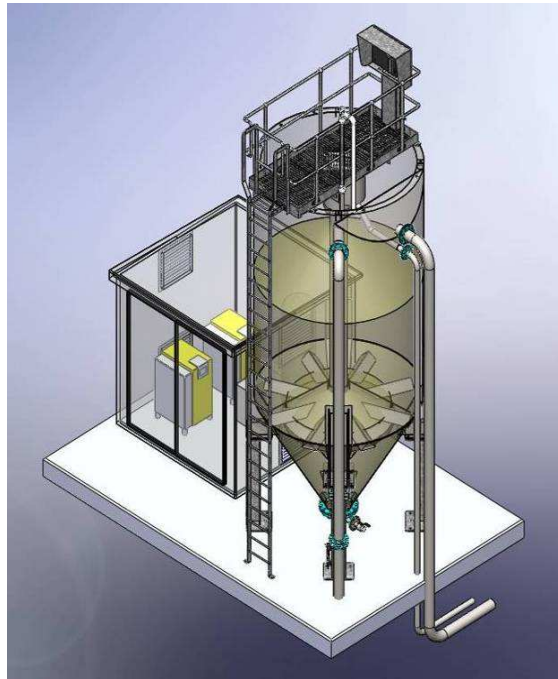
Metal hydroxide removal from wastewaters

Water Supply

Potable water filtration, algae removal

General

Boiler feed water pre-treatment, cooling tower water clarification, membrane ultra-filtration and ozonization plant pre-treatment.



MATERIALS

All wetted parts are in stainless steel AISI 304L,

Special construction materials available upon request.

MULTI-MODULE SYSTEM

Solution for installation in a concrete basin of several basic filter inserts



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