

[TFC] Multi-tube continuous filtration concentrator

High precision, Hermetic processing, low maintenance cost

Features

1. The solution to slurry difficult with sedimentation

Slurry is fed parallelly to double-sided filter media with relative high velocity; internal pressure drive filtrate out of filtration media layer; due to the dynamic parallel filtration concept, TFC filtration performance is comparable to that of membrane filter.

2. Hermetic operation

TFC is one self-contained unit with hermitic processing concept; any pollution to operation environment or products , concerning about loss during in processing can be fully prevented.

3. Low maintenance cost

The cake attached on the filtering media will be washed away by dynamic slurry during filtration that extends the lifetime of the filtering media; besides, tubes are individually removable and easy for maintaining.

4. Alternative materials

We manufacture in various grades of stainless steel and alloys or coated designs to satisfy customer individual application; polished surface is possible.

5. Filtration tests

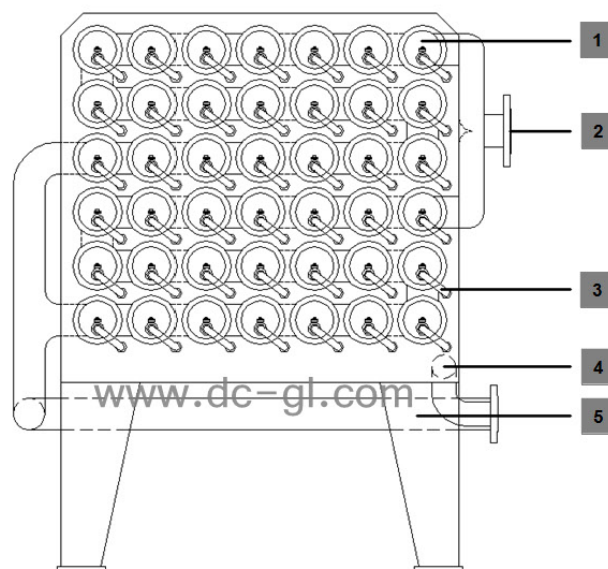
TFC equipment is available in our test center for customer specific filtration tests; test reports are offered as reliable basis for product selection.



Structural principle & Process steps

Structures

- ① Filtration tube component
Multiple tubes with nested pipes both with filtering media; filtration chamber between are series connected;
- ② Feeding port
Slurry is fed via the port by defined pump;
- ③ Filtrate collection channels
Filtrate is drained off via the channel from each filtration tube to collection groove;
- ④ Filtrate outlet
Filtrate is collected in the groove and drain off via the outlet;
- ⑤ Concentrated slurry outlet
After filtering one by one of all filtration tubes, concentrated slurry is automatically discharged via the outlet.



Process

The dynamic and continuous processing: slurry is continuously fed into the tube under certain pressure provided by defined pump with relative high velocity; filtrate in the slurry is drained off during filtering process along the tube via each series connected channels; finally the concentrated slurry is discharged to storage tank.

Applications

Chemicals/ Food/ Dyes/ Metallurgy/ Environmental industry and so on

Performance data and dimensions

Items	Technical data	Remarks
Active filtration area [m ²]	10~50	
Tube components	8~42	
Recommended feeding pressure [MPa]	>0.3	
Filtration capacity [m ³ /h.m ²]	1.5~50	As reference, depending on slurry properties
Particle capture rate [%]	99.9	Application experience value
Dimensions length x width x height [mm]	2600×1300×1800	Dimension of equipment with 50m ² active filtration area
Material	Carbon steel, stainless steel, titanium, alloy or coated design and so on	
Particle size [um]	>0.05	
Weight [t]	0.8~4	

DING CHANG national patented products:

- Cylinder cone filtering&washing&drying equipment
- Cylinder cone press filter
- Bi-conical spiral mixing dryer
- Continuous press filter with composite rotary plate
- Horizontal crystallizing&washing&filtering&drying equipment
- Multi-tube continuous filtration concentrator
- Multi-plate continuous filtration concentrator
- Spiral mixing continuous crystallization reactor



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