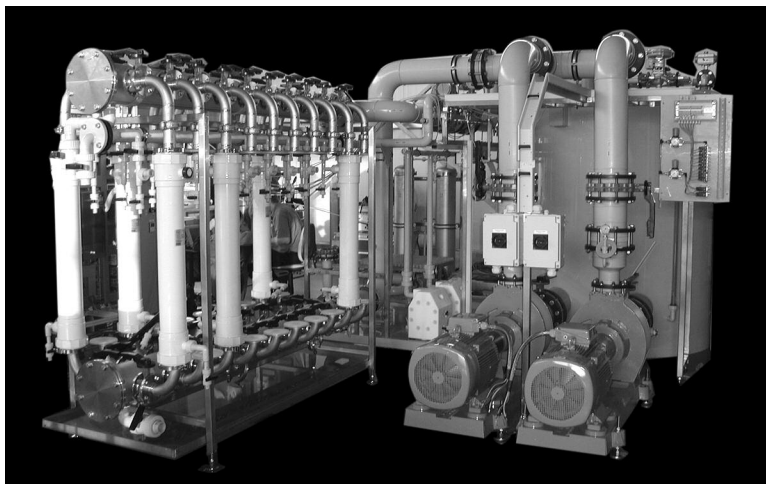




Pall Microza¹ Filtration Systems for CMP Wastewater



Description

Pall Microza Hollow Fiber Filtration Systems remove all suspended solids from spent slurry wastewater. The clear filtration permeate may be discharged to sewage or, where required, treated to remove varying amounts of dissolved constituents, e.g., copper in copper CMP wastewater. The retained solids may be transferred to an existing sludge treatment system, or to a dedicated system for final dewatering. Pall can also provide fully automated turnkey installations for reclaiming or recycling of the permeate for cooling towers, for raw water, for water suitable for RO make-up, or for water suitable for recycling back to the CMP process.

Specifications

Technical Data

- Design Influent: Spent oxide or metal slurry wastewater
- Design TSS: Typically <3 g/L (3,000 ppm or 0.3% by weight)
- Operation Mode: Continuously fed batch
- Automation: Full automation via PLC and Touch Panel HMI
- Typical Footprint (w/o buffer tank):
2 m x 4 m for 8 m³/hr / 35 gpm;
4 m x 8 m for 14 m³/hr / 62 gpm;
2.7 m x 12 m (two tiered design) for 28 m³/hr / 125 gpm

Performance Data

- Permeate Recovery: > 98% of incoming wastewater
- Permeate Turbidity: < 0.2 NTU
- Uptime: > 99%²
- Module Lifetime: > 2 years
- Cleaning Frequency: typically < 2/year
- Operator Labor: < 15 min/day
- Chemical Dosage: none³

¹ Microza is a trademark of Asahi Kasei Corporation

² Uptime = $\frac{\text{Volume of treated wastewater}}{\text{Volume of available wastewater}} \times 100\%$

Not including chemical cleaning.

³ Except for occasional chemical cleaning.

Options

Recommended Options to Base System

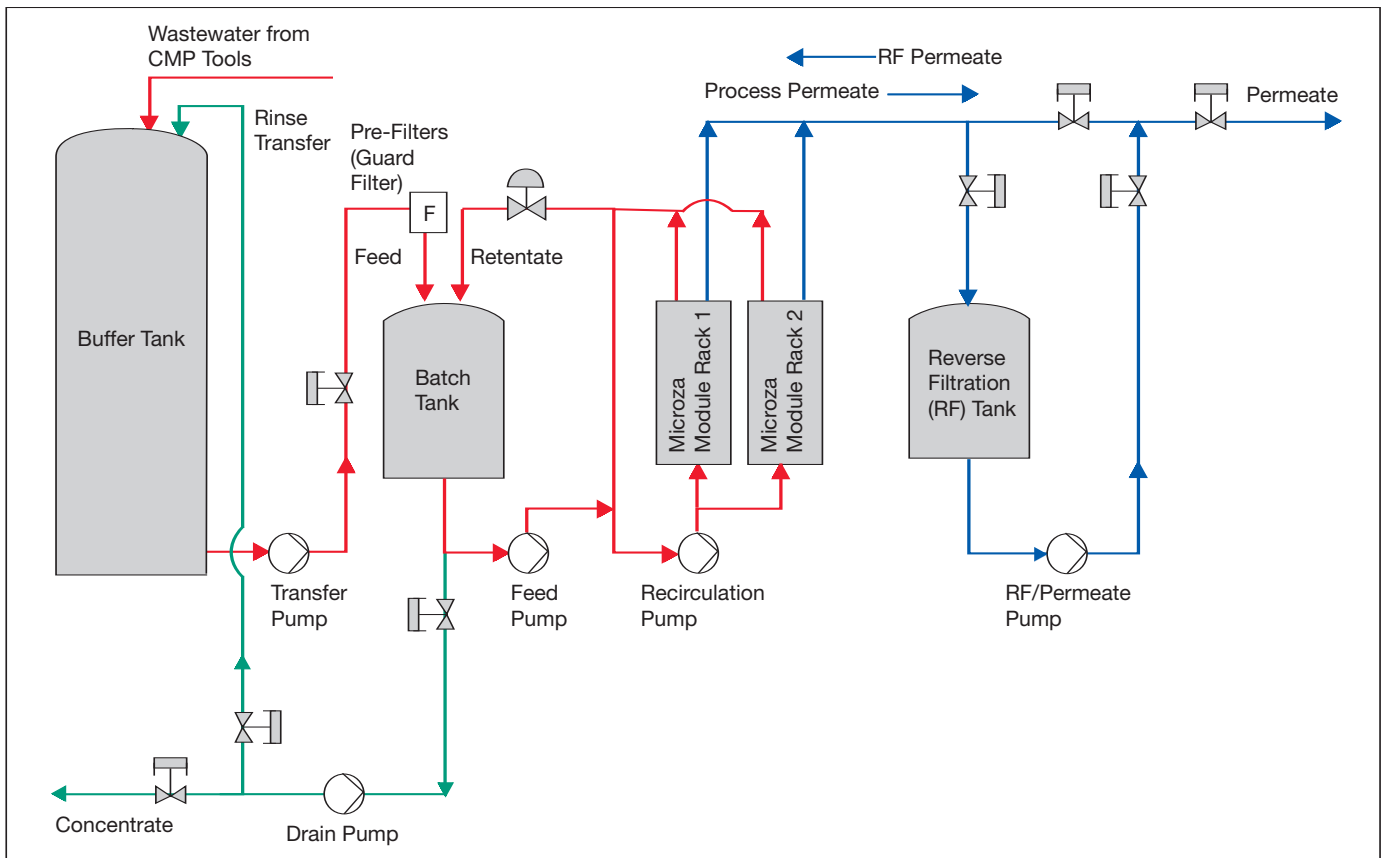
- Buffer Tank System: Provides holding capacity for changing feed flow rates and optimizes Microza Systems' uptime. Typically 2+ hours holding capacity above volume required for normal processing.
- Transfer Pump System: For transfer of wastewater from buffer tank to Microza System.
- pH Adjustment: For optimizing treatment of mixed oxide and metal wastewater.

Additions

- N+1 Redundant Pumps: Add redundancy to transfer, feed, recirculation and reverse filtration and concentrate transfer pumps.
- CIP Tank System: For off-line preparation of cleaning solutions.
- Chemical Dosing Stations: For automatic addition of chemicals for pH adjustment and chemical cleaning.
- Concentrate Post Treatment: System for storage, coagulation/ destabilization and final dewatering of concentrated wastewater for solids disposal.

- Permeate Post Treatment: System for processing permeate to desired quality: e.g., by ion exchange, reverse osmosis or activated carbon.
- A comprehensive copper CMP wastewater treatment infrastructure can be supplied to produce copper free permeate and dewatered solids. For a typical PFD, see the CMP section of the Pall Microelectronics catalog at www.pall.com/micro.
- Service Contract: Routine on-site system maintenance and remote monitoring to ensure optimized performance

Flow Schematic for Pall Microza CMP Base System with Buffer Tank and Transfer Pump Options



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