Tesca Filtration Pilot Plant 32483 mainly consists of a sand fi lter and of an activated carbon filter; filtered water is collected into a tank of stainless steel from which samples for proper laboratory analyses can be extracted. An in-line turbidimeter enables to measure the turbidity of water fl owing in and out of filters.
Process control, data acquisition and supervision are automatically carried out by a microprocessor controller and by a specific control and supervision software (only for automatic plant) that enables the remote control of various operational parameters.

Specifications

- Framework of AISI 304 stainless steel with castors
- Sand filter of borosilicate glass with decreasing particle size and capacity of 30 l
- Activated carbon filter of borosilicate glass with capacity of 30 l
- 4 pressure gauges, with range of 0 to 10 m of water column
- Centrifugal pump with casing and rotor of AISI 304 stainless steel and flow-rate of 3000 l/h
- Variable area flowmeter of AISI 304 stainless steel, with range of 100 to 1000 l/h
- Metering pump of plastic material for sodium hypochlorite, with flow rate of 3 l/h
- Metering pump of plastic material for flocculant, with flowrate of 3 l/h
- 2 feed tanks of AISI 304 stainless steel with capacity of 120 l
- Tank of AISI 304 stainless steel for collecting the filtered water with capacity of 200 l
- Thermo-resistance Pt 100 with sheath of AISI 316 stainless steel
- Board-type electronic temperature indicator
- Connecting lines and valves of AISI 304 and 316 stainless steel Besides being provided with all the technical characteristics of optional automatic, this model also includes the following additional equipment:
- Pneumatic control valve of stainless steel AISI 316 for feed flow rate of water, Cv = 2.5
- Electro-pneumatic converter (4 to 20 A / 0.2 to 1 bar)
- Digital microprocessor PID controller
- Electronic turbidimeter for measuring the turbidity of the water fl owing in and out of filters, with programmable range and 4 to 20 mA output signal
- Supervision software for Windows: it enables to control ONOFF signals, analog signals coming from PID controller, realtime trend and historical trend

Experiments

The process unit enables to develop and analyze the following issues:

- Mechanical filtration
- Chemical filtration
- Main parameters affecting filtration
- Influence of feed flow rate on filtration
- Optional automatic PID control
- Optional plant supervision

Mains Power

- 220 – 240V 1Ph, 50Hz

Note: Specifications are subject to change.

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