

Flat Foam Sheet Experiments

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Before designing a foam filtration system, it is necessary to test the filtering capacity and associated head loss of various pore sizes of foam. Therefore, we set up the following schematic:

- Raw water flows from the distribution tank, into a holding reservoir. The holding reservoir is necessary as it allows air trapped in the water line to escape before sending it through the filter. Air cannot be allowed into the filter as it will alter the results of filter performance.
- The water is then pumped into the top of the filtration apparatus, and down through the filters.
- The effluent water line continues to the turbidimeter where the effluent turbidity is measured.

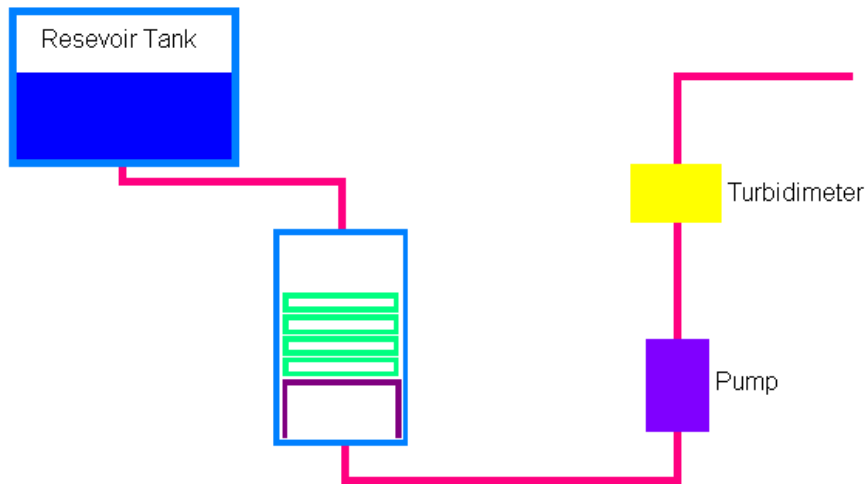


Figure 1: Schematic of foam sheet experiment

Experiments

Raw Water Turbidity Process

Multiple experiments were run with varying pore size in order to determine how pore size affects filtration performance.

Experiment Set 1: 60 ppi Foam

Experiment Set 2: 90 ppi Foam