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KEY WORD : SETTLING/TUBE SETTLER/WASTEWATER/TURBIDITY

NARONGSAK DEEWATTANARKUL : FLEXIBLE TUBE SETTLER IN WASTEWATER

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This study was designed a suitable concentration of suspended solids fed into the test tube settler. The independent variables horizontal angles of the tube (from 35 to 60) and the concentration of suspended solids (50-600 mg/l). The experiment was done at the over flow rate of $2 \text{ m}^3/\text{m}^2\text{-hr}$ through the sedimentation tank of $50 \times 50 \text{ cm}^2$. Inside which were $25\text{-}10 \times 10 \text{ cm}^2$ PVC. square tubes with 65 cm length. When clogged, the sludge in the tube settler was removed by increasing the angle of tube settler to 80 , allowing the settle down to the plenum hopper section.

The optimum suspended solids concentration for the flexible tube settle was shown to be in the range of 130-347 mg/l. The efficiency of suspended solids removal was approximated at 76-90% whereas the effluent suspended solids was less than than 30 mg/l.

The removal efficiency of suspended solids decreased with the increased horizontal tube angle. The downward velocity of sludge level, When drawn of from the tube at 80 angle setting, was in proportion to the sludge volume index (SVI).