

V COST COMPARISON

An important goal in water treatment field today is the economic optimization of treatment systems. To optimize a treatment system requires reasonably low cost of the system components. According to this study, the use of corrugated sheet as tube settler enables the detention time of the settling process to be reduced to a few minutes in contrast to conventional settling process which required 1 - 4 hours detention period. The major advantages of tube settlers are very compact and provide the benefits of significant saving in construction cost and land requirement.

It may be pointed out that the costs presented here may differ slightly from other estimators. The differences probably result from the fact that assumption must be made about certain factors of capital costs. These assumptions vary among estimators. The estimation of construction cost, including material and labour costs, in this study were estimated based on Table 1. No effort was made to evaluate the cost of piping and equipment, foundation, land and excavation.

Table 1. PRICE LIST

Item	Unit	Price (฿)	Remark
Concrete	m. ³	550	Price included material and labour cost.
Steel reinforcement	ton	7,000	
Form work	m. ²	80	
Galvanized steel Corrugated sheet	ft.	4.25	Ref. Sam Construction Journal 1975
Brickwall	m. ²	150	

Fig 35 show the cost comparison of conventional settling tank and tank using medium galvanized steel corrugated sheets as tube settlers. Capacity of water treated per day was plotted against total cost in Baht per m.³ per day. Example of calculations were shown in Appendix B. It can be seen directly from Fig 35 that tank using corrugated sheets as tube settlers enables substantial saving in cost and is about 35% of the cost of conventional settling tank.

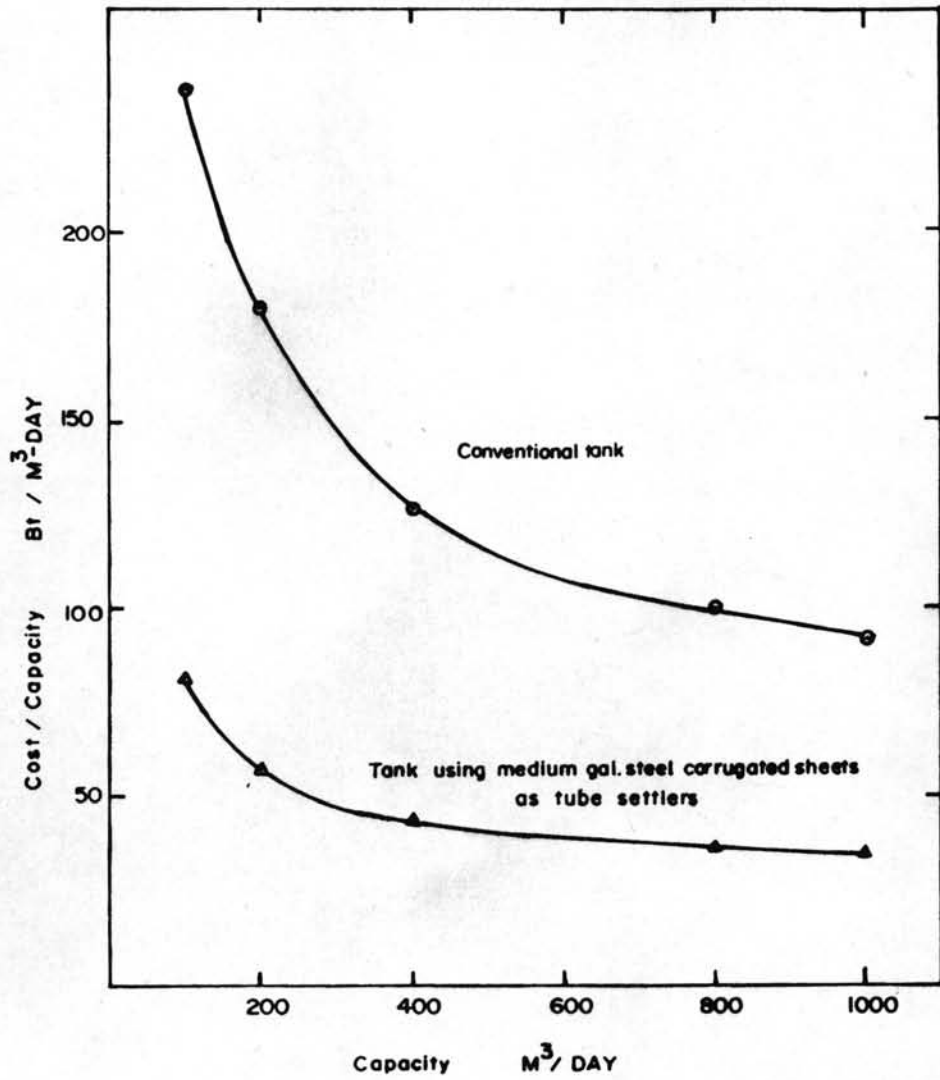


Fig 35 Cost of Sedimentation Tank Versus Capacity

Note Cost exclude Piping, Equipment and Foundation