

Calculation of Oxygenation Capacity Mechanical Surface Aerators

at _____ day MCRT

Required Input Data

- (1) Oxygen Required, O_{2REQ} _____ lb O_2 /day
- (2) Oxygen Transfer Capacity (field condition), OT _____ lb O_2 /hp/hr

Assumptions

- (3) Typical oxygen transfer capacities for mechanical aerators as follows:

	Oxygen Transfer Rate (field conditions)
Low Speed Surface Aerator	1.15-2.1 lb/hp/hr
Low Speed Surface Aerator with Draft Tube	1.15-2.3 lb/hp/hr
High Speed Floating Aerator	1.15-2.1 lb/hp/hr

Determine Aerator Horsepower Required

(3)
$$hp_{REQ} = \frac{(O_{2REQ})}{(OT)(24 \text{ hr/day})}$$

(4)
$$hp_{REQ} = \frac{(\quad)}{(\quad)(24 \text{ hr/day})}$$

Enter from line (2) \curvearrowright
 $hp_{REQ} =$

Enter from line (1) \curvearrowright