

Chapter VII

CONCLUSION

The results of this study on aeration rotor can be concluded as follows:

1. The overall oxygen transfer rate constant is influenced by the depth of immersion of the aeration rotor blades and the speed of rotation.
2. At higher speeds the value of the overall oxygen transfer rate constant increase significantly because of the agitation of the surface of the water caused by the impact of the blade, points and the presence of tracks of bubbles produced by the movement of the blade in the water, on the other hand at low speeds the overall oxygen transfer rate constant low because of the less bubbles produced.
3. At low speeds (below 60 RPM) Rectangular Rotor NO 1 gives a higher overall oxygen transfer rate constant than the other two rotors, but the reverse is observed when the rotors are operating at the higher speed range (above 80 RPM).
4. Power consumption is influenced by the depth of immersion of the aeration rotor blades and the speed of rotation.
5. Optimum operation condition occurs at 5.0 to 7.5 cm. depth of immersion of rotor blade and 80 RPM for Rectangular Rotor NO 2 and 3.