



OXIDATION DITCH

Applications

- ◆ Municipal Wastewater Treatment
Plants of medium to high size > 30,000 EP
- ◆ Industrial wastewater with soluble COD
- ◆ Industrial wastewater high in nitrogen
eg. abattoirs

Oxidation Ditch Advantages

- ◆ Low operating costs
- ◆ Simple to operate or automate
- ◆ DO levels can be closely maintained to optimise power savings
- ◆ Brilliant denitrification is achieved (< 5 mg/L)
- ◆ Mixing system is independent of aeration system, thus the basin velocity and aeration can be independent
- ◆ Well established technology

Disadvantages

- ◆ Produces solid waste
- ◆ Requires air and hence power

Performance

- ◆ Extended aeration typical F:M » 0.05
- ◆ Very efficient aeration system typically
4 kg O₂/kWhr (SOR)
2.5 kg O₂/kWhr (AOR)
- ◆ Excellent nitrogen and BOD removal
Typical effluent is better than:
5 mg/L BOD
5 mg/L NFR
5 mg/L TKN
- ◆ Relatively low power cost per kg of BOD removed generally less than 0.05 kW/kgBOD

Status

- ◆ Has principally been used on municipal treatment plants greater than 30,000 EP
- ◆ Over 200 oxidation ditches installed in Europe
- ◆ Used also on municipal plants treating high percentage of industrial waste
- ◆ Aquatec-Maxcon has installed 5 Ladox Rotor Oxidation Systems
- ◆ Gibson Is. (2x20ML ditches 150,000 EP)
- ◆ Loganholme 3 (1x8.5 ML ditch, 30,000 EP)
- ◆ Coombabah (2x15 ML Ditch, 100,000 EP)
- ◆ Porirua (1 x 18 ML Ditch, 75,000 EP)
- ◆ Loganholme 4 (1 x 8.5 ML Ditch 30,000 EP)

The manufacturer reserves the right to alter performance, specification or design without notice.



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