

Environ offers oxygen transfer testing facility for aerators

Aeration system is the heart of any biological ETP/STP and maximum energy is consumed in aeration system to reduce the BOD/COD. As this is a non-productive plant, the energy used in such systems is also a monetary waste for any industry / CETP / STP. So to save such expenses the industry including ETP, CETP, and municipal corporations should enquire whether the invested capital will work efficiently for a long period of time with low maintenance.

There are many aeration systems available in the market like mechanical aerators i.e. slow speed / high speed / aspirator/ aerators with draft tube arrangements, energy efficient aerators, diffused aeration system having many types of diffusers, jet aerators, ELO2 aerators etc. Environ claims to be the only manufacturer in India who has got oxygen transfer testing facility for the aerators up to 150 hp ratings and had tested the oxygen transfer along with mixing efficiency of the prototype aerator before placing the aerator in the market.

At the initial commissioning stage the manufacturer of aeration system, turnkey executors show good results, but after they hand over the plant to the end user say after a period of time of 6 – 10 months, the efficiency of the out let parameters of the effluent getting disturbed (this is due to inefficient aeration system) and the end user starts facing the problems of not getting results, and mean time the guarantee of the equipment is over.

Environ always prefers to explain the facts to the client and then ask them to take their own decision, in such cases after understanding the technical features and their requirement, the end users are always in a position to take right decisions.

In any mechanical aeration system apart from oxygen transfer, mixing efficiency is equally important. The oxygen transfer and mixing efficiency always depend on the design of the aerator impeller. Each and every aerator impeller has its own influence zone and mixing efficiency and has the limitations to cater particular depth of say 2.5 metres. However, if the tank depth is more than 2.5 metres, then there will be settlement at the floor level, which will create septic conditions and the D.O. level reduces and sometimes goes down to zero.

Nowadays, due to the space constraint, most of the aeration tanks are designed with higher depths. As the depths of the aeration tank is more than 2.5 metres. Environ believes that it is the duty as a aerator manufacturer to design the aerator impeller accordingly considering the depth of the aeration tank. However, it is not possible without doing the experiments or R&D. Environ can reduce 20 to 70 per cent energy in existing aeration system, having the aeration tank depth up to 6 metres, offering the results as per the norms. ■

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