ADVANTAGES-DISADVANTAGES

ADVANTAGES OF UASB REACTOR.

- Low investment cost.
- Low land Requirements.
- Low energy costs, just transport of the influent to the plant.
- Production of valuable by product :- Biogas.
- Very high loading rate can be applied, including for low strength domestic wastewater.
- Short retention time.
- Preservation of anaerobic sludge in the reactor for many months without loosing much of its activity is possible.
- No need of support medium as required in other high rate anaerobic process.
- Low production of stabilized excess sludge, which can be easily dewatered.
- Acceptable effluent quality with high COD removal efficiency (15 to 90%).
- Simple reactor construction.
- Nutrient requirement is low.
- Process is totally enclosed and all the exhaust gas is either burned in gas utility or an automatically controlled flare stack, hence the system is completely environment friendly.
- Very low sludge production.
- Automatic biological overload control facility.

DISADVANTAGES OF UASB REACTOR.

- Granulation process is difficult to control and it depends upon wastewater properties.
- Process is rather sensitive for specific toxic compounds and inhibitors (e.g. for compound such as CN - $CHCl_3$ etc.).
- The removal of pathogenic bacteria, viruses, parasites, helminthes etc. is poor and post treatment is required before the effluent can be discharged into receiving water or reused for irrigation of edible crops.
- As organic load increases a proper monitoring of the process will have to be done especially to maintain required alkalinity to counter excessive acid production.
- First startup of the process requires a period of several weeks.