



4-Street SBR-Wastewater Treatment Plant of the Holiday Resort **SUNNY BEACH** at the Black Sea (Bulgaria)



View of the 4-street SBR-WWTP of the resort SUNNY BEACH

- **Connection load:** 70,000 population equivalents
- **Sewer system:** combined system
- **Process objective:** BOD₅ < 25.0 mg/l
COD < 110.0 mg/l
- **Pre-treatment of sewage:** 2-street screen, automatically cleared 2-street-sand trap
- **Aeration technology:** HyperClassic- mixing and aeration system (3 ea./reactor), 5 blowers for generation of compressed air
O₂-sensors for control of air-input
- **Sludge-treatment:** storing and drying of sludge
- **Start-up:** July 2006
- **Effluent quantity:** 30,000 m³/d (dry weather)
- **Operation results:** BOD₅ < 5.0 mg/l
COD < 50.0 mg/l
N_{total} < 10.0 mg/l
NH₄-N < 1.0 mg/l
- **Treatment concept of biological stage:** extended aeration process as 4-street SBR-WWTP, including nitrification, denitrification and simultaneously stabilization of excess sludge
- **Control concept:** fully automatic control including remote servicing
- **Sludge-utilization:** agricultural use of excess sludge as liquid fertilizer



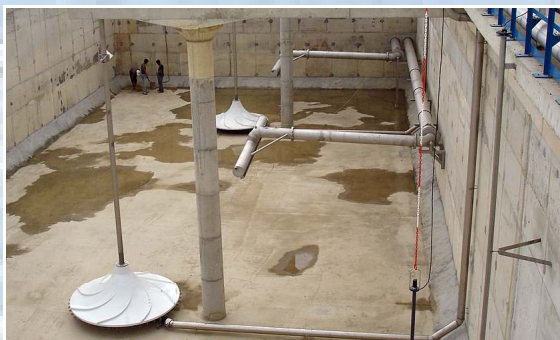
View from the service platform to the two SB-reactors



2-street screening system located in the operation building



Inlet of the WWTP with valve and sand trap



SB-reactor during assembly phase (mixers and decanters)



Detailed view of a mixing and aeration system



Station with 5 rotary blowers



SB-reactor during aeration phase