MUTAG
WATER MATTERS

Reference: Nhon Tract, Vietnam

Textile WWTP revamping at stepwise increase of flowrate.

Project:
Revamping of a textile wastewater treatment plant (WWTP) designed for 10,000 to 50,000 m^3/day

Industry:
Industrial - textile effluent

Facts & figures:
- 320 m^3 Mutag BioChip™
- Influent BOD: 800 mg/l; effluent BOD: 190 m^3/l
- Influent COD: 1,500 mg/l; effluent COD: 350 m^3/l
- Influent NH4-N: 30; effluent NH4-N: 8
- Influent TN: 80 mg/l; effluent TN: 30 mg/l
- In operation since 2017
- Stepwise upgrade of flowrate from 10,000 to 50,000 m^3/day
- Enhancement to the fivefold of its original flowrate, without the need of constructing more tanks

Task:
Expansion project of a textile WWTP that was originally designed for a flowrate of 10,000 m^3/day. Due to an increase of the production capacity, the flowrate increased to 40,000 m^3/day in a first phase and to 50,000 m^3/day in a second phase, whereas also the loads impacting the plant became correspondingly higher. Task was to still attain the permissible effluent requirements of the factory, without the construction of additional tanks.

Solution:
The plant was constructed in 2016 to originally comply with a flowrate of 10,000 m^3/day, whereas 120 m^3 Mutag BioChip™ were added in 2017 to attain the effluent requirements. Due to an increase of production capacity, the flowrate increased in two phases. To generate more tank volume for that, the existing tank height and water level were increased from 4.5 m^3 to 8.5 m^3 water depth. Initially, in upgrading phase 1, the flowrate increased to 40,000 m^3/day then, whereas another 100 m^3 Mutag BioChip™ were added and subsequently, following another 100 m^3 Mutag BioChip™ that were added for the last phase of enhancement to 50,000 m^3/day.

Results:
Biggest advantage for the customer is that the plant is now handling the fivefold of its original flowrate, which was possible without the need for construction of additional tanks due to an enhancement of the water level and “chip-tuning” with Mutag BioChip™. The BioChip™ is in operation in this plant since 2017 and the related discharge quality requirements have been safely attained at any time since the commissioning until today.

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