Sewage sludge mineralisation reed beds at Wadi Hassan, Jordan

Client :
Deutsche Gesellschaft für Internationale Zusammenarbeit GIZ (GmbH)

Contractor :
Under tender

Capacity:
Wastewater of conventional wastewater treatment plant per day: 900 m³
50 m³/day surplus sludge with 3 % DS (1500 kg DM)

Planning: 2018
Construction: 2018/2019

Sewage treatment:
Extended aeration

- Aeration basin
- Settling tanks

Sewage sludge treatment :

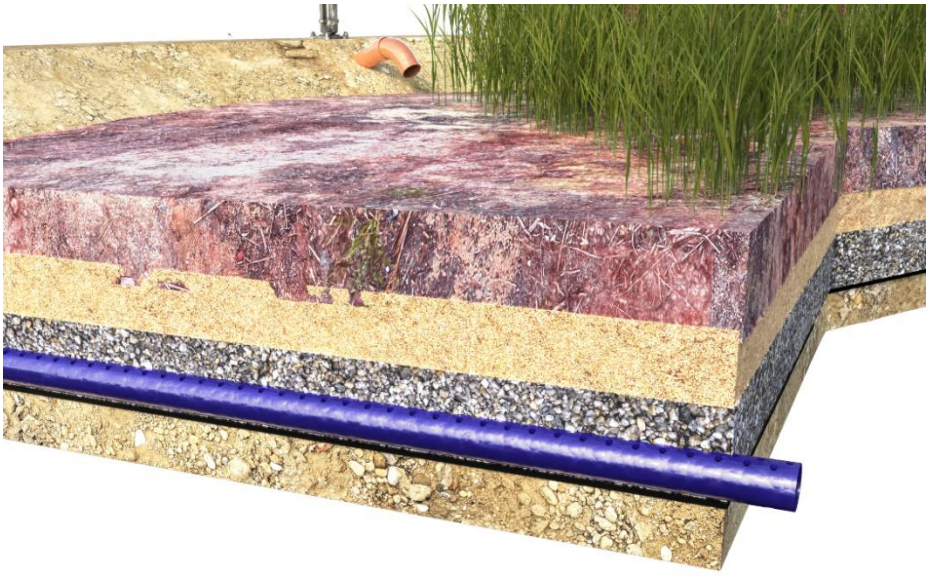
- Sludge thickener
- Sludge drying beds (summer operation)
- Sludge mineralization reed beds (winter operation)

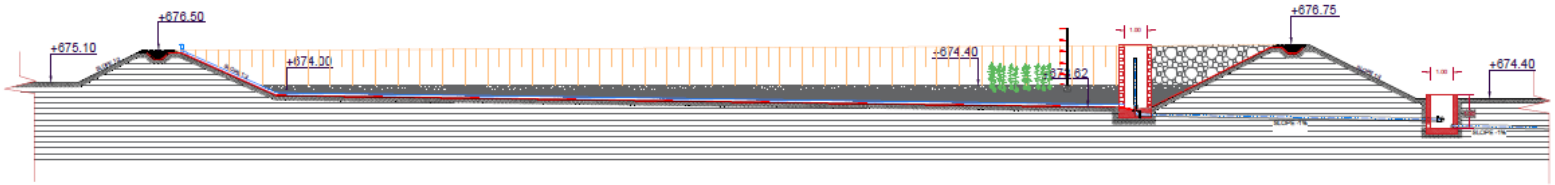
Load of sludge mineralization reed beds
- 6 months per year (winter)
- 70 kg DM /m² x year
- Treated effluent sewage irrigation during summer and start-up period (40 m³/day)

Output:
- Sludge liquor is pumped back to STP
- 686 m³ mineralized sludge per year accumulating in the basins, first removal after 10 years.

Advantages:
- No liquid sludge handling, storage & disposal for several 10 year-periods
- No use of chemicals and energy consumption only for pumping

Space requirement:
- 3,911 m² (reed bed surface area divided in 4 basins)
- 9,238 m² (total area)





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