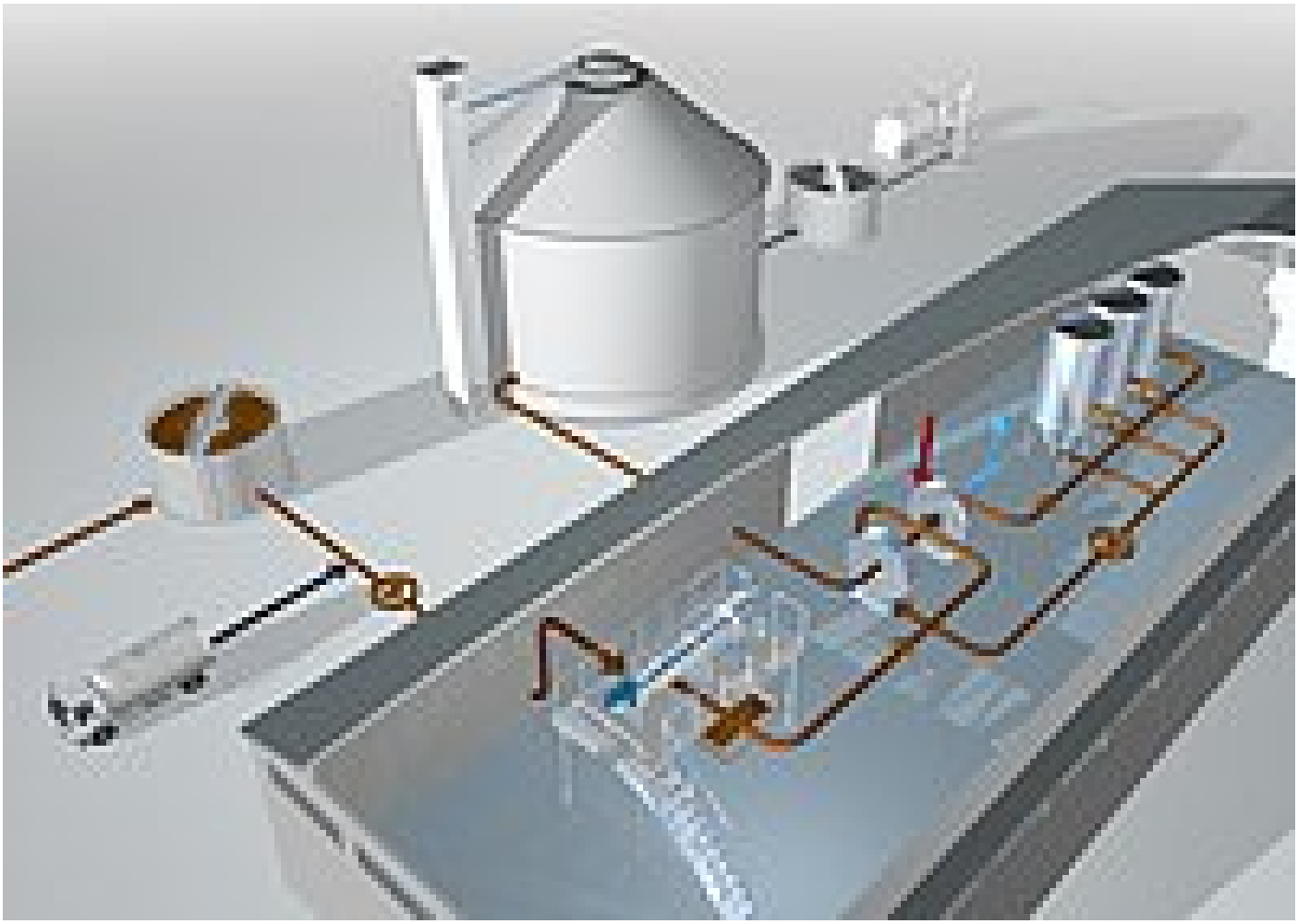
HUBER TECHNOLOGY sp. z o.o.

Sludge Stabilization and Disinfection



The following processes are commonly used for sludge stabilization with or without disinfection:

- **Simultaneous aerobic stabilization or extended aeration** are rather simple processes, but need large tanks and consume an extra ca. 12 kWh/(PE•a) power beyond N-removing. Disinfection is not achievable. Application should be limited to small plants < 10,000 PT.
- **Auto-thermal thermophilic aerobic digestion (ATAD)** of thickened sludge is compact, but power consumption is even higher. Disinfection is achievable.
- **Chemical stabilization** with slaked or quick lime consumes little power but much energy in the lime. Disinfection can be achieved with high dosage. Sludge mass and fuel consumption for transportation is increased. Application is limited to small plants.
- **Mesophilic anaerobic digestion** consumes ca. 1 kWh/(PE•a) power and 14 kWh/(PE•a) heat. About 18 kWh/(PE•a) power and 29 kWh/(PE•a) heat is co-generated from digester gas.
- **External pump recirculation** for digester mixing requires much power. Internal draft tubes or gas injection are far more efficient.
- Disinfection can be achieved by **pre-pasteurization** with modest power and heat consumption. Most of the heat should be recovered.
- **Thermophilic anaerobic digestion** achieves disinfection. Heat should be recovered and a second mesophilic stage provided.
- Digester gas production can be increased by raw sludge **disintegration or homogenization**.

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