



Application

Before discharging into the canalisation, the waste water must be treated according to the standards that conform to the public sewer acceptance limits.

Batch plants are used for treatment of small effluent volumes (<3 m³/hr) with a wide range of pollutant concentration.

The following treatment processes can be carried out:

- Treatment of rinse water, regenerate and concentrate
- Detoxification of Chromate, Nitrite and Cyanide
- Treatment of complexed metals
- Neutralization
- Sludge separation

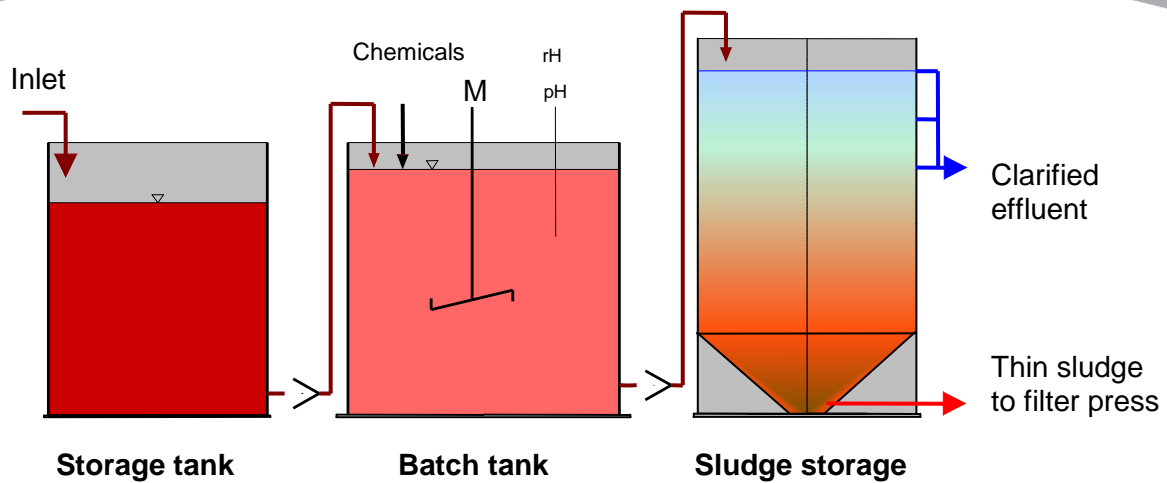
Process Characteristics

Advanced rinsing methods and efficient water management reduce overall effluent quantity. The treatment in separated streams enables a better identification of contaminants and thus makes the treatment easier.

The waste water is detoxified and neutralized in a batch plant. The precipitates in the form of sludge particles (e.g. heavy metal hydroxides) are dewatered in a filter press.

In the next process step, the content of wastewater contaminants is reduced according to the local effluent standards.

If noxious gases occur, they can be exhausted and scrubbed with the "RECOJET" gas scrubber.



Description of the plant

In batch treatment plants the waste water is handled in several chemical process step sequences considering necessary reaction times.

The batch reactor is filled by pumping of the waste water from a storage tank. After decontamination, hydroxide precipitation can be carried out or, in presence of chelating compounds, sulphide precipitation can be applied.

After a defined settling time, the clarified water is discharged from the batch reactor. A sand filter possibly followed by a selective ion exchanger (if needed) is used as final purification unit before draining of the treated effluent into the sewer.

The sedimentation of the sludge flakes can take place in the batch reactor itself or in a sludge storage tank connected to the batch tank.

The sludge is usually dewatered with a chamber filter press to a depositable, dry sludge.

Advantages

- Treatment of small wastewater volumes and/or discretely produced wastewater streams having higher contaminant concentration
- Chromate, nitrite and cyanide detoxification (possible only in batch treatment mode)
- Realisation of complicated reaction processes
- High reliability
- Monitoring of wastewater prior to discharge
- Compact construction
- Standard dimensions
- Corrosion-resistant construction
- Low invest costs

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