

The SOLVOCARB® process. Neutralization of alkaline wastewater with carbon dioxide.

General

Due to stricter environmental requirements, today wastewater may only be discharged into the sewage pipelines or outlet channels if it is within a narrow pH range around the neutral point. The SOLVOCARB® method employs the environmentally-friendly gas carbon dioxide (CO₂), to neutralize alkaline waters. When dissolved in water, carbon dioxide forms carbonic acid and reduces the pH value to the appropriate level.

Advantages

Compared with mineral acids, carbon dioxide and carbonic acid offer many advantages:

- Carbon dioxide is not categorized as a substance that is harmful to water
- No additional salt formation in the water as chlorides, sulphates etc. and therefore no increased salt load in the infeed to wastewater plants
- No over-acidification of the wastewater due to the flat neutralization curve
- No corrosion of the system components
- Safe, simple storage and use of the carbon dioxide
- The best economical and ecological alternative

Areas of use

The carbon dioxide can treat alkaline wastewaters for most industries, including:

- Beverage
- Dairies and butcheries
- Bakery and confectionery
- Electroplating
- Cement and concrete
- Paper and cellulose
- Leather
- Textile
- Laundries and dye works
- Photo-chemical

The addition method

The gaseous carbon dioxide is added to the wastewater using the SOLVOCARB methods developed by Linde:

- SOLVOCARB® B method
Carbon dioxide enters via finely perforated aeration hoses
- SOLVOCARB® D method
Carbon dioxide enters via ball-head nozzles
- SOLVOCARB® R method
Carbon dioxide enters via special reactors



SOLVOCARB® B

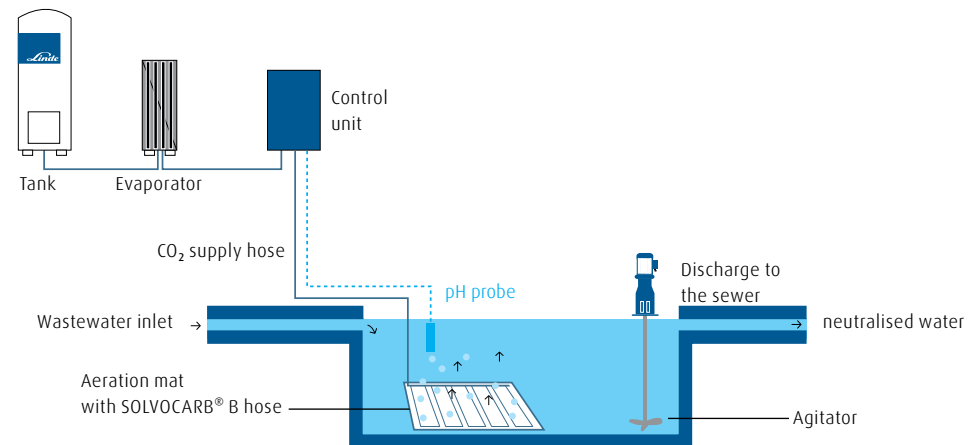


SOLVOCARB® D

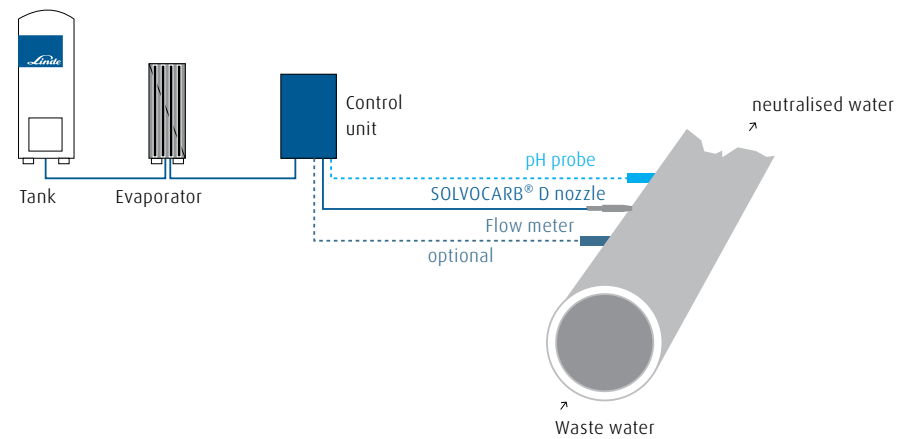


SOLVOCARB® R

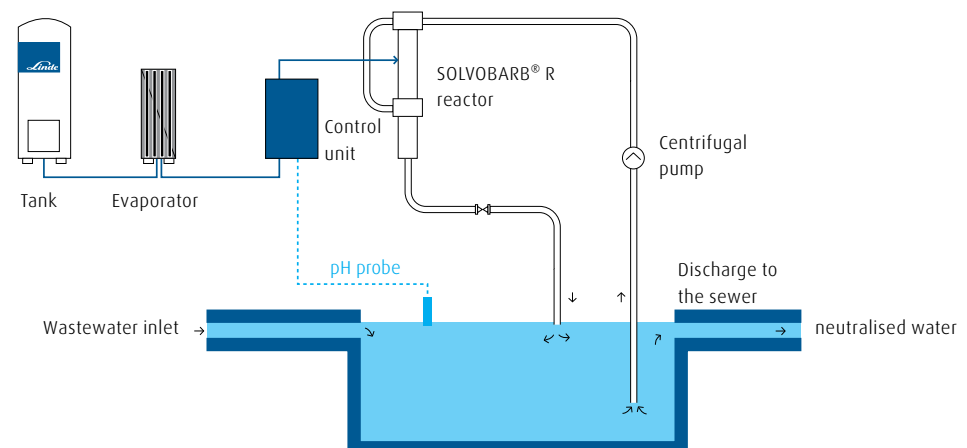
SOLVOCARB® B method CO₂ ingress via perforated hoses made of elastic and resistant rubber installed on the bottom of the tank



SOLVOCARB® D method CO₂ ingress via ballhead nozzle directly into the sewage pipe



SOLVOCARB® R method CO₂ ingress via reactor connected in the main flow or the secondary flow



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