BOC
A Member of The Linde Group

The SOLVOCARB® process. Neutralisation of alkaline waters 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 (CO_2), to neutralise 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 categorised as a substance that is harmful to water
- No additonal 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 neutralisation 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

Carbon dioxide can treat alkaline wastewaters from most industries, including:

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

The addition method

Gaseous carbon dioxide is added to the wastewater using the SOLVOCARB® methods developed by BOC:

- SOLVOCARB® B method
  Carbon dioxide dissolves via finely perforated aeration hoses
- SOLVOCARB® D method
  Carbon dioxide is injected via ball-head nozzles
- SOLVOCARB® R method
  Carbon dioxide dissolves in special reactors

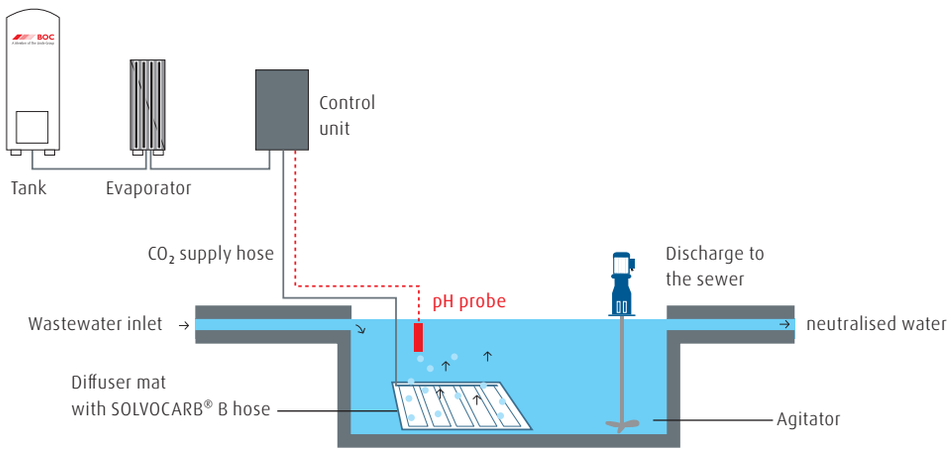
SOLVOCARB® B

SOLVOCARB® D

SOLVOCARB® R

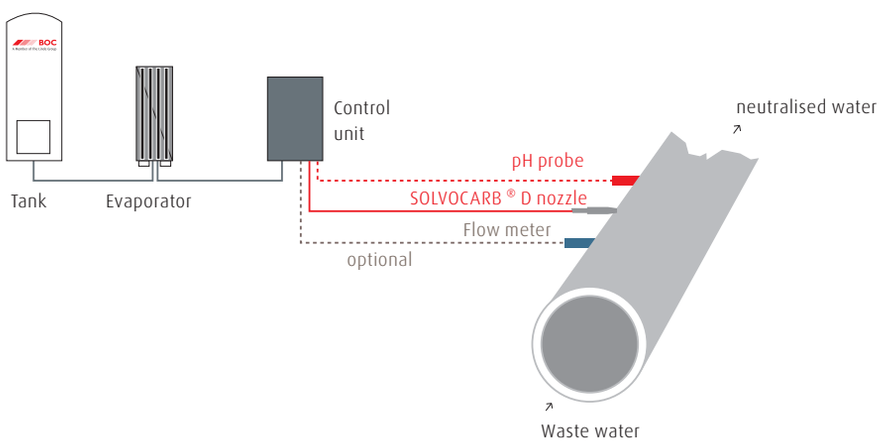
SOLVOCARB® B method

CO_2 dissolution via perforated hoses made of elastic and resistant rubber installed on the bottom of the tank



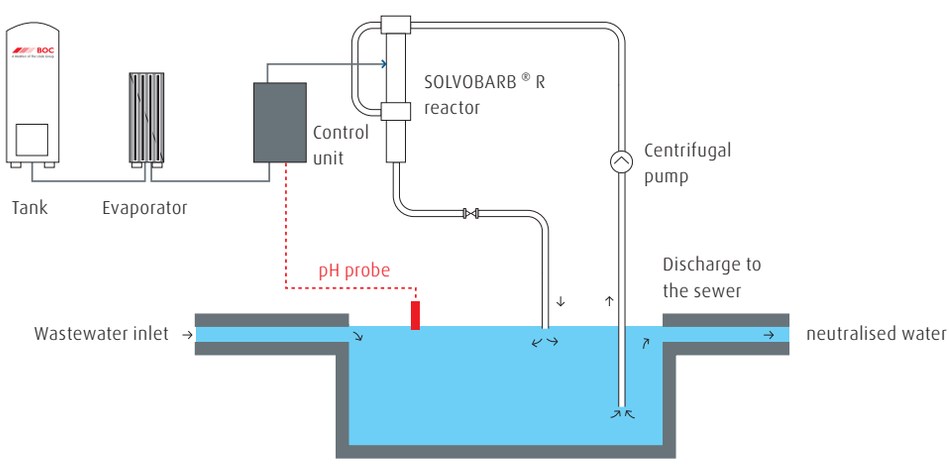
SOLVOCARB® D method

CO_2 injection via ballhead nozzle directly into the piped flow



SOLVOCARB® R method

CO_2 dissolution via reactor connected in the main flow or the secondary flow



Contact

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