PROTECTING MAN AND ENVIRONMENT

Technology Offer

# Method of wastewater treatment using nitrification

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## Abstract

**The technology offer of a German institute concerns a method of waste water treatment that is applied in order to avoid or reduce offensive smell and corrosion of waste water conduit systems. As a result of the centralisation of the waste water treatment, olfactory emissions and corrosion increasingly appear within the waste water systems. This particularly applies to the increased waste water draw-off through penstock. The institute aspires to a licence agreement.**


## Description

Offensive smell particularly arises from the existence of hydrogen sulphide, organic acids and ammonia. Through nitrification – bacterial oxidation of ammonia – an accumulation of waste water with nitrate can be effected. During the proposed method, the waste water treatment regarding smell affliction and corrosion tendency already occurs before the discharge into the continuative systems, in fact through a combined application of immobilised nitrificants and aeration with oxygen in the sump pit. Instead of adding nitrate as chemical to the waste water, a biological process in order to generate nitrates is initiated and the potential of the material existing in the waste waters is utilised. To immobilise nitrogen-fixing microbial strains, growth substrates are situated in the sump pit, which, based on their diameter as well as appropriate backing mechanisms if applicable, are not absorbed into the pump and transported into the pressure line.

## Innovations and advantages of the offer

Waste water treatment without allowance of chemicals through combination of nitrification and aeration with oxygen.
The method is realisable at existing plants by low costs.

## Current and Potential Domain of Application

waste water treatment
nitrification


**For further information (including IPR status) please contact:**
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