

ABSTRACT
METHOD AND EQUIPMENT FOR THE BIOLOGICAL DENITRIFICATION OF WASTE
WATER

The invention relates to a method for the biological denitrification of waste water, which comprises a nitrification-denitrification sequence followed by, for a first fraction of water, a post-denitrification step (6) during which an electron donor is injected into said first fraction, while a second fraction of water passes through a by-pass (5b), then is mixed with the first fraction downstream of the post-denitrification step; the first fraction of waste water is subjected, during the post-denitrification, to a nearly complete denitrification so as to exit the step at a nitrate $[N-NO_3]$ concentration less than 4 mg/L, in order to minimize the production of nitrous oxide N_2O . The by-pass rate is determined based on: a measurement (9) of the nitrate $[N-NO_3]$ concentration of the water upstream of the post-denitrification, the desired nitrate $[N-NO_3]$ concentration for the mixture of the two fractions downstream of the post-denitrification treatment, and the nitrate $[N-NO_3]$ concentration of the first fraction at the outlet of the post-denitrification, before the mixing of the two fractions.

FIG 1