

ABSTRACTWATER TREATING METHOD AND ARRANGEMENT INTEGRATING A
FIXED-BACTERIA BIOLOGICAL TREATMENT AND FLOCCULATION-
DECANTATION

The inventive water treating method and arrangement successively combine at least one step consisting in biological treating at least one part of pollution contained in said waters by a fixed biomass, wherein a bio-cleaned flow logically obtainable at the and of said step, prior to the entry thereof to a next step, contains less than 2 g/l of SS, and at least one stage for carrying out a flocculation-decantation by ballasted flocs consisting in transferring biologically treated flow to a mixing area (2), preferentially at a velocity gradient ranging from 10 s⁻¹ to 1000 s⁻¹, wherein at least one type of denser than water insoluble granulated material is injected and suspended matters are aggregated around said granulated material particles, in transferring the flow issued from the mixing area (2) to a decantation area, wherein the clarified flow and decantation sludges mixed with the granulated material are separated, in extracting granulated material from the decantation sludges, in recycling major part thereof is in the mixing area (2) and in removing the decantation sludges separated from the granulated material.

Figure 1