

DEVICE FOR PRODUCING AND TREATING A GAS STREAM THROUGH A VOLUME OF LIQUID, AND FACILITY AND METHOD IMPLEMENTING SAID DEVICE

Abstract

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The device comprises an enclosure (10), of which the lower part (10e) is submerged in a liquid (L) supply (11) open at the top, such that the submerged lower part (10e) of the enclosure contains a volume (V) of said liquid, and which comprises at least one opening (10g) for discharging a gas stream, positioned above the surface (S) of the volume (V) of liquid contained in the enclosure. The device further comprises means for producing and injecting a gas stream (F) comprising at least one injection conduit (120), of which a lower part (120a) is submerged in the volume (V) of liquid and extends in an upper part inside the enclosure (10) outside said volume (V) of liquid, said injection conduit (120) comprising, in the submerged lower part of same, at least one discharge opening (120c) positioned below the surface (S) of said volume (V) of liquid. Said means for producing and injecting a gas stream (F) comprise a compressor (121a) connected to the non-submerged part (120b) of the injection conduit (120) or to the discharge opening (10g) of the enclosure (10), and make it possible, during operation, to create and introduce an incoming gas stream (F), coming from outside the enclosure (10), in the non-submerged part (120b) of the injection conduit (120), with a flow rate of at least 100m³/hr, and such that said incoming gas stream (F) passes through the discharge opening (120c) of the submerged lower part of the injection conduit (120), and is introduced into said volume (V) of liquid contained in the submerged lower part of the enclosure, below the surface (S) of said volume (V) of liquid, and such that an outgoing gas stream (F'), treated by direct contact with said volume of liquid (V), rises inside the enclosure (10) outside the injection conduit (120) and is discharged out of said enclosure (10), passing through the discharge opening (10g) of the enclosure.

30 [FIG. 1]