- $V_{EB} < V/50$;
- $v \leq V_{EB}/100$;
- at least one liquid reagent is added continuously at a rate q to the interior of the chamber;
- the reagent is a flocculant added to the turbulence zone of the chamber in proportions of between 0.05% and 0.1% of the dry matter content of the sludge;
- the rate Q_{EB} is greater than or equal to 15 m3/h, the rate d is greater than or equal to 25 m3/h, and the relative pressure in the chamber is greater than or equal to 0.8 bar;
- the rate Q_{EB} is greater than or equal to 20 m3/h, the rate d is greater than or equal to 50 m3/h, and the relative pressure in the chamber is greater than 1.2 bar;
- the liquid reagent is a cationic organic flocculant;
- the effluents are degassed on emergence from the chamber and the gases obtained are used to feed the injection of air at the bottom part.

The invention also provides a device for treating colloidal structures present in a liquid and/or sludge fed in continuous flow at a rate $Q_{EB} = V_{EB}$/hour, characterized in that it comprises a closed chamber of volume $v < V_{EB}/20$ comprising at least two identical opposite orifices situated in the lower half of said chamber,
means for collecting the sludge and for feeding the flow of sludge thus collected into said chamber in at least two partial flows each, respectively, injected via one of said orifices,
means for feeding air to the chamber at a rate d below said orifices, and
means for removing the flow, arranged so as to maintain the chamber at overpressure.

The flow is advantageously removed at the top part via a pressure relief valve which releases above a specified threshold value.

Also advantageously the volume $v \leq V_{EB}/50$.

Also advantageously the volume $v \leq V_{EB}/100$.

In another advantageous embodiment, the device comprises means for feeding a liquid reagent at a specified rate directly into the chamber.

The invention will be better understood from a reading of the description that follows of embodiments which are given as nonlimitative examples. The description makes reference to the accompanying drawings, in which:

- Figure 1 is a scheme illustrating the principle of the method of treatment according to one embodiment of the invention.

- Figure 2 is an operating scheme of one embodiment of a device according to the invention.

- Figure 3 is a schematic view illustrating the conversion of a sludge, using a device according to the invention.

Figure 1 shows the principles of the method for treating or breaking the colloidal structures present in an effluent, according to the embodiment of the invention more particularly described here.

In a reactor 1 formed by an oblong chamber 2 which extends about an axis 3, and has a small volume v of the order, for example, of 50 liters, the effluents (arrows 4) are injected via two opposite ports 5 and 6 which are symmetrical with respect to the axis 3 of the chamber.

claims, characterized in that the effluents are degassed on emergence from the chamber and the gases obtained are used to feed the injection of air in the bottom part.

14. A device (20) for treating colloidal structures present in a liquid and/or sludge fed in continuous flow at a rate $Q_{EB} = V_{EB}$/hour, characterized in that it comprises

a closed, flow passage chamber (2, E) of volume $v < V_{EB}/20$, V_{EB} being a volume, comprising at least two identical opposite orifices (22) situated in the lower half (23) of said chamber,

means (55) for collecting the sludge and for feeding the sludge flow thus collected into said chamber in at least two partial flows each, respectively, injected via one of said orifices (22),

means (31) for feeding the chamber with air (32) at a rate d below said orifices, and

means (41, 42) for continuously or semicontinuously removing the total flow, arranged so as to maintain the chamber in overpressure.

15. The device as claimed in claim 14, characterized in that the flow is removed in the top part via a pressure relief valve (42) which releases above a specified threshold value.

16. The device as claimed in either of claims 14 and 15, characterized in that $v \leq V_{EB}/50$.

17. The device as claimed in claim 16, characterized in that $v \leq V_{EB}/100$.