

## Flocculation / Flotation

Flotation, using micro air bubbles, removes suspended solids as well as free oil, fat and grease. Emulsions of proteins, carbohydrates and fats can be transformed into removable flocs by means of coagulation (destabilisation) and flocculation (conglomeration of destabilised particles). Based on the philosophy of low investment, minimal maintenance and operation costs, Redox has incorporated the pipe- or plugflow flocculator. In this flocculator chemicals are added, under strictly controlled conditions, for floc formation and neutralisation of the waste water. After each addition, the waste water flows through a mixing element where the optimal mixing energy is applied, resulting in uniform flocs which can perfectly be removed by Redox' flotation systems. Due to the absence of any energy consuming moving parts, like agitators, no break-up of formed flocs will occur.

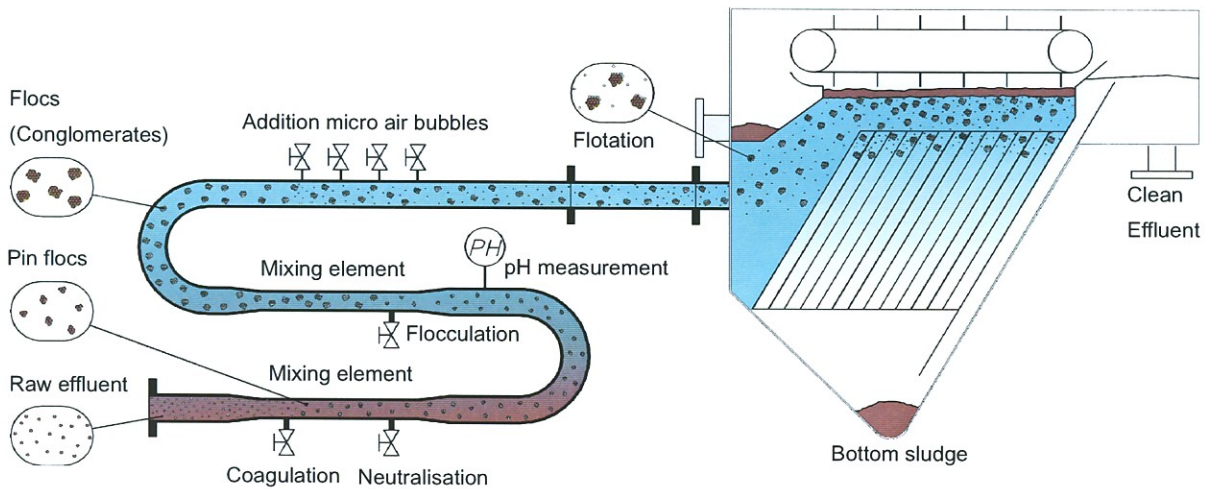


Fig. 5 The working principle of the Redox pipe flocculator, in combination with a Redox counter current flotation system



Fig. 6 Flotation system, type WWL 180, for flotation of e.g. activated sludge

The Redox pipe flocculator offers the following additional advantages:

- Very precise dosing of chemicals and therefore cost reducing.
- Due to controlled turbulence, guaranteed blockage free and optimal floc formation.
- The absence of dead corners and short circuit streams.
- Very compact design due to short residence time.