

## ABSTRACT

A method for introducing a gas (1) into a liquid (2), the method comprising: filling a gas volume (6) arranged below a surface (4) of the liquid (2) and defined in a downward direction by a level (5) of the liquid (2) with the gas (1) in sequential pulses wherein the gas (1) simultaneously displaces the liquid (2) from a top down from a gas lifting channel (14, 25, 30, 46, 57, 70) until the level (5) drops below an inlet cross section (12, 24, 43, 55, 72) of a gas flow out channel (13, 29, 42, 53, 73); subsequently flowing the gas (1) out of the gas volume (6) downward through the gas lifting channel (14, 25, 30, 46, 57, 70), a deflection portion (11, 45, 56, 71) adjoining at a bottom of the gas lifting channel, in upward direction through the inlet cross section (12, 24, 43, 55, 72) and through a gas flow out channel (13, 29, 42, 53, 73) adjoining the inlet cross section (12, 24, 43, 55, 72) at a top to the surface (4), wherein a blocking flow (18) of the liquid flows through a compensation inlet (17, 21, 33, 48, 62, 75) below the gas lifting inlet (16, 32, 60, 69) to the inlet cross section (12, 24, 43, 55, 72) and is pulled along by the gas (1) until the liquid (2) fills the deflection portion (11, 45, 56, 71) and thereby closes the inlet cross section (12, 24, 43, 55, 72) for the gas (1). The invention also relates to a gas introduction device (3) including a downward open gas collection cavity (7) for performing the method according to the invention. In order to assure that the gas introduction device pulses in a stable manner in a wide variation range of the gas volume flow feed a method is proposed wherein the gas (1) initially only flows

through the gas outlet channel (13, 29, 42, 53, 73) after the level (5) has dropped below the inlet cross section (12, 24, 43, 55, 72) until the level (5) rises above the compensation inlet (17, 21, 33, 48, 62, 75), and only then the blocking flow (18) runs through the compensation inlet (17, 21, 33, 48, 62, 75) to the inlet cross section (12, 24, 43, 55, 72).

Figure 1e accompanies.