

ABSTRACT

The present invention includes a gas dissolving device^{8,9} for causing an turbulent flow to be produced in a gas and liquid mixture while the gas and liquid mixture is being introduced into said gas dissolving device, thereby enhancing the dissolubility of the gas into the liquid and providing the gas-dissolved liquid and an injection outlet connected to said gas dissolving device for injecting the gas-dissolved liquid; and a pressure tank¹¹ in which the gas-dissolved liquid injected through said injection outlet can be stored and from which the gas-dissolved liquid can be taken out, whereby the gas can be absorbed into the liquid more efficiently, the gas can be dissolved in a short time (for example, through one pass) until it becomes saturated, and the gas can remain as dissolved for an extended time of period. Note that the apparatus can have a reduced-size construction, and may be manufactured at reduced costs.