

Title (en)

DISSOLVING APPARATUS WITH A NOZZLE DEVICE FOR DISSOLVING A SOLID IN A SOLVENT

Title (de)

AUFLÖSEAPPARATUR MIT EINER DÜSENVORRICHTUNG ZUR AUFLÖSUNG EINES FESTSTOFFS IN EINEM LÖSUNGSMITTEL

Title (fr)

APPAREIL DE DISSOLUTION AVEC UN DISPOSITIF A AJUTAGES POUR DISSOUDRE UN SOLIDE DANS UN SOLVANT

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Application

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Abstract (en)

[origin: WO0153191A2] The invention relates to a nozzle device (3) in a dissolving apparatus for dissolving a solid (F) in a solvent, preferably for dissolving a powdery solid in water. The nozzle device comprises a mixing tank (1) from which the solvent-solid suspension is removed in the bottom part (1a) thereof whereupon the suspension is subsequently pumped outside of the mixing tank (1) through a circulation line (6) and is returned once again. The aim of the invention is to reduce the dissolving time in the mixing tank (1) with regard to that of prior art dissolving apparatuses of the generic type and to simplify the apparatus itself. To these ends, the invention provides that the suspension is introduced into the mixing tank (1) via the nozzle device (3) arranged in the bottom part (1a) of said mixing tank. In addition, the invention provides that the nozzle device, starting from a feed tube (3a) and when viewed in a direction of flow, branches into an annular gap nozzle (3c) and a tubular nozzle (3d), that the annular gap nozzle (3c) generates an annular gap flow (R), which is oriented in an essentially transversal manner with regard to the longitudinal axis of the mixing tank (1), and that the tubular nozzle (3d) generates a driving flow (T) which, with regard to the longitudinal axis of the mixing tank (1), has both an axial and tangential directional component oriented toward the top part (1c) of the mixing tank.

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