

Title (en)

Device for multiple dosing of cleaners

Title (de)

Vorrichtung zur Mehrfachdosierung von Reinigern

Title (fr)

Dispositif de dosage multiple de produits de nettoyage

Publication

**EP 2502542 B1 20160629 (DE)**

Application

**EP 12001703 A 20120313**

Priority

DE 102011014893 A 20110323

Abstract (en)

[origin: EP2502542A1] The dosing apparatus comprises a conveyor unit (26). A cleaner is present in form of a powder, as granules, a tab, in block form of a liquid or as a gel, and is received in a cartridge (48) having a seal (52), after which opening the cleaner arrives in a dissolution chamber (42) and/or a dissolvent-/resolution range (46) and stands in connection with a treatment agent reservoir. The dissolution chamber and/or the dissolvent-/resolution range is separated from the treatment agent reservoir through a retention device. The retention device comprises solid-retardant properties. The dosing apparatus comprises a conveyor unit (26). A cleaner is present in form of a powder, as granules, a tab, in block form of a liquid or as a gel, and is received in a cartridge (48) having a seal (52), after which opening the cleaner arrives in a dissolution chamber (42) and/or a dissolvent-/resolution range (46) and stands in connection with a treatment agent reservoir. The dissolution chamber and/or the dissolvent-/resolution range is separated from the treatment agent reservoir through a retention device. The retention device comprises solid-retardant properties, and is formed as a membrane, sieve, or fabric. A dissolving volume flow flows in the dissolving chamber and/or the dissolvent-/resolution range from a resolution range-intermixing device, and continuously mixes the resolution range by detaching cycle and dosing cycle. The cleaner solubilizes and/or dissolves, and creates a treatment agent. The treatment agent reservoir is continuously mixed by a reservoir-mixing current emerging from a reservoir-mixing device at the detaching cycle and the dosing cycle. The dissolution chamber, the dissolvent-/resolution range and/or the treatment agent reservoir are connected to a device for fluid circulation, by which the treatment agent is generated in the dissolution chamber and/or the dissolvent-/resolution range and the treatment agent reservoir. The treatment agent is circulated in the treatment agent reservoir containing a medium. The retention device retains undissolved residues of the cleaner in the resolution range until the cleaner is completely gone into a solution. The retention device is escapable during a filling process of a metering device by flushing with a flushing flow directed by a filling line to an overflow. The cartridge includes the cleaners, temperature-intensive components and/or maintenance components, which are successively deferred and released. The conveyor unit is connected over an inlet with the treatment agent reservoir, where a division of the volume flow is implemented: on a pressure side of the conveyor units; in a fluid volume flow for releasing the product concentrate; and in the dissolving-volume flow for mixing the dissolution chamber and/or the dissolvent-/resolution range into the reservoir-mixing flow for mixing the treatment agent reservoir. A metered flow to an injection point is regulated by a metering valve (28). A filling cycle, the detaching cycle, the dosing cycle, a cleaning agent and/or the treatment agent are generated in a defined and dosed mass concentration. An independent claim is included for a dosing method for generating and metering a treatment agent such as a cleaning agent, a decalcifying agent, or clear rinsing agents from a cleaner present in powder form, tab form, block form, liquid form or gel form.

IPC 8 full level

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CPC (source: EP US)

**A47L 15/0055** (2013.01 - EP); **A47L 15/4436** (2013.01 - EP US); **A47L 15/4463** (2013.01 - EP); **B01F 21/22** (2022.01 - EP); **D06F 39/02** (2013.01 - EP US); **F24C 14/005** (2013.01 - EP); **A47L 15/4472** (2013.01 - EP)

Citation (opposition)

Opponent : Reckitt Benckiser Finish B.V.

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