

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.

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Citation (opposition)

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 - US 2004162226 A1 20040819 - SUNDER MATTHIAS [FR], et al
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