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Patent claims

1. A dosing system (1) for a dosing material having a dosing device (5) with a housing (11) comprising a feed channel (80) for dosing material, a nozzle (40), a discharge element (31) and an actuator unit (10) coupled to the discharge element (31) and/or the nozzle (40), and having a dosing material reservoir (70) coupled to the housing (11) or integrated into the housing (11),
- the dosing system (1) having a plurality of temperature control devices (2, 2', 2") which are each assigned to different temperature zones (6, 6', 6") of the dosing system (1) in order to control the temperature zones (6, 6', 6") to respectively different target temperatures,
- at least one first temperature zone (6) being assigned to the dosing material reservoir (70) and at least one second temperature zone (6") being assigned to the nozzle (40), and
- at least the temperature control device (2) assigned to the dosing material reservoir (70) comprising a cooling device (3, 3', 3") having a cold source (93, 93', 95, 99).

2. The dosing system according to claim 1, wherein the cold source (95) of the cooling device (3, 3', 3") is configured to cool a cooling medium of the cooling device (3, 3', 3") to a predeterminable temperature and/or wherein the cold source (93, 93') comprises at least one vortex tube (93, 93').

3. The dosing system according to claim 1, having a control unit (50) and/or regulating unit (50) to control and/or to regulate the temperature control device (2, 2', 2").

4. The dosing system according to claim 1, wherein the temperature control device (2, 2', 2") comprises a heating device (4, 4', 4").

5. The dosing system according to claim 4, wherein the temperature control device (2, 2', 2") is assigned a control unit (50) and/or regulating unit (50) which is configured to separately control and/or to separately regulate the cooling device (3, 3', 3") and the heating device (4, 4', 4") of the temperature control device (2, 2', 2").

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6. The dosing system according to claim 3, wherein the control unit (50) and/or regulating unit (50) is configured to control and/or regulate the temperature control device (2, 2', 2") for controlling the temperature of the dosing material based on at least one input parameter.

7. The dosing system according to claim 6, wherein the temperature control device (2, 2', 2") is assigned to at least one temperature sensor (88, 88') in the dosing system (1) for generating the input parameter.

8. The dosing system according to claim 4, wherein the cooling device (3, 3', 3") and the heating device (4, 4', 4") of the temperature control device (2, 2', 2") are spatially separated from one another.

9. The dosing system according to claim 1, wherein the dosing system (1) comprises at least one further temperature control device (2') which is assigned to a third temperature zone (6'), the third temperature zone being assigned to the feed channel (80) of the dosing system (1).

10. The dosing system according to claim 1, wherein the dosing material reservoir (70) comprises a dosing material supply container (70).

11. The dosing system according to claim 3, wherein the control unit (50) and/or regulating unit (50) regulates the dosing material in the assigned temperature zone (6, 6', 6") to a target temperature.

12. The dosing system according to claim 4, wherein the temperature control device (2") assigned to the nozzle (40) comprises the heating device (4").

13. The dosing system according to claim 6, wherein the at least one input parameter comprises a volume flow and/or a temperature and/or a viscosity.