Claims

1. A dispensing nozzle (10) for concrete, mortar or the like, ~~having~~which, when assembled, has
- a housing (12) and a mixing chamber (14), which is arranged therein and is delimited by a circumferential wall (16) and extends along a longitudinal axis (L) at least between a supply opening (19) and an outlet opening (20),
- an actively driveable mixing device, which is arranged in the mixing chamber (14), and
- a nozzle element (30; 30a) with an exit opening (32), which is directly or indirectly flow-connected to the outlet opening (20) of the mixing chamber (14),
characterised in that
- at least one cavity (44; 44a, 44b), which extends axially and in the circumferential direction, is arranged around the circumferential wall (16) of the mixing chamber (14) and is in contact with the circumferential wall (16) and at least substantially surrounds the mixing chamber (14) in the circumferential direction,
- the circumferential wall (16) of the mixing chamber (14) consists of elastic material, which is configured to deform dynamically into the at least one cavity (44; 44a, 44b) during operation of the nozzle.

2. The dispensing nozzle according to claim 1, characterised in that the at least one cavity (44; 44a, 44b) extends over at least substantially the entire length of the mixing chamber (14).

3. The dispensing nozzle according to claim 1, characterised in that the at least one cavity, seen over the length of the mixing chamber (14), comprises several cavities (44; 44a, 44b) at least substantially surrounding the mixing chamber (14) in the circumferential direction.

4. The dispensing nozzle according to any one of claims 1 to 3, characterised in that a pressure application device (46) is present, which is connected to the at least one cavity (44; 44a, 44b) in order to deform the circumferential wall (16) of the mixing chamber (14) into the mixing chamber (14) by applying pressure.

5. The dispensing nozzle according to any one of claims 1 to 4, characterised in that the at least one cavity (44; 44a, 44b) is part of an insert (64) forming the mixing chamber (14), which insert is configured to be inserted into the housing (12).

6. The dispensing nozzle according to claim 3 and 4, characterised in that arranged centrally in the mixing chamber (14) in an end section of the mixing chamber (14) comprising the outlet opening (20) of the mixing chamber (14) is a flow cross-section reduction element (54) and that one (44b) of the several cavities (44a, 44b) is arranged in the region of the flow cross-section reduction element (54) and completely surrounds the mixing chamber (14) in the circumferential direction.

7. The dispensing nozzle according to claim 6, characterised in that the portion of the circumferential wall (16) that is associated with the cavity (44b) arranged in the region of the flow cross-section reduction element (54) is deformable into the mixing chamber (14) by the application of pressure until it rests on the flow cross-section reduction element (54).

8. The dispensing nozzle according to claim 7, characterised in that the application of pressure to the portion of the circumferential wall (16) associated with the cavity (44b) arranged in the region of the flow cross-section reduction element (54) is achieved by pneumatic, hydraulic or mechanical means.

9. The dispensing nozzle according to any one of claims 6 to 8, characterised in that the flow cross-section reduction element (54) is attached to a flange (62), which is located between the outlet opening (20) of the mixing chamber (14) and the exit opening (32).

10. The dispensing nozzle according to any one of claims 6 to 8, characterised in that the flow cross-section reduction element (54) is attached to the nozzle element (30) forming the exit opening (32).

11. The dispensing nozzle according to any one of the preceding claims, characterised in that the mixing device extends from the supply opening (19) up to an end section of the mixing chamber (14) comprising the outlet opening (20) of the mixing chamber (14).

12. The dispensing nozzle according to claim 11, characterised in that the mixing device comprises a rotatable mixing shaft (24) extending at least substantially axially.

13. The dispensing nozzle according to claim 12 in conjunction with any one of Claims 6 to 8, characterised in that the mixing shaft (24) is provided at its end facing the outlet opening (20) of the mixing chamber (14) with a thickened mixing shaft head forming the flow cross-section reduction element (54).

14. The dispensing nozzle according to any one of claims 6 to 10 or 13, characterised in that the flow cross-section reduction element (54) is spherical or drop-shaped.

15. The dispensing nozzle according to any one of the preceding claims, characterised in that an additional opening (36) for introducing one or more additives into the mixing chamber (14) is arranged concentric to the supply opening (19).

16. The dispensing nozzle according to any one of the preceding claims, characterised in that the exit opening (32) is part of a movable nozzle element (30a).

17. The dispensing nozzle according to claim 16, characterised in that the nozzle element (30a) is motor-adjustable.