Claims

1. A distribution system (10) for a process fluid for a chemical and/or electrolytic surface treatment of a substrate (20), comprising:
   - a distribution body (11), and
   - a distribution medium (12),

   wherein the distribution body (11) comprises several openings (13) for a process fluid and/or an electric current,
   wherein some of the openings (13) are drain holes (16) that extend through the distribution body (11), and the drain holes (16) are configured to drain off a return flow of the process fluid back from the substrate (20) through the distribution body (11) and away from the substrate (20),
   wherein the distribution medium (12) covers at least some of the openings (13) of the distribution body (11), and
   wherein the distribution medium (12) comprises a netted framework with passages (14) to distribute the process fluid and/or the electric current from the distribution body (11).

2. Distribution system (10) according to claim 1, wherein the netted framework forms a sponge with randomly distributed passages (14).

3. Distribution system (10) according to claim 1, wherein the netted framework forms a grid with evenly distributed passages (14).

4. Distribution system (10) according to one of the preceding claims, wherein the distribution medium (12) is porous.

5. Distribution system (10) according to claim 1, wherein porosity and/or hydraulic conductivity of the distribution medium (12) is anisotropic.

6. Distribution system (10) according to one of the preceding claims, wherein the netted framework comprises a single layer of cells and passages (14).

7. Distribution system (10) according to one of the claims 1 to 5, wherein the netted framework comprises at least two layers of cells and passages (14).

8. Distribution system (10) according to the preceding claim, wherein the passages (14) of adjacent layers of cells and passages (14) are partially displaced relative to each other.

9. Distribution system (10) according to one of the preceding claims, wherein the passages (14) are interconnected.

10. Distribution system (10) according to one of the preceding claims, wherein the openings (13) covered by the distribution medium (12) are jet holes (15) that only open from an interior volume of the distribution body (11) and do not extend through the distribution body (11), wherein the jet holes (15) are configured to direct the process fluid towards the substrate (20) at an increased exit velocity.

11. Distribution system (10) according to one of the preceding claims, wherein the distribution medium (12) covers the distribution body (11) at least partially.

12. Distribution system (10) according to claim 1, wherein the distribution body (11) is arranged between an anode (21) and the substrate (20) forming a cathode.

13. A manufacturing method for a distribution system (10) for a process fluid for a chemical and/or electrolytic surface treatment of a substrate (20), comprising:

- providing a distribution body (11), wherein the distribution body (11) comprises several openings (13) for a process fluid and/or an electric current, wherein some of the openings (13) are drain holes (16) that extend through the distribution body (11), and the drain holes (16) are configured to drain off a return flow of the process fluid back from the substrate (20) through the distribution body (11) and away from the substrate (20), and
- covering at least some openings (13) of the distribution body (11) by means of a distribution medium (12), wherein the distribution medium (12) comprises a netted

framework with passages (14) to distribute the process fluid and/or the electric current from the distribution body (11).