

3. Wet-scrubber (1) according to any of the preceding claims, wherein the liquid distribution system (11) comprises a number of extension tubes (15) comprising:

- a first end (2) in fluid communication with a central liquid conduit,
- a second end (3) arranged for emitting liquid, said first end (2) and second end

(3) being in fluid communication.

4. Wet-scrubber (1) according to any of the preceding claims, wherein the wall of the chamber (5) comprises more than one liquid exit aperture.

5. Wet-scrubber (1) according to claim 3 or 4, wherein the second end (3) of the extension tubes (15) comprises a tube outlet, where the axis of the tube outlet is arranged so as to point towards the inner wall of the chamber (5) in a downstream angle.

6. Wet-scrubber (1) according to any of the preceding claims, wherein the longitudinal axis of the chamber (5) is substantially horizontal.

7. Wet-scrubber (1) according to any of the preceding claims, wherein the longitudinal axis of the chamber (5) is arranged in a position different from a horizontal position.

8. Wet-scrubber (1) according to any of the preceding claims, wherein the liquid distribution system (11) comprises a substantially centrally arranged conduit in fluid communication with the nozzles inside the chamber (5) and a liquid supply.

9. Wet-scrubber (1) according to any of claims 1-8, wherein the chamber (5) comprises heat-exchanging means arranged to harvest energy from the gas in the chamber (5).

10. Wet-scrubber (1) according to any of claims 1-8, wherein the at least three liquid outlets (12) and spray nozzles are arranged at different angles relative to their respective extension tube.

11. Method of cleaning flue gas, the method comprising the steps:

- providing a wet-scrubber (1) comprising a first end (2) comprising a first end (2) wall and a second end (3) comprising a second end (3) wall; an annular wall (4) extending from the first end (2) and to the second end (3) so as to form a chamber (5) having a longitudinal axis, said annular wall (4) and said end walls having an inner surface (7) and an outer surface (8), said chamber (5) comprising a gas inlet opening (9) and a gas outlet opening (10) for emitting the flue gas from the wet-scrubber (1), said openings being in fluid communication and defining a downstream direction from the inlet opening (9) to the outlet opening (10), a liquid distribution system (11) comprising at least three liquid outlets (12,17,17',17'') each comprising a spray nozzle, where the at least three cones are positioned at different positions along the longitudinal axis of the chamber (5) , a liquid exit aperture (19) arranged at the lowest point of an annular wall (4) of the chamber (5) , where the second end (3) comprises the gas outlet opening (10) and is separated from the liquid exit aperture,

- injecting liquid through the liquid distribution system (11) creating a cone (17) of liquid formed from the spray nozzles for distributing a liquid film (18) on the inner surface (7) of the chamber (5) where the liquid cone (17) provides an area where flue gas can easily pass around the liquid cones;

- rotating the liquid film (18) on the inner surface (7) of the annular wall (4) relative to the annular wall (4) using the injected cone (17) of liquid;

- providing contaminated flue gas into the chamber (5) via the inlet opening (9) forcing the gas into contact with the liquid,

- providing an unobstructed path for the gas along the longitudinal axis of the chamber (5) where the cones of liquid creates chicanes in order to obstruct the path of the flue gas in a direction parallel to the longitudinal axis of the chamber (5);

- arranging the gas to pass around the first cone (17) of liquid, subsequently to pass around the second cone (17') and subsequently to pass around the third cone (17'') of liquid, and

- emitting the cleaned gas from the gas outlet opening (10) of the chamber.

12. Method of cleaning flue gas according to claim 1, wherein the method further comprises the step of: