CLAIMS

1. Exhaust gas cleaning system (1, 49, 77, 107) for cleaning exhaust gas (EG) onboard a ship as the exhaust gas (EG) flows in an exhaust gas flow direction through the exhaust gas cleaning system, the exhaust gas cleaning system (1, 49, 77, 107) comprises

an exhaust gas inlet (5, 79) for receiving the exhaust gas (EG) to be cleaned,

a scrubber (9, 51, 83) arranged to clean, in a scrubbing section (11, 53, 89) of the scrubber (9, 51, 83), the exhaust gas (EG) from pollutants, wherein the scrubbing section (11, 53, 89) comprises an exhaust gas inlet (19) for receiving the exhaust gas (EG) and an exhaust gas outlet (15, 57) for outputting the exhaust gas (EG),

the scrubbing section (11, 53, 89) comprises a first sub scrubbing section (23, 93, 109) and a number ≥ 1 of first sub scrubbing section ejection devices (27, 97) arranged inside the first sub scrubbing section (23, 93, 109) to eject a scrubbing fluid into the exhaust gas (EG) to wash the exhaust gas (EG) that has entered the exhaust gas inlet,

the scrubbing section (11, 53, 89) comprises a second sub scrubbing section (25, 95) and a number ≥ 1 of second sub scrubbing section ejection devices (29, 99) arranged inside the second sub scrubbing section (25, 95), the second sub scrubbing section ejection devices (29, 99) being arranged to supply scrubbing fluid to wash the exhaust gas (EG) in the second sub scrubbing section (25, 95).

a wet Electrostatic Precipitator (39) arranged to further clean the exhaust gas (EG) from pollutants after it has been cleaned in the scrubbing section (11, 53, 89), wherein the wet Electrostatic Precipitator (39) comprises an exhaust gas inlet (40) arranged in communication with the exhaust gas outlet (15, 57) of the scrubbing section (11, 53, 89) for receiving the exhaust gas (EG), an exhaust gas outlet (42) for outputting the exhaust gas (EG), and at least one channel (38) arranged to convey the exhaust gas (EG) from the exhaust gas inlet (40) to the exhaust gas outlet (42) of the wet Electrostatic Precipitator (39), the at least one channel (38) being an elongated channel that is elongated in the exhaust gas flow direction extending from the exhaust gas inlet (40) of the wet Electrostatic Precipitator (39) to the exhaust gas outlet (42) of the wet Electrostatic Precipitator (39) so that the exhaust gas (EG) entering the wet Electrostatic Precipitator (39) at the gas inlet of the wet Electrostatic Precipitator (39) flows in the exhaust gas flow direction along the at least one channel (38) toward the gas outlet of the wet Electrostatic Precipitator,

the second sub scrubbing section being arranged between the wet Electrostatic Precipitator and the first sub scrubbing section in the exhaust gas flow direction and

an exhaust gas outlet (7, 81) for outputting the cleaned exhaust gas (EG),

the exhaust gas cleaning system (1, 49, 77, 107) being **characterized in** further comprising

one or more wet Electrostatic Precipitator ejection devices (43) arranged between the scrubbing section (11, 53, 89) and said at least one channel (38), each of the wet Electrostatic Precipitator ejection devices (43) comprising an ejection orifice (43a) facing the wet Electrostatic Precipitator (39) and being arranged to, when exhaust gas (EG) is flowing through the exhaust gas cleaning system (1, 49, 77, 107), eject liquid in the exhaust gas flow direction towards said at least one channel (38) so that the liquid ejected by the wet Electrostatic Precipitator ejection devices enters the at least one channel to clean said at least one channel from pollutants deposited by the exhaust gas (EG) when this is conveyed through said at least one channel (38).

2. Exhaust gas cleaning system (1, 49, 77, 107) according to claim 1, which exhaust gas cleaning system (1, 49, 77, 107) lacks a demister between the exhaust gas outlet (42) of the wet Electrostatic Precipitator (39) and the exhaust gas outlet (7, 81) of the exhaust gas cleaning system (1, 49, 77, 107).

3. Exhaust gas cleaning system (49) according to claim 1 or 2, wherein the scrubber (51) comprises an exhaust gas outlet (59) for outputting the exhaust gas (EG), which exhaust gas outlet (59) is arranged in communication with the exhaust gas outlet (57) of the scrubbing section (53) for forwarding the exhaust gas (EG), and wherein the exhaust gas inlet (40) of the wet Electrostatic Precipitator (39) is arranged in communication with the exhaust gas outlet (59) of the scrubber (51) for receiving the exhaust gas (EG).

4. Exhaust gas cleaning system (1, 49, 77, 107) according to any one of the preceding claims , wherein the second sub scrubbing section (25, 95) comprises a filling (31, 101) arranged inside the second sub scrubbing section (25, 95).

5. Exhaust gas cleaning system (1, 49, 77, 107) according to claim 4, wherein the second sub scrubbing section (25, 95) and a wESP section (13, 91) of the exhaust gas cleaning system (1, 49, 77, 107) comprising the wet Electrostatic Precipitator (39) have essentially similar outer contours along a longitudinal center axis (C) of the second scrubbing section (23, 93, 109) and the wESP section (13, 91).

6. Exhaust gas cleaning system (1, 49, 77 , 107) according to any one of the preceding claims , wherein the scrubbing fluid has a pH value above 7.

7. Exhaust gas cleaning system (1, 49, 77, 107) according to any one of the preceding claims, further comprising a number ≥ 1 of channel ejection devices (45) arranged between the exhaust gas outlet (7, 81) of the exhaust gas cleaning system (1, 49, 77, 107) and said at least one channel (38) and arranged to, when no exhaust gas (EG) is flowing through the exhaust gas cleaning system (1, 49, 77, 107), eject liquid towards said at least one channel (38) to clean it from pollutants deposited by the exhaust gas (EG) when this is conveyed through said at least one channel (38).

8. Exhaust gas cleaning system (1, 49, 77, 107) according to any one of the preceding claims, wherein an exhaust gas flow direction through the wet Electrostatic Precipitator (39) and at least most of the scrubbing section (11, 53, 89) is essentially vertical.

9. Method for cleaning exhaust gas (EG) onboard a ship, comprising

cleaning the exhaust gas (EG) from pollutants in a scrubbing section (11, 53, 89) of a scrubber (9, 51, 83) by conveying the exhaust gas (EG) in an exhaust gas flow direction through a first sub scrubbing section of the scrubbing section and through a second sub scrubbing section of the scrubbing section, the cleaning of the exhaust gas from the pollutants in the scrubbing section comprising: ejecting a scrubbing fluid inside the first sub scrubbing section to wash the exhaust gas that is in the first sub scrubbing section; and supplying scrubbing fluid to the second sub scrubbing section of the scrubbing section to wash the exhaust gas that is in the second sub scrubbing section,

further cleaning the exhaust gas (EG) from pollutants in a wet Electrostatic Precipitator (39) after the exhaust gas has been cleaned in the first sub scrubbing section and the second sub scrubbing section of the scrubbing section (11, 53, 89), which wet Electrostatic Precipitator (39) comprises at least one channel (38) arranged to convey the exhaust gas (EG) through the wet Electrostatic Precipitator (39), the second sub scrubbing section being arranged between the wet Electrostatic Precipitator and the first sub scrubbing section in the exhaust gas flow direction;

the method being **characterized in** further comprising

ejecting, when exhaust gas (EG) is flowing through the wet Electrostatic Precipitator liquid through a respective ejection orifice of a number ≥ 1 of wet electrostatic Precipitator ejection devices arranged between the scrubbing section (11, 53, 89) and said at least one channel (38), the wet Electrostatic Precipitator ejection orifices facing the wet Electrostatic Precipitator (39), towards said at least one channel (38) to clean it from pollutants deposited by the exhaust gas (EG) when this is conveyed through said at least one channel (38).

10. Method according to claim 9, comprising releasing the exhaust gas (EG) into the atmosphere, after said cleaning and further cleaning from pollutants, without passing it through a demister.

11. Method according to any one of claims 9 to 10, wherein the wet Electrostatic Precipitator (39) is arranged outside the scrubber (51, 83) such that said cleaning of the exhaust gas (EG) from pollutants takes place inside the scrubber (51, 83) while said further cleaning of the exhaust gas from pollutants takes place outside the scrubber (51, 83).

12. Method according to any of claims 9-11, wherein the supplying of the scrubbing fluid to the second sub scrubbing section of the scrubbing section also comprises supplying the scrubbing fluid to a filling (31, 101) arranged inside the second sub scrubbing section (25, 95) of the scrubbing section (11, 53, 89) to wash the exhaust gas (EG) when the exhaust gas passes through the filling (31, 101).

13. Method according to any one of claims 9-12, wherein the scrubbing fluid has a pH value above 7.

14. Method according to any one of claims 9-13 comprising feeding the exhaust gas through the wet Electrostatic Precipitator (39) and at least most of the scrubbing section (11, 53, 89) in an essentially vertical exhaust gas flow direction.

15. Use of an exhaust gas cleaning system (1, 49, 77, 107) according to any one of claims 1-8 on-board a ship for the purpose of reduction of pollutants in exhaust gas (EG) from a marine combustion engine (3), burner or boiler.