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(54) STEAM GENERATOR AND LAUNDRY TREATMENT MACHINE HAVING THE SAME

(57) A steam generator and a laundry treatment machine (100) having the same are provided, in which the steam generator (10) includes a housing, a heater (15) and a temperature controller, in which the housing (11) defines a steam generating cavity (12) therein and has a water inlet (13) and a steam outlet (14) in communication with the steam generating cavity (12), and the heater is disposed in the steam generating cavity (12), the temperature controller is disposed in the steam generating cavity (12) and is connected to the heater (15), and the temperature controller disposed in the steam generating cavity (12), being connected to the heater (15) and configured to detect a temperature of the heater (15), wherein the temperature controller controls the heater (15) to heat up and the water inlet (13) to close when the temperature of the heater (15) is below a predetermined temperature, and controls the heater (15) to stop heating and the water inlet (13) to open when the temperature of the heater (15) reaches a predetermined temperature. The steam generator (10) according to embodiments of the present disclosure controls the heater (15) and the water inlet (13) to work via the temperature controller and controls the water level in the steam generating cavity (12) within a

reasonable range, which may not only ensure the steam generator (10) to supply the steam to the laundry treatment machine (100) continuously, but also could improve the working performance of the laundry treatment machine (100) and prolong the service life of the laundry treatment machine (100).

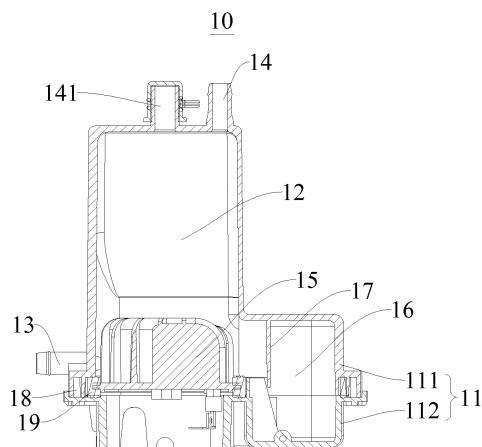


Fig. 2

Description

FIELD

[0001] The present disclosure relates to a laundry treatment machine, and more particularly, to a steam generator for a laundry treatment machine and a laundry treatment machine having the same.

BACKGROUND

[0002] Laundry treatment machine, especially a drum-type washer dries clothes by means of rotation of a drum during the operation, and because clothes is prone to be wrinkled during the rotation and heating, a steam generator is added to the laundry treatment machine to solve the problem that the clothes is wrinkled when being dried for users. In addition, with respect to those clothes having smells but being not dirty, a washer has no better treatment method and still operates according to a washing process as before, resulting in a large consumption of water, electricity and time. However the steam generator of the laundry treatment machine in the related art can't control the water volume in the steam generator well, that is, when the water volume is large, water drops are prone to spray, and when the water volume is small, the steam generator is prone to be damaged, moreover limescale produced in the steam generator can't be cleaned and will influence the working performance of the steam generator.

SUMMARY

[0003] Embodiments of the present disclosure seek to solve at least one of the problems existing in the related art to at least some extent.

[0004] For that reason, a steam generator is provided by the present disclosure, in which the steam generator controls the water volume in a steam generating cavity via a temperature controller, being beneficial to the steam generator supplying steam continuously to a laundry treatment machine and improving the working efficiency of the steam generator.

[0005] A laundry treatment machine having the steam generator is further provided by the present disclosure.

[0006] According to a first aspect of the present disclosure, the steam generator includes a housing, a heater and a temperature controller, in which the housing defines a steam generating cavity therein and has a water inlet and a steam outlet in communication with the steam generating cavity, and the heater is disposed in the steam generating cavity, the temperature controller is disposed in the steam generating cavity and is connected to the heater, and the temperature controller is configured to detect a temperature of the heater, the temperature controller controls the heater to heat up and the water inlet to close when the temperature of the heater is below a predetermined temperature, and controls the heater to

stop heating up and the water inlet to open when the temperature of the heater reaches a predetermined temperature.

[0007] The steam generator according to embodiments of the present disclosure controls the heater and the water inlet to work through the temperature controller, in which when the water in the steam generating cavity is evaporated to empty, the temperature of the heater gets higher, then the temperature controller makes the heater close and the water inlet open to let water in, and when the temperature of the heater decreases, the temperature controller makes the water inlet close and starts the heater to heat, therefore the heater and the water inlet are controlled to work via the temperature controller and the water level in the steam generating cavity is controlled within a reasonable range, which may not only ensure the steam generator to supply the steam to the laundry treatment machine continuously, but also could improve the working performance of the laundry treatment machine and prolong the service life of the laundry treatment machine, moreover the steam can sterilize and remove smells from clean clothes, saving the washing process of the clothes.

[0008] In addition, the steam generator according to embodiments of the present disclosure may further have the following additional technical features:

According to an embodiment of the present disclosure, the steam generator further includes a water inlet valve, in which the water inlet valve is disposed in the water inlet, the water inlet valve is connected to the temperature controller and is controlled to be opened and closed by the temperature controller.

[0009] According to an embodiment of the present disclosure, the heater is disposed on a bottom of the steam generating cavity and the water inlet is disposed adjacent to the heater.

[0010] According to an embodiment of the present disclosure, the housing further defines a limescale storage cavity therein, in which the limescale storage cavity is in communication with the bottom of the steam generating cavity.

[0011] According to an embodiment of the present disclosure, a horizontal height of a bottom of the limescale storage cavity is lower than a horizontal height of the bottom of the steam generating cavity.

[0012] According to an embodiment of the present disclosure, a horizontal height of a top of the limescale storage cavity is equal to that of a top of the heater.

[0013] According to an embodiment of the present disclosure, the water inlet is disposed on a first side of the housing and the limescale storage cavity is disposed on a second side of the housing opposite to the water inlet.

[0014] According to an embodiment of the present disclosure, the housing includes an upper cover and a lower cover, in which the upper cover and the lower cover are detachably connected.

[0015] According to an embodiment of the present disclosure, a bottom of the upper cover is provided with a sealing groove, the sealing groove is provided with a sealing ring therein and the lower cover and the upper cover are fitted with each other, so as to press the sealing ring tightly.

[0016] According to a second aspect of the present disclosure, the laundry treatment machine includes the steam generator according to embodiments of the present disclosure.

[0017] The laundry treatment machine according to the second aspect of the present disclosure may be configured as a drum-type washer.

[0018] The laundry treatment machine according to the second aspect of the present disclosure may be configured as a clothes dryer.

[0019] Additional aspects and advantages of embodiments of present disclosure will be given in part in the following descriptions, become apparent in part from the following descriptions, or be learned from the practice of the embodiments of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] These and other aspects and advantages of embodiments of the present disclosure will become apparent and more readily appreciated from the following descriptions made with reference to the drawings, in which:

Fig. 1 is a schematic view of a steam generator according to embodiments of the present disclosure;
Fig. 2 is a sectional view of a steam generator according to embodiments of the present disclosure;
Fig. 3 is a perspective view of a part of assembly of a laundry treatment machine according to embodiments of the present disclosure.

Reference numerals:

[0021]

100 laundry treatment machine;
10 steam generator;
11 housing; 111 upper cover; 112 lower cover;
12 steam generating cavity;
13 water inlet; 131 water inlet pipe;
14 steam outlet; 141 explosion-proof muzzle; 142 steam guiding pipe;
15 heater; 16 limescale storage cavity; 17 baffle; 18 sealing groove; 19 sealing ring;
20 base; 21 reinforcing plate;
30 drum body.

DETAILED DESCRIPTION

[0022] Reference will be made in detail to embodiments of the present disclosure. The same or similar el-

ements and the elements having same or similar functions are denoted by like reference numerals throughout the descriptions. The embodiments described herein with reference to drawings are explanatory, illustrative, and used to generally understand the present disclosure. The embodiments shall not be construed to limit the present disclosure.

[0023] According to a first aspect of embodiments of the present disclosure, a steam generator 10 will be described in detail with reference to Figs 1-3.

[0024] The steam generator 10 according to embodiments of the present disclosure includes a housing 11, a heater 15 and a temperature controller (not shown), in which the housing 11 defines a steam generating cavity 12 therein and has a water inlet 13 and a steam outlet 14 in communication with the steam generating cavity 12. The heater 15 is disposed in the steam generating cavity 12, the temperature controller is disposed in the steam generating cavity 12 and is connected to the heater 15. The temperature controller is configured to detect a temperature of the heater 15. The temperature controller controls the heater 15 to heat up and the water inlet 13 to close when the temperature of the heater 15 is below a predetermined temperature, and controls the heater 15 to stop heating and the water inlet 13 to open when the temperature of the heater 15 reaches a predetermined temperature.

[0025] In other words, the steam generator 10 is mainly composed of a housing 11, a heater 15 and a temperature controller, a steam generating cavity 12 is disposed in the housing 11, the housing 11 is provided with a water inlet 13 and a steam outlet 14 in communication with the steam generating cavity 12. The steam generating cavity 12 is provided with the heater 15 therein, so that water in the housing 11 is heated to produce steam. The heater 15 is provided with the temperature controller, which can detect the temperature of the heater 15 and control the water inlet 13 to open or close and the heater 15 to start or stop according to the temperature of the heater 15.

[0026] Referring to Fig. 1, the steam outlet 14 is disposed on a top portion of the housing 11, the water inlet 13 is disposed on a side wall of the housing 11 and adjacent to the heater 15. The water enters the housing 11 from the water inlet 13, the heater 15 heats the water to produce the steam and the steam generated in the steam generating cavity 12 flows out from the steam outlet 14.

[0027] The temperature controller controls the inflow water from the water inlet 13 and the heating of the heater 15 according to the temperature of the heater 15, thereby adjusting the consumption and supplement of the water for evaporation in the steam generating cavity 12, so that the water level in the steam generating cavity 12 could be controlled within a reasonable range. Specifically, when the water in the steam generating cavity 12 is evaporated to empty, the temperature of the heater 15 gets higher, the temperature controller makes the heater 15 close and the water inlet 13 open to let water in. When the water flow enters the steam generating cavity 12, the

temperature of the heater 15 decreases, the temperature controller makes the water inlet 13 close and starts the heater 15 to heat, ensuring that the steam generator 10 continues to work. By using the adjustment function of the temperature controller, on one hand the steam generator 10 could be ensured to supply the steam to the laundry treatment machine 100 continuously, guaranteeing the normal working of the laundry treatment machine 100, on the other hand the water level in the steam generator 10 could be prevented from being over high to cause the water drop to spray, as well as could be prevented from being over low to cause the steam generator 10 to be damaged, thereby prolonging the service life and improving working performance of the steam generator 10.

[0028] Therefore, the steam generator 10 according to embodiments of the present disclosure controls the heater 15 and the water inlet 13 to work via the temperature controller and controls the water level in the steam generating cavity 12 within a reasonable range, which may not only ensure the steam generator 10 to supply the steam to the laundry treatment machine continuously, but also could improve the working performance of the laundry treatment machine and prolong the service life of the laundry treatment machine, moreover the steam can sterilize and remove smell in clean clothes, saving the washing process for the clothes. The steam generator 10 has a simple structure, a reliable connection between parts, a convenient assembly and disassembly and may supply the steam to the laundry treatment machine continuously, as well as has a high use reliability.

[0029] In an embodiment, the steam generator 10 further includes a water inlet valve (not shown), in which the water inlet valve is disposed in the water inlet 13, the water inlet valve is connected to the temperature controller and controlled to be opened and closed by the temperature controller.

[0030] That is, the water inlet 13 is provided with the water inlet valve, the temperature controller controls the water flow at the water inlet 13 to be on or off by controlling the water inlet valve to be opened or closed. When the water in the steam generating cavity 12 is relatively less, the temperature controller controls the water inlet valve to open, then the water enters the steam generating cavity 12 through the water inlet valve. When the water volume in the steam generating cavity 12 meets the requirements, the temperature controller makes the water inlet valve close and prevents the water from entering the steam generating cavity 12.

[0031] Thus, by the temperature controller controlling the water inlet valve to make the water inlet 13 open and close, an automatic control of the water level in the steam generating cavity 12 will be achieved, thereby not only improving the automation degree of the steam generator 10, reducing the operations by the user, simplifying a method for using the laundry treatment machine 100, but also achieving a self-protection function of the steam generator 10, that is when the steam generating cavity

12 has no water therein, the heater 15 may stop working automatically, so as to prevent the heater 15 from heating without water to damage the laundry treatment machine 100.

[0032] In an embodiment, the heater 15 is disposed on a bottom of the steam generating cavity 12, the water inlet 13 is disposed adjacent to the heater. Referring to Fig. 2, the bottom of the steam generating cavity 12 is provided with the heater 15, and under the action of gravity the water in the steam generating cavity 12 accumulates in the bottom. The heater 15 contacts with the accumulated water and heats the accumulated water to produce the steam, thereby the water in the steam generating cavity 12 may be made full use, the water level in the steam generating cavity 12 may be lowered, and the water spraying caused by the high-pressure steam may be prevented.

[0033] In an embodiment, the housing 11 further defines a limescale storage cavity 16 therein, which is in communication with the bottom of the steam generating cavity 12.

[0034] In other words, a cavity defined in the housing 11 includes the steam generating cavity 12 and the limescale storage cavity 16, in which a partition plate is disposed between the steam generating cavity 12 and the limescale storage cavity 16, a through hole is disposed in the bottom of the partition plate, and the steam generating cavity 12 and the limescale storage cavity 16 are in communication with each other via the through hole, and the limescale produced in the steam generating cavity 12 enters the limescale storage cavity 16 with the assist of the water flow.

[0035] By the limescale storage cavity 16 configured to be in communication with the steam generating cavity 12, the limescale could be prevented from being accumulated in the steam generator 10, and the heater 15 could be ensured to be in contact with the water normally, so as to produce the steam. Further the limescale could be prevented from occupying the space in the steam generating cavity 12 which results in that the temperature controller is unable to detect the temperature of the heater 15, normal work cannot be implemented and the drying effect of the laundry treatment machine 100 is influenced. Moreover overmuch limescale in the steam generator 10 could result in that the water level in the steam generating cavity raises and the steam is mingled with the water drops, influencing the drying effect of the laundry treatment machine 100 and prolonging the drying time.

[0036] In an embodiment, the horizontal height of the bottom of the limescale storage cavity 16 is lower than the horizontal height of the bottom of the steam generating cavity 12, that is, the bottom of the limescale storage cavity 16 is located below the bottom of the steam generating cavity 12. The accumulated water in the steam generating cavity 12 could enter the limescale storage cavity 16 under the action of gravity, however the accumulated water in the limescale storage cavity 16 could not flow reversely to the steam generating cavity 12.

[0037] Therefore, the limescale in the steam generating cavity 12 could be controlled to be able to enter the limescale storage cavity 16 merely in a single direction, and the process is irreversible, ensuring that the limescale could not influence the normal work of the steam generator 10 any more after entering the limescale storage cavity 16, preventing the limescale in the limescale storage cavity 16 from flowing reversely to damage the heater 15 and the temperature controller, reducing the failure rate of the steam generator 10 and prolonging the service life of the steam generator 10.

[0038] In an embodiment, the horizontal height of a top of the limescale storage cavity 16 is equal to the horizontal height of a top of the heater 15, that is, the top of the limescale storage cavity 16 and the top of the heater 15 are in the same horizontal plane. The water flow entering steam generating cavity 12 through the water inlet 13 washes the limescale on the heater 15 to the limescale storage cavity 16. By the limescale storage cavity 16 and the heater 15 configured to have the same height, the limescale could be ensured to be washed to the limescale storage cavity 16 completely, and the limescale could be prevented from touching with the housing 11 to still remain in the steam generating cavity 12, improving the washing effect of the water flow to the limescale and eliminating the condition that the limescale could not be washed clearly.

[0039] In an embodiment, the water inlet 13 is disposed on a first side of the housing 11, and the limescale storage cavity 16 is disposed on a second side in the housing 11 opposite to the water inlet 13.

[0040] That is, the water inlet 13 and the limescale storage cavity 16 are disposed on two sides of the housing 11 opposite to each other, and the water inlet 13 and the limescale storage cavity 16 are in communication with each other through the steam generating cavity 12. The water entering the steam generating cavity 12 via the water inlet 13 could continue flowing to the limescale storage cavity 16.

[0041] Therefore, by disposing the limescale storage cavity 16 opposite to the water inlet 13, the structural design of the steam generator 10 could be optimized, the space on the housing could be used rationally, and moreover the washing effect of the water flow in the water inlet 13 on the limescale could be improved. The limescale could enter the limescale storage cavity 16 along the direction of the water flow, as the top of the limescale storage cavity 16 and the top of the heater 15 have the same height, and the bottom of the limescale storage cavity 16 is lower than the bottom of the steam generating cavity 12, the water flow mingled with the limescale enters the limescale storage cavity 16 without causing a return flow, thereby improving the cleaning effect on the steam generating cavity 12.

[0042] In which, the housing 11 includes an upper cover 111 and a lower cover 112, the upper cover 111 and the lower cover 112 are detachably connected. Specifically, the housing 11 is mainly composed of an upper

cover 111 and a lower cover 112, the upper cover 111 and the lower cover 112 are connected to form one and the connection therebetween is configured as a detachable connection. One of the upper cover 111 and the lower cover 112 is provided with a threaded hole, and the other one is provided with a mounting hole at the corresponding position thereof. The upper cover 111 and the lower cover 112 are connected by using a screw and could be separated by removing the screw if the detachment is needed.

[0043] The detachable connection between the upper cover 111 and the lower cover 112 can not only simplify the assembly and disassembly process of the steam generator 10 and improve the assembly efficiency, but also save the detaching time, as well as the maintenance is simplified and the maintenance cost is reduced, thereby facilitating replacement of damaged parts in the steam generator 10 and prolonging the service life of the steam generator 10.

[0044] In an embodiment, the bottom of the upper cover 111 is provided with a sealing groove 18, a sealing ring 19 is disposed in the sealing groove 18 and the lower cover 112 and the upper cover 111 are fitted with each other, so as to press the sealing ring 19 tightly.

[0045] Specifically, the sealing groove 18 is disposed on a flange of the bottom of the upper cover 111, the sealing groove 18 has a shape same as that of a flange of the lower cover 112, the flange of the lower cover 112 could be stuck in the sealing groove 18 on the flange of the upper cover 111. The sealing groove 18 on the bottom of the upper cover 111 is provided with a sealing ring 19 therein, the sealing ring 19 and the sealing groove 18 have the same shape. When the upper cover 111 and the lower cover 112 are connected together, the sealing ring 19 is compressed between the lower cover 112 and the upper cover 111, so as to improve the sealing property of the steam generator 10.

[0046] By the sealing groove 18 and the sealing ring 19 configured to be located at the connecting position between the upper cover 111 and the lower cover 112, the sealing property of the steam generating cavity 12 could be improved. Because the air pressure of the steam in the steam generating cavity 12 is relatively high, the pressure at the connecting position between the upper cover 111 and the lower cover 112 is relatively large, but the sealing ring 19 could prevent the steam from leaking and ensure the normal work of the steam generator 10.

[0047] A working process of the steam generator 10 according to embodiments of the present disclosure will be described in detail.

[0048] The steam generator 10 according to embodiments of the present disclosure is mainly composed of the housing 11, the heater 15 and the temperature controller. The housing 11 is provided with the steam generating cavity 12 therein, the side wall of the housing 11 is provided with the water inlet 13 thereon, the top wall of the housing 11 is provided with the steam outlet 14, the steam generating cavity 12 is provided with the heater

15 therein and the heater 15 is disposed adjacent to the water inlet 13, the heater 15 is provided with the temperature controller, the temperature controller could detect the temperature of the heater 15 and control the working conditions of the water inlet 13 and the heater 15 according to the temperature of the heater 15, the steam outlet 14 is disposed above the heater 15, the steam produced in the steam generating cavity 12 flows out from the steam outlet 14, one side of the steam outlet 14 is provided with an explosion-proof muzzle 141, so as to prevent the air pressure from damaging the steam generator 10 when the steam outlet 14 is blocked.

[0049] When the steam generator 10 operates, the temperature of the heater 15 would raise. When the temperature of the heater 15 reaches 130 °C, the temperature controller controls the heater 15 to stop heating and controls the water inlet valve to open, then the water flow enters the steam generating cavity 12 to contact with the heater 15. When the temperature of the heater 15 is reduced to less than 100°C, the temperature controller controls the heater 15 to start heating and controls the water inlet valve to close, then the steam generating cavity 12 produces the steam therein. The steam enters a drum of the laundry treatment machine 100, and when the water in the steam generating cavity 12 is evaporated to empty, the temperature of the heater 15 is raised to 130 °C, at the time the next cycle of watering and heating starts in the steam generator 10.

[0050] The steam generator 10 according to embodiments of the present disclosure adjusts the consumption and supplement of the water for evaporation in the steam generating cavity 12 by the temperature controller, so that the water level in the steam generating cavity 12 is controlled within a reasonable range. On one hand the steam generator 10 could be ensured to supply the steam to the laundry treatment machine 100 continuously, so as to guarantee the normal work of the laundry treatment machine 100, on the other hand the water level in the steam generator 10 could be prevented from being too high to cause the water drops to spray, moreover the water level could be prevented from being too low to cause the damage to the steam generator 10, thereby prolonging the service life and improve the working performance of the steam generator 10.

[0051] A laundry treatment machine 100 according to a second aspect of embodiments of the present disclosure will be described in detail with reference to Fig. 3. Herein, in the present disclosure, a drum-type washer is taken as an example of the laundry treatment machine.

[0052] The laundry treatment machine 100 (the drum-type washer) according to embodiments of the present disclosure includes a casing (not shown), a base 20, a drum body 30 and a steam generator 10, in which the base 20 is detachably connected to the bottom of the casing, the drum body 30 and the steam generator 10 are disposed on the base 20, the steam generator 10 and the base 20 are connected through an reinforcing plate 21, so as to prevent the drum body 30 from influ-

encing the work of the steam generator 10 during the rotation thereof. The top of the steam generator 10 is in communication with the drum body 30 through a steam guiding pipe 142, and the bottom of the steam generator 10 is connected to a water inlet pipe 131. When the laundry treatment machine 100 operates, the steam generator 10 supplies the steam to the drum body 30 continuously.

[0053] Because the steam generator 10 according to embodiments of the present disclosure has the above-mentioned technical effects, therefore, the laundry treatment machine 100 according to embodiments of the present disclosure has the above-mentioned technical effects as well, that is, the laundry treatment machine 100 controls the water level in the steam generator 10 through the water inlet valve, not only the steam generator 10 could be ensured to supply the steam to the laundry treatment machine 100 continuously, the normal working of the laundry treatment machine 100 could be guaranteed to eliminate the wrinkle on the clothes, but also the water level could be prevented from being too high to cause the water drops to spray and being too low to cause the damage to the steam generator 10, prolonging the service life and improving the working performance of the steam generator 10, moreover the steam can sterilize and remove smells from the clean clothes, saving the washing process of the clothes.

[0054] Other components and operations of the laundry treatment machine 100 according to embodiments of the present disclosure are known to those skilled in the art, which will not be described in detail. The laundry treatment machine may be configured as a clothes dryer as well.

[0055] In the specification, it is to be understood that terms such as "central," "longitudinal," "lateral," "length," "width," "thickness," "upper," "lower," "front," "rear," "left," "right," "vertical," "horizontal," "top," "bottom," "inner," "outer," "clockwise," and "counterclockwise" should be construed to refer to the orientation as then described or as shown in the drawings under discussion. These relative terms are for convenience of description and do not require that the present invention be constructed or operated in a particular orientation.

[0056] In addition, terms such as "first" and "second" are used herein for purposes of description and are not intended to indicate or imply relative importance or significance or to imply the number of indicated technical features. Thus, the feature defined with "first" and "second" may comprise one or more of this feature. In the description of the present invention, "a plurality of" means two or more than two, unless specified otherwise.

[0057] In the present invention, unless specified or limited otherwise, the terms "mounted," "connected," "coupled," "fixed" and the like are used broadly, and may be, for example, fixed connections, detachable connections, or integral connections; may also be mechanical or electrical connections; may also be direct connections or indirect connections via intervening structures; may also

be inner communications of two elements, which can be understood by those skilled in the art according to specific situations.

[0058] Reference throughout this specification to "an embodiment," "some embodiments," "one embodiment," "another example," "an example," "a specific example," or "some examples," means that a particular feature, structure, material, or characteristic described in connection with the embodiment or example is included in at least one embodiment or example of the present disclosure. Thus, the appearances of the phrases such as "in some embodiments," "in one embodiment," "in an embodiment," "in another example," "in an example," "in a specific example," or "in some examples," in various places throughout this specification are not necessarily referring to the same embodiment or example of the present disclosure. Furthermore, the particular features, structures, materials, or characteristics may be combined in any suitable manner in one or more embodiments or examples.

[0059] Although explanatory embodiments have been shown and described, it would be appreciated by those skilled in the art that the above embodiments cannot be construed to limit the present disclosure, and changes, alternatives, and modifications can be made in the embodiments without departing from the scope of the present disclosure.

Claims

1. A steam generator (10) comprising:

a housing (11), wherein the housing (11) defines a steam generating cavity (12) therein and has a water inlet (13) and a steam outlet (14) in communication with the steam generating cavity (12);
a heater (15) disposed in the steam generating cavity (12); and
a temperature controller disposed in the steam generating cavity (12), being connected to the heater (15) and configured to detect a temperature of the heater (15), wherein the temperature controller controls the heater (15) to heat up and the water inlet (13) to close when the temperature of the heater (15) is below a predetermined temperature, and controls the heater (15) to stop heating and the water inlet (13) to open when the temperature of the heater (15) reaches a predetermined temperature.

2. The steam generator (10) according to claim 1, further comprising a water inlet (13) valve disposed in the water inlet (13), being connected to the temperature controller and controlled to be opened and closed by the temperature controller.

3. The steam generator (10) according to claim 1, wherein the heater (15) is disposed on a bottom of the steam generating cavity (12) and the water inlet (13) is disposed adjacent to the heater (15).

4. The steam generator (10) according to claim 3, wherein the housing further defines a limescale storage cavity (16) therein, wherein the limescale storage cavity (16) is in communication with the bottom of the steam generating cavity (12).

5. The steam generator (10) according to claim 4, wherein a horizontal height of a bottom of the limescale storage cavity (16) is lower than that of the bottom of the steam generating cavity (12).

6. The steam generator (10) according to claim 5, wherein a horizontal height of a top of the limescale storage cavity (16) is equal to that of a top of the heater (15).

7. The steam generator (10) according to claim 4, wherein the water inlet (13) is disposed on a first side of the housing and the limescale storage cavity (16) is disposed on a second side of the housing opposite to the water inlet (13).

8. The steam generator (10) according to any one of claims 1-7, wherein the housing comprises an upper cover and a lower cover, wherein the upper cover and the lower cover are detachably connected.

9. The steam generator (10) according to claim 8, wherein, a bottom of the upper cover is provided with a sealing groove (18), the sealing groove (18) is provided with a sealing ring (19) therein and the lower cover and the upper cover are fitted with each other, so as to press the sealing ring (19) tightly.

10. A laundry treatment machine (100) comprising the steam generator (10) according to any one of claims 1-9.

11. The laundry treatment machine (100) according to claim 10, wherein the laundry treatment machine (100) is configured as a drum-type washer.

12. The laundry treatment machine (100) according to claim 10, wherein the laundry treatment machine (100) is configured as a clothes dryer.

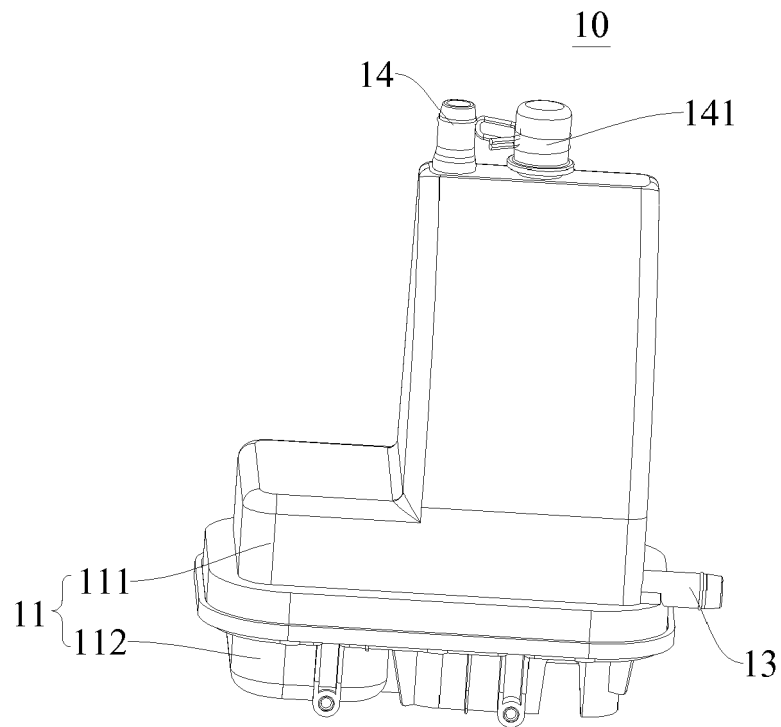


Fig. 1

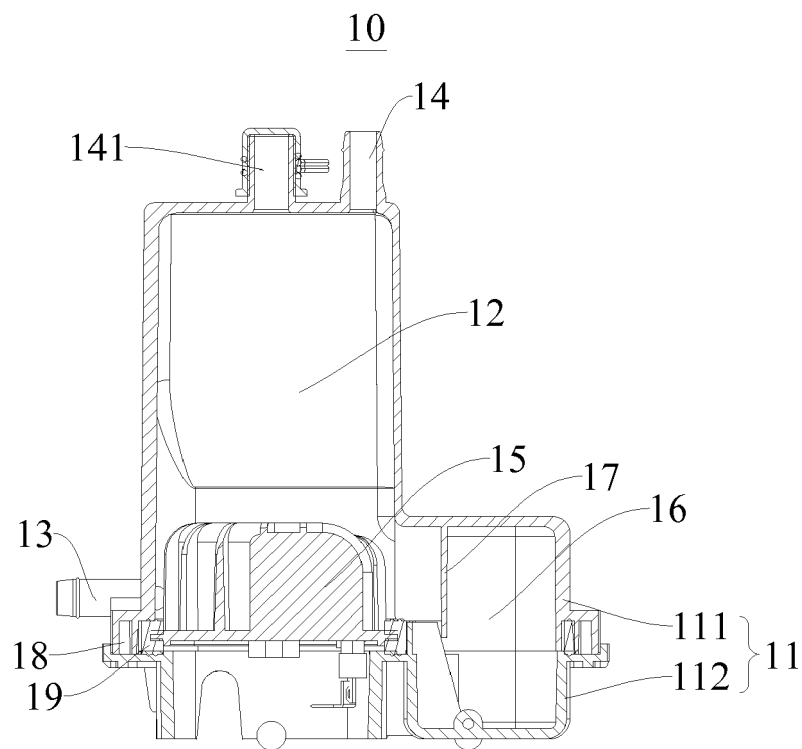


Fig. 2

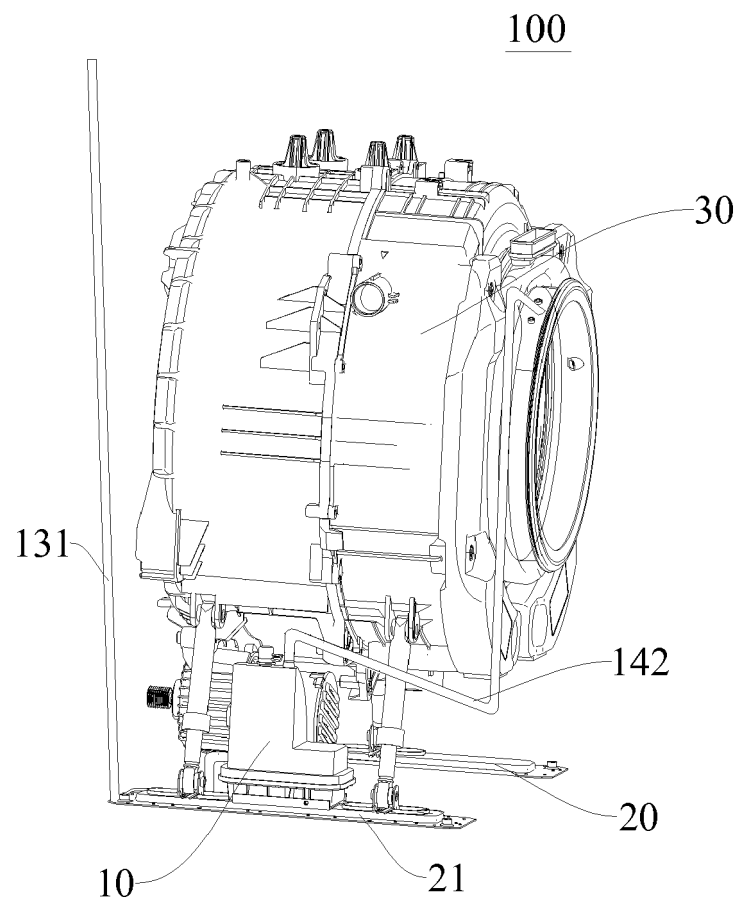


Fig. 3



EUROPEAN SEARCH REPORT

 Application Number
 EP 17 15 3008

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2016/116319 A1 (KONINKL PHILIPS NV [NL]) 28 July 2016 (2016-07-28)	1-10	INV. D06F39/00 D06F58/20
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