CLAIMS

1. An energy-saving electric steaming device containing a heat recovery system comprises a heating chamber (1), a steaming chamber body (2), where the heating chamber (1) is located below and communicated with the steaming chamber body (2), wherein the device further comprises an upper heat recovery chamber (3) provided with a serpentine pipe (4), the upper heat recovery chamber (3) is located above the steaming chamber body (2) in such a manner that the bottom of the upper heat recovery chamber (3) is attached to the top of the steaming chamber body (2), the steam inlet of the upper heat recovery chamber (3) is connected with the steam outlet of the steaming chamber body (2), and a heat storage medium is provided within the upper heat recovery chamber (3) in such a manner that the serpentine pipe (4) is directly heated by steam in the upper heat recovery chamber (3);

wherein the device further comprises a lower heat recovery chamber (8), where the top of the lower heat recovery chamber (8) is attached to the bottom of the heating chamber (1); a hot-water outlet of the upper heat recovery chamber (3) is connected with a hot-water inlet of the lower heat recovery chamber (8), and the lower heat recovery chamber (8) is communicated with the heating chamber (1).

2. The device of claim 1, wherein water is used as the heat storage medium, and the upper heat recovery chamber (3) is provided with a tap-water inlet ~~and a hot-water outlet~~.

~~3. The device of claim 2, wherein it further comprises a lower heat recovery chamber (8), where the top of the lower heat recovery chamber (8) is attached to the bottom of the heating chamber (1); the hot-water outlet of the upper heat recovery chamber (3) is connected with the hot-water inlet of the lower heat recovery chamber (8), and the lower heat recovery chamber (8) is communicated with the heating chamber (1).~~

4~~3~~. The device of claim ~~3~~1, wherein the upper heat recovery chamber (3) is provided with a steam outlet which is located close to the tap-water inlet and connected with the low-temperature steam inlet of the lower heat recovery chamber (8).

5~~4~~. The device of claim ~~3~~1, wherein the upper heat recovery chamber (3) is provided with a

steam outlet which is located close to the tap-water inlet and connected with the inlet of the steaming chamber body (2).

~~6~~5. The device of claim 2, wherein the water is stored in the serpentine pipe (4) which is coiled within the upper heat recovery chamber (3); and the inlet and the outlet of the serpentine pipe (4) are respectively connected with the tap-water inlet and the hot-water outlet of the upper heat recovery chamber.

~~7~~6. The device of claim ~~6~~5, wherein the serpentine pipe (4) is made of stainless steel and provided with stainless steel fins (5).

~~8~~7. The device of claim ~~7~~6, wherein the upper recovery chamber (3) is provided with intermediate separators (6), preferably two or more intermediate separators; a gap is present between only one end of the intermediate separator (6) and the upper heat recovery chamber (3), and the gaps with respect to adjacent intermediate separators (6) are located at opposite sides in relation to each other.

~~9~~8. The device of claim 1, wherein a thermal insulation layer is disposed outside of the upper heat recovery chamber (3) and the steam recollected by the upper heat recovery chamber (3) contains overheated steam.

~~10~~9. The device of claim ~~9~~8, wherein an electric heating plate (7) with a certain height in the vertical direction is disposed at the lower part of the heating chamber (1); for the purpose of heating, water is added into the heating chamber (1) such that the lower part of the electric heating plate (7) is immersed therein, but the upper part of the electric heating plate (7) is extends from the surface of the water.

CLAIMS

1. An energy-saving electric steaming device containing a heat recovery system comprises a heating chamber (1), a steaming chamber body (2), where the heating chamber (1) is located below and communicated with the steaming chamber body (2), wherein the device further comprises an upper heat recovery chamber (3) provided with a serpentine pipe (4), the upper heat recovery chamber (3) is located above the steaming chamber body (2) in such a manner that the bottom of the upper heat recovery chamber (3) is attached to the top of the steaming chamber body (2), the steam inlet of the upper heat recovery chamber (3) is connected with the steam outlet of the steaming chamber body (2), and a heat storage medium is provided within the upper heat recovery chamber (3) in such a manner that the serpentine pipe (4) is directly heated by steam in the upper heat recovery chamber (3);

wherein the device further comprises a lower heat recovery chamber (8), where the top of the lower heat recovery chamber (8) is attached to the bottom of the heating chamber (1); a hot-water outlet of the upper heat recovery chamber (3) is connected with a hot-water inlet of the lower heat recovery chamber (8), and the lower heat recovery chamber (8) is communicated with the heating chamber (1).

2. The device of claim 1, wherein water is used as the heat storage medium, and the upper heat recovery chamber (3) is provided with a tap-water inlet.

3. The device of claim 1, wherein the upper heat recovery chamber (3) is provided with a steam outlet which is located close to the tap-water inlet and connected with the low-temperature steam inlet of the lower heat recovery chamber (8).

4. The device of claim 1, wherein the upper heat recovery chamber (3) is provided with a steam outlet which is located close to the tap-water inlet and connected with the inlet of the steaming chamber body (2).

5. The device of claim 2, wherein the water is stored in the serpentine pipe (4) which is coiled within the upper heat recovery chamber (3); and the inlet and the outlet of the serpentine pipe (4) are respectively connected with the tap-water inlet and the hot-water

outlet of the upper heat recovery chamber.

6. The device of claim 5, wherein the serpentine pipe (4) is made of stainless steel and provided with stainless steel fins (5).

7. The device of claim 6, wherein the upper recovery chamber (3) is provided with intermediate separators (6), preferably two or more intermediate separators; a gap is present between only one end of the intermediate separator (6) and the upper heat recovery chamber (3), and the gaps with respect to adjacent intermediate separators (6) are located at opposite sides in relation to each other.

8. The device of claim 1, wherein a thermal insulation layer is disposed outside of the upper heat recovery chamber (3) and the steam recollected by the upper heat recovery chamber (3) contains overheated steam.

9. The device of claim 8, wherein an electric heating plate (7) with a certain height in the vertical direction is disposed at the lower part of the heating chamber (1); for the purpose of heating, water is added into the heating chamber (1) such that the lower part of the electric heating plate (7) is immersed therein, but the upper part of the electric heating plate (7) is extends from the surface of the water.