



EUROPEAN PATENT APPLICATION
published in accordance with Art. 153(4) EPC

(43) Date of publication:
27.09.2023 Bulletin 2023/39

(21) Application number: **21874629.5**

(22) Date of filing: **01.12.2021**

(51) International Patent Classification (IPC):
D06F 33/32 ^(2020.01) **D06F 34/04** ^(2020.01)
D06F 103/16 ^(2020.01) **D06F 105/28** ^(2020.01)

(52) Cooperative Patent Classification (CPC):
D06F 33/32; D06F 31/00; D06F 34/04;
D06F 35/008; D06F 39/008; D06F 2103/16;
D06F 2105/28; D06F 2105/32

(86) International application number:
PCT/CN2021/134685

(87) International publication number:
WO 2022/068975 (07.04.2022 Gazette 2022/14)

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(30) Priority: **25.12.2020 CN 202011561879**

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(54) **HIGH-TEMPERATURE STEAMING METHOD, COMPUTER-READABLE STORAGE MEDIUM AND CONTROL APPARATUS**

(57) A high-temperature steaming method, a computer-readable storage medium and a control apparatus. In the high-temperature steaming method, when the temperature of washing water in a first washing cylinder (1) is extremely high, and a large amount of steam is generated, a corresponding valve port can be blocked by means of a three-way valve (3); and when the temperature of the washing water in the first washing cylinder (1) decreases, and an extremely small amount of steam is generated or no steam is generated, a valve port corresponding to a second washing cylinder (2) in which the temperature of washing water continuously rises is blocked in a timely manner.

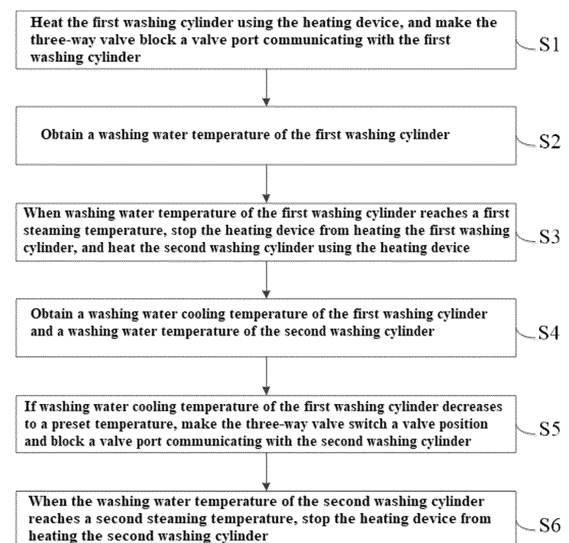


FIG.2

Description

FIELD

[0001] The present disclosure belongs to the technical field of clothing treatment apparatus, and specifically relates to a high-temperature steaming method, a computer-readable storage medium, and a control device.

BACKGROUND

[0002] In order to meet classified washing needs and large washing capacity needs of users, some washing machines are provided with two washing cylinders, both of which can hold washing water and objects to be washed to achieve the purpose of dual-cylinder washing. When the washing machine has the function of high-temperature steaming and disinfection, the washing water in the two washing cylinders of the washing machine is usually heated to a higher temperature to achieve the purpose of steaming and disinfecting the objects to be washed. When both washing cylinders need to execute the high-temperature steaming program, in order to prevent a working power of the washing machine from being too large, which will make it difficult to adapt to safety current limiting conditions of most users' homes, the washing water in the two washing cylinders is usually heated in turn for high-temperature steaming. However, due to the high heating temperature of the washing water set in the high-temperature steaming program, the dual-cylinder washing machine will spray a large amount of water vapor for a long time when executing the high-temperature steaming program, which can very easily cause damage to walls, furniture and other household apparatuses at a position where the dual-cylinder washing machine is placed in the user's home due to long-time exposure to moisture. Moreover, if an arrangement space of the dual-cylinder washing machine is relatively closed, a large amount of water vapor will also reduce a visibility of the arrangement space, thus reducing the visibility for users in the arrangement space, which poses a hidden safety hazard.

[0003] Accordingly, there is a need for a new high-temperature steaming method, a computer-readable storage medium and a control device in the art to solve the above problem.

SUMMARY

[0004] In order to solve the above problem in the prior art, that is, to solve the problem of excessive water vapor escaping from the existing dual-cylinder washing machines when two washing cylinders are performing high-temperature steaming and disinfecting simultaneously, the present disclosure provides a high-temperature steaming method for a dual-cylinder washing machine; the dual-cylinder washing machine includes a first washing cylinder, a second washing cylinder, a three-way

valve, an air duct, and a heating device capable of heating washing water in the first washing cylinder and the second washing cylinder; the first washing cylinder and the second washing cylinder are respectively communicated with the air duct through the three-way valve; and the high-temperature steaming method includes: heating the first washing cylinder using the heating device, and making the three-way valve block a valve port communicating with the first washing cylinder; obtaining a washing water temperature of the first washing cylinder; when the washing water temperature of the first washing cylinder reaches a first steaming temperature, stopping the heating device from heating the first washing cylinder, and heating the second washing cylinder using the heating device; obtaining a washing water cooling temperature of the first washing cylinder and a washing water temperature of the second washing cylinder; if the washing water cooling temperature of the first washing cylinder decreases to a preset temperature, then making the three-way valve switch a valve position and block a valve port communicating with the second washing cylinder; and when the washing water temperature of the second washing cylinder reaches a second steaming temperature, stopping the heating device from heating the second washing cylinder.

[0005] In a preferred technical solution of the high-temperature steaming method described above, the high-temperature steaming method further includes: if the washing water cooling temperature of the first washing cylinder is higher than the preset temperature and the washing water temperature of the second washing cylinder is within a set temperature range, then temporarily stopping the heating device from heating the second washing cylinder; obtaining the washing water cooling temperature of the first washing cylinder again; and in a case where the washing water cooling temperature of the first washing cylinder decreases to the preset temperature, continuing to heat the second washing cylinder using the heating device, where a largest temperature value in the set temperature range is smaller than or equal to the preset temperature.

[0006] In a preferred technical solution of the high-temperature steaming method described above, the preset temperature is any temperature between 50°C and 60°C.

[0007] In a preferred technical solution of the high-temperature steaming method described above, the set temperature range is 40°C to 50°C.

[0008] In a preferred technical solution of the high-temperature steaming method described above, the high-temperature steaming method further includes: in a case where the washing water cooling temperature of the first washing cylinder is higher than the preset temperature and the washing water temperature of the second washing cylinder increases to the preset temperature, if the washing water cooling temperature of the first washing cylinder decreases to be lower than or equal to the washing water temperature of the second washing cylinder, then making the three-way valve switch the valve position

and block the valve port communicating with the second washing cylinder.

[0009] In a preferred technical solution of the high-temperature steaming method described above, the step of "making the three-way valve block a valve port communicating with the first washing cylinder" includes: in a case where the washing water of the first washing cylinder is heated by the heating device and the valve port communicating with the second washing cylinder is blocked by the three-way valve, if the washing water temperature of the first washing cylinder reaches the preset temperature, then making the three-way valve block the valve port communicating with the first washing cylinder; and in a case where the washing water of the first washing cylinder is heated by the heating device and the valve port communicating with the first washing cylinder is blocked by the three-way valve, making the three-way valve maintain the state of blocking the valve port communicating with the first washing cylinder.

[0010] In a preferred technical solution of the high-temperature steaming method described above, the first steaming temperature is higher than 90°C.

[0011] In a preferred technical solution of the high-temperature steaming method described above, the second steaming temperature is equal to the first steaming temperature.

[0012] The present disclosure also provides a computer-readable storage medium on which a plurality of program codes are stored, and the program codes are suitable for being loaded and run by a processor to execute any of the above high-temperature steaming methods.

[0013] The present disclosure also provides a control device which includes a processor and a storage device; the storage device is suitable for storing a plurality of program codes, and the program codes are suitable for being loaded and run by the processor to execute any of the above high-temperature steaming methods.

[0014] It can be understood by those skilled in the art that in the high-temperature steaming method of the present disclosure, during the process of heating the first washing cylinder and the second washing cylinder in turn, through the cooperation with switching the blocking position of the valve ports of the three-way valve, an overall steam escape amount of the two washing cylinders can be reduced. When the washing water temperature of the first washing cylinder is extremely high and a large amount of steam is generated, the corresponding valve port is blocked by the three-way valve; when the washing water temperature of the first washing cylinder decreases, and there is very little or no steam generated, the valve port corresponding to the second washing cylinder where the washing water temperature rises continuously is blocked in time, so that when the washing water temperature of the second washing cylinder is extremely high and a large amount of steam can be generated, the steam in the washing cylinder can be prevented from escaping randomly, thus greatly reducing the overall amount of steam escaping from the dual-cylinder washing machine

when both washing cylinders are performing the high-temperature steaming program, and effectively eliminating the adverse effects of the steam escaping from the dual-cylinder washing machine on the decoration environment and visual environment of users' homes.

BRIEF DESCRIPTION OF DRAWINGS

[0015] Preferred embodiments of the present disclosure will be described below with reference to the accompanying drawings. In the drawings:

FIG. 1 is a schematic view of an internal structure of a dual-cylinder washing machine according to the present disclosure; and

FIG. 2 is a flowchart illustrating steps of a high-temperature steaming method for the dual-cylinder washing machine according to the present disclosure.

[0016] List of reference signs: 1: first washing cylinder; 2: second washing cylinder; 3: three-way valve; 4: air duct; 5: fan.

DETAILED DESCRIPTION

[0017] It should be understood by those skilled in the art that in the description of the present disclosure, although various steps of the control method of the present disclosure are described in specific orders in the present application, these orders are not restrictive. Without deviating from the basic principles of the present disclosure, those skilled in the art can execute the steps in different orders.

[0018] In view of the problem pointed out in the "BACKGROUND OF THE INVENTION" that excessive water vapor escapes from the existing dual-cylinder washing machines when two washing cylinders are performing the high-temperature steaming program simultaneously, the present disclosure provides a high-temperature steaming method for a dual-cylinder washing machine, which aims to reduce the overall amount of steam escaping from the dual-cylinder washing machine when both washing cylinders are performing the high-temperature steaming program, and eliminate the adverse effects of the steam escaping from the dual-cylinder washing machine on the decoration environment and visual environment of users' homes.

[0019] First, reference is made to FIG. 1, which is a schematic view of an internal structure of a dual-cylinder washing machine of the present disclosure. As shown in FIG. 1, the dual-cylinder washing machine of the present disclosure includes a shell, as well as a first washing cylinder 1, a second washing cylinder 2, a three-way valve 3, an air duct 4 and a heating device (not shown in the figure) that are arranged inside the shell. A fan 5 is arranged inside the air duct 4, and an air outlet of the air

duct 4 is communicated with a valve port of the three-way valve 3 for air inflow. A first valve port of the three-way valve 3 for air outflow is communicated with the first washing cylinder 1 (hereinafter, the valve port of the three-way valve 3 that is communicated with the first washing cylinder 1 is collectively referred to as the first valve port), and a second valve port of the three-way valve 3 for air outflow is communicated with the second washing cylinder 2 (hereinafter, the valve port of the three-way valve 3 that is communicated with the second washing cylinder 2 is collectively referred to as the second valve port). A valve spool of the three-way valve 3 can switch between a blocking position of the first valve port and a blocking position of the second valve port, so that an airflow in the air duct 4 can selectively enter the first washing cylinder 1 and the second washing cylinder 2 for ventilation or drying. The heating device includes a first heating unit capable of heating washing water in the first washing cylinder 1 and a second heating unit capable of heating washing water in the second washing cylinder 2. The above-mentioned three-way valve 3 is any valve device that can selectively block any of the first valve port and the second valve port, such as a wax motor three-way valve. The first heating unit and the second heating unit mentioned above can be any type of heating apparatus that can meet the heating needs of washing water. The first heating unit includes a heating module and a temperature control module, the heating module achieves the purpose of heating the washing water in the first washing cylinder 1, and the temperature control module can at least control the heating module to be turned off when the washing water in the first washing cylinder 1 is heated to an expected temperature. A basic structure of the second heating unit is the same as that of the first heating unit, but considering that the first washing cylinder 1 and the second washing cylinder 2 do not need to be heated simultaneously, the temperature control module of the second heating unit and the temperature control module of the first heating unit are preferably configured into one piece. Specifically, the first heating unit or the second heating unit can heat the water in the first washing cylinder 1 or the second washing cylinder 2 by heating the first washing cylinder 1 or the second washing cylinder 2; for example, the heating module of the first heating unit or the second heating unit can be an electromagnetic heating device, and at least part of the structure of the first washing cylinder 1 or the second washing cylinder 2 is made of a metal material, so that a cylinder body of the first washing cylinder 1 or the second washing cylinder 2 can be subjected to a magnetic field generated by the electromagnetic heating device, thus generating an eddy current effect and producing heat, and transferring the heating energy to the water in the first washing cylinder 1 or the second washing cylinder 2, thereby achieving the effect of heating the washing water. Alternatively, the first heating unit or the second heating unit can protrude into the first washing cylinder 1 or the second washing cylinder 2 in a way that does not affect the rotation

of the first washing cylinder 1 or the second washing cylinder 2 so as to heat the washing water in the first washing cylinder 1 or the second washing cylinder 2; for example, the heating module of the first heating unit or the second heating unit is an electric wire heating device that protrudes into the interior of the first washing cylinder 1 or the second washing cylinder 2 in a way that does not affect the rotation of the first washing cylinder 1 or the second washing cylinder 2, so that the electric wire heating device directly enters the washing water in the first washing cylinder 1 or the second washing cylinder 2 and heats the washing water. The specific structures and arrangement positions of the first heating unit and the second heating unit can be the same or different, as long as the first heating unit and the second heating unit can meet the washing water heating needs of the first washing cylinder 1 and the second washing cylinder 2 correspondingly.

[0020] The high-temperature steaming method of the present disclosure will be described below in connection with the above dual-cylinder washing machine.

[0021] Next, reference is made to FIG. 2, which is a flowchart illustrating steps of the high-temperature steaming method for the dual-cylinder washing machine of the present disclosure. As shown in FIG. 2, the high-temperature steaming method for the dual-cylinder washing machine of the present disclosure includes:

Step S1: heating the first washing cylinder 1 using the first heating unit of the heating device, and making the three-way valve 3 block the first valve port;

Step S2: obtaining a washing water temperature of the first washing cylinder 1;

Step S3: when the washing water temperature of the first washing cylinder 1 reaches a first steaming temperature, stopping the first heating unit from heating the first washing cylinder 1, and heating the second washing cylinder 2 using the second heating unit;

Step S4: obtaining a washing water cooling temperature of the first washing cylinder 1 and a washing water temperature of the second washing cylinder 2;

Step S5: if the washing water cooling temperature of the first washing cylinder 1 decreases to a preset temperature, then making the three-way valve 3 switch a valve position and block the valve port that communicates with the second washing cylinder 2; and

Step S6: when the washing water temperature of the second washing cylinder 2 reaches a second steaming temperature, stopping the second heating unit from heating the second washing cylinder 2.

[0022] In the above steps, the "washing water temper-

ature of the first washing cylinder 1" is the temperature of the washing water in the first washing cylinder 1 when being heated, and the "washing water temperature of the second washing cylinder 2" is the temperature of the washing water in the second washing cylinder 2 when being heated. The "first steaming temperature" is a highest temperature to which the washing water inside the first washing cylinder 1 can increase after being heated during the high-temperature steaming program, and the "second steaming temperature" is a highest temperature to which the washing water inside the second washing cylinder 2 can increase after being heated during the high-temperature steaming program. The set values of the first steaming temperature and the second steaming temperature can be the same or different. Those skilled in the art can set the specific temperature values of the first steaming temperature and the second steaming temperature according to the steaming and disinfection needs. Exemplarily, the first steaming temperature is a temperature value larger than 90°C, and the second steaming temperature is the same as the first steaming temperature. For example, the first steaming temperature and the second steaming temperature are both 95°C. The first heating unit stops working when the washing water in the first washing cylinder 1 is heated to 95°C, and at the same time, the second heating unit starts heating the washing water in the second washing cylinder 2 until the washing water in the second washing cylinder 2 is heated to 95°C, thus completing the heating work in the high-temperature steaming program. The "washing water cooling temperature of the first washing cylinder 1" is the temperature of the washing water in a cooling process of the first washing cylinder 1 after heating is completed. The "preset temperature" is an expected reduced temperature value set for the washing water cooling temperature of the first washing cylinder 1. When the washing water cooling temperature of the first washing cylinder 1 decreases to this expected reduced temperature value, the amount of steam generated by the washing water in the first washing cylinder 1 is relatively small, and a small amount of steam escapes from the first washing cylinder 1, and then condenses and evaporates to disappear during the process of escaping from the interior of the dual-cylinder washing machine to the outside. Even if a very small amount of steam can escape from the dual-cylinder washing machine, the escaping steam will dissipate into the air very quickly, and the influence on the decoration environment and visual environment can be negligible. Preferably, the above preset temperature is any temperature value between 50°C and 60°C (including 50°C and 60°C), such as 60°C. The temperature parameters required to be obtained, such as the above first washing water temperature, the second washing water temperature, and the washing water cooling temperature of the first washing cylinder 1, can all be obtained through temperature acquisition devices such as temperature sensors arranged inside the corresponding washing cylinders.

[0023] Through the above steps, the time when the washing water in the first washing cylinder 1 decreases to the preset temperature can be used as the timing for the three-way valve 3 to switch the blocking position of the valve spool, so that when the washing water temperature of the first washing cylinder 1 is relatively high and there is a large amount of steam generated, the steam escaping from the washing cylinder is blocked, thus preventing a large amount of steam from escaping from the first washing cylinder 1 to the outside of the dual-cylinder washing machine; and when the washing water temperature of the first washing cylinder 1 decreases and the amount of steam generated is low so that it is almost impossible for the steam to escape to the outside of the dual-cylinder washing machine, a valve spool position switch operation of the three-way valve 3 is performed so that the second valve port is blocked by the valve spool; in this way, before the washing water temperature of the second washing cylinder 2 rises to a higher temperature and the amount of steam generated increases sharply, the channel of the washing cylinder from which the steam can escape is blocked. By switching the three-way valve 3 at the set timing, a large amount of steam escaping from the first washing cylinder 1 and a large amount of steam escaping from the second washing cylinder 2 are sequentially blocked, thereby maximally reducing the total amount of steam escaping from the first washing cylinder 1 and the second washing cylinder 2 during the process of executing the entire high-temperature steaming program.

[0024] In a possible embodiment, a temperature rising rate of the washing water in the second washing cylinder 2 can be controlled by adjusting a heating power for the washing water in the second washing cylinder 2. In the high-temperature steaming program, an output power of the second heating unit can be appropriately increased or decreased according to a decreasing rate of the washing water cooling temperature of the first washing cylinder 1, thereby increasing or decreasing an increasing rate of the washing water temperature of the second washing cylinder 2, so that when the washing water cooling temperature of the first washing cylinder 1 decreases to the preset temperature, the washing water in the second washing cylinder 2 is controlled to be heated to a temperature not exceeding the preset temperature. In a preferred situation, when the washing water cooling temperature of the first washing cylinder 1 decreases to the preset temperature, the washing water temperature of the second washing cylinder 2 just increases to the preset temperature, which can not only ensure an overall heating efficiency of the first washing cylinder 1 and the second washing cylinder 2, but also can control the three-way valve 3 to timely switch the valve spool from the first valve port to the second valve port when there is no steam obviously escaping from the washing water in the first washing cylinder 1 and a large amount of steam is about to escape from the washing water in the second washing cylinder 2, so that the valve ports corresponding to each

washing cylinder can be in a closed state when a large amount of steam is generated in both washing cylinders, thus effectively reducing the overall amount of escaping steam. Of course, in addition to controlling the heating power of the second heating unit, those skilled in the art can also estimate or control the temperature rising rate of the washing water in the second washing cylinder 2 based on the volume of the washing water in the second washing cylinder 2.

[0025] In another possible embodiment, the high-temperature steaming method for the dual-cylinder washing machine of the present disclosure further includes:

if the washing water cooling temperature of the first washing cylinder 1 is higher than the preset temperature and the washing water temperature of the second washing cylinder 2 is within a set temperature range, then temporarily stopping the second heating unit from heating the second washing cylinder 2;

obtaining the washing water cooling temperature of the first washing cylinder 1 again; and

in a case where the washing water cooling temperature of the first washing cylinder 1 decreases to the preset temperature, continuing to heat the second washing cylinder 2 using the second heating unit, where a largest temperature value in the set temperature range is smaller than or equal to the preset temperature.

[0026] In the above steps, the temperature values within the set temperature range are all close to and smaller than the preset temperature. Before the washing water cooling temperature of the first washing cylinder 1 decreases to the preset temperature, once the washing water temperature of the second washing cylinder 2 increases to be within the set temperature range, by controlling the second heating unit to stop working temporarily, the washing water temperature of the second washing cylinder 2 can be temporarily stopped from continuing to rise, so as to prevent a large amount of steam from beginning to escape from the second washing cylinder 2 to the outside before the three-way valve 3 switches the valve spool to the blocking position of the second valve port. When the washing water cooling temperature of the first washing cylinder 1 decreases to the preset temperature, the three-way valve 3 controls the valve spool to block the second valve port; at this time, the second heating unit continues to heat the washing water in the second washing cylinder 2. After this, even if the washing water temperature of the second washing cylinder 2 increases beyond the set temperature range very quickly or even exceeds the preset temperature, the large amount of steam gradually increasing in the second washing cylinder 2 will be blocked by the valve spool and cannot escape to the outside. The above set temperature range is preferably 40°C to 50°C.

[0027] In further another possible embodiment, the high-temperature steaming method for the dual-cylinder washing machine of the present disclosure further includes:

in a case where the washing water cooling temperature of the first washing cylinder 1 is higher than the preset temperature and the washing water temperature of the second washing cylinder 2 increases to the preset temperature, if the washing water cooling temperature of the first washing cylinder 1 decreases to be lower than or equal to the washing water temperature of the second washing cylinder 2, then making the three-way valve 3 switch the valve position and block the valve port communicating with the second washing cylinder 2.

[0028] In the above steps, if the washing water temperature of the second washing cylinder 2 has already increased to the preset temperature before the washing water cooling temperature of the first washing cylinder 1 decreases to the preset temperature, a large amount of steam can each escape from the washing water in the first washing cylinder 1 and the washing water in the second washing cylinder 2. In this case, if the washing water cooling temperature of the first washing cylinder 1 decreases to be lower than or equal to the washing water temperature of the second washing cylinder 2, it indicates that the washing water temperature of the second washing cylinder 2 is higher and more steam is generated. At this time, there is no need to wait for the washing water cooling temperature of the first washing cylinder 1 to decrease to the preset temperature; instead, the three-way valve 3 is directly controlled to switch the valve spool from the blocking position of the first valve port to the blocking position of the second valve port, thereby blocking the second washing cylinder 2 from which more steam can escape. If the washing water cooling temperature of the first washing cylinder 1 is higher than the washing water temperature of the second washing cylinder 2, then the state in which the three-way valve 3 blocks the first valve port is maintained, thereby blocking the first washing cylinder 1 from which more steam can escape.

[0029] Based on any of the above embodiments, the step of "making the three-way valve 3 block the first valve port" includes:

in a case where the washing water of the first washing cylinder 1 is heated by the first heating unit and the second valve port is blocked by the three-way valve 3 (i.e., when heating the washing water of the first washing cylinder 1, the valve spool of the three-way valve 3 is not in the blocking position of the first valve port), if the washing water temperature of the first washing cylinder 1 reaches the preset temperature, then making the three-way valve 3 switch the blocking position of the valve spool from the second valve port to the first valve port; and

in a case where the washing water of the first washing cylinder 1 is heated by the first heating unit and

the first valve port is blocked by the three-way valve 3 (i.e., when heating the washing water of the first washing cylinder 1, the valve spool of the three-way valve 3 is already in the blocking position of the first valve port), making the three-way valve 3 maintain the state of blocking the first valve port.

[0030] Of course, in the first case mentioned above, the time when the washing water temperature of the first washing cylinder 1 reaches the preset temperature is only the latest timing for the three-way valve 3 to switch the blocking position of the valve spool to the first valve port. In actual operation, before the washing water temperature of the first washing cylinder 1 does not exceed the preset temperature, the three-way valve 3 can also switch the valve spool to the position of blocking the first valve port at any time.

[0031] Further, the present disclosure also provides a computer-readable storage medium.

[0032] In an embodiment of the computer-readable storage medium according to the present disclosure, the computer-readable storage medium can be configured to store a program for executing the high-temperature steaming method for a dual-cylinder washing machine according to the above method embodiment, and the program can be loaded and run by a processor to implement the above high-temperature steaming method. For facilitating description, only the parts related to the embodiments of the present disclosure are shown. As to specific technical details that are not disclosed, reference may be made to the method embodiment of the present disclosure. The computer-readable storage medium can be a storage medium formed by various electronic devices; optionally, the storage medium in the embodiments of the present disclosure is a non-temporary computer-readable storage medium.

[0033] Further, the present disclosure also provides a control device.

[0034] In an embodiment of the control device according to the present disclosure, the control device includes a processor and a storage device; the storage device can be configured to store a program for executing the high-temperature steaming method for a dual-cylinder washing machine according to the above method embodiment, the processor can be configured to execute the program in the storage device, and the program includes but is not limited to a program for executing the high-temperature steaming method according to the above method embodiment. For facilitating description, only the parts related to the embodiments of the present disclosure are shown. As to specific technical details that are not disclosed, reference may be made to the method embodiment of the present disclosure. The control device may be a control device including various electronic devices.

[0035] Hitherto, the technical solutions of the present disclosure have been described in connection with the preferred embodiments shown in the accompanying

drawings, but it is easily understood by those skilled in the art that the scope of protection of the present disclosure is obviously not limited to these specific embodiments. Without departing from the principles of the present disclosure, those skilled in the art can make equivalent changes or replacements to relevant technical features, and all the technical solutions after these changes or replacements will fall within the scope of protection of the present disclosure.

Claims

1. A high-temperature steaming method for a dual-cylinder washing machine, wherein the dual-cylinder washing machine comprises a first washing cylinder, a second washing cylinder, a three-way valve, an air duct, and a heating device capable of heating washing water in the first washing cylinder and the second washing cylinder, and the first washing cylinder and the second washing cylinder are respectively communicated with the air duct through the three-way valve;
the high-temperature steaming method comprises:

heating the first washing cylinder using the heating device, and making the three-way valve block a valve port communicating with the first washing cylinder;
obtaining a washing water temperature of the first washing cylinder;
when the washing water temperature of the first washing cylinder reaches a first steaming temperature, stopping the heating device from heating the first washing cylinder, and heating the second washing cylinder using the heating device;
obtaining a washing water cooling temperature of the first washing cylinder and a washing water temperature of the second washing cylinder;
if the washing water cooling temperature of the first washing cylinder decreases to a preset temperature, then making the three-way valve switch a valve position and block a valve port communicating with the second washing cylinder; and
when the washing water temperature of the second washing cylinder reaches a second steaming temperature, stopping the heating device from heating the second washing cylinder.

2. The high-temperature steaming method according to claim 1, further comprising:

if the washing water cooling temperature of the first washing cylinder is higher than the preset temperature and the washing water temperature of the second washing cylinder is within a set

- temperature range, then temporarily stopping the heating device from heating the second washing cylinder;
obtaining the washing water cooling temperature of the first washing cylinder again; and
in a case where the washing water cooling temperature of the first washing cylinder decreases to the preset temperature, continuing to heat the second washing cylinder using the heating device, wherein
a largest temperature value in the set temperature range is smaller than or equal to the preset temperature.
3. The high-temperature steaming method according to claim 2, wherein the preset temperature is any temperature between 50°C and 60°C. 15
 4. The high-temperature steaming method according to claim 2, wherein the set temperature range is 40°C to 50°C. 20
 5. The high-temperature steaming method according to claim 1, further comprising:
in a case where the washing water cooling temperature of the first washing cylinder is higher than the preset temperature and the washing water temperature of the second washing cylinder increases to the preset temperature, if the washing water cooling temperature of the first washing cylinder decreases to be lower than or equal to the washing water temperature of the second washing cylinder, then making the three-way valve switch the valve position and block the valve port communicating with the second washing cylinder. 25 30 35
 6. The high-temperature steaming method according to claim 1, wherein the step of "making the three-way valve block a valve port communicating with the first washing cylinder" comprises: 40

in a case where the washing water of the first washing cylinder is heated by the heating device and the valve port communicating with the second washing cylinder is blocked by the three-way valve, if the washing water temperature of the first washing cylinder reaches the preset temperature, then making the three-way valve block the valve port communicating with the first washing cylinder; and 45 50

in a case where the washing water of the first washing cylinder is heated by the heating device and the valve port communicating with the first washing cylinder is blocked by the three-way valve, making the three-way valve maintain the state of blocking the valve port communicating with the first washing cylinder. 55
 7. The high-temperature steaming method according to claim 1, wherein the first steaming temperature is higher than 90°C.
 8. The high-temperature steaming method according to claim 7, wherein the second steaming temperature is equal to the first steaming temperature. 5
 9. A computer-readable storage medium, on which a plurality of program codes are stored, wherein the program codes are suitable for being loaded and run by a processor to execute the high-temperature steaming method according to any one of claims 1 to 8. 10
 10. A control device, which comprises a processor, and a storage device suitable for storing a plurality of program codes, wherein the program codes are suitable for being loaded and run by the processor to execute the high-temperature steaming method according to any one of claims 1 to 8.

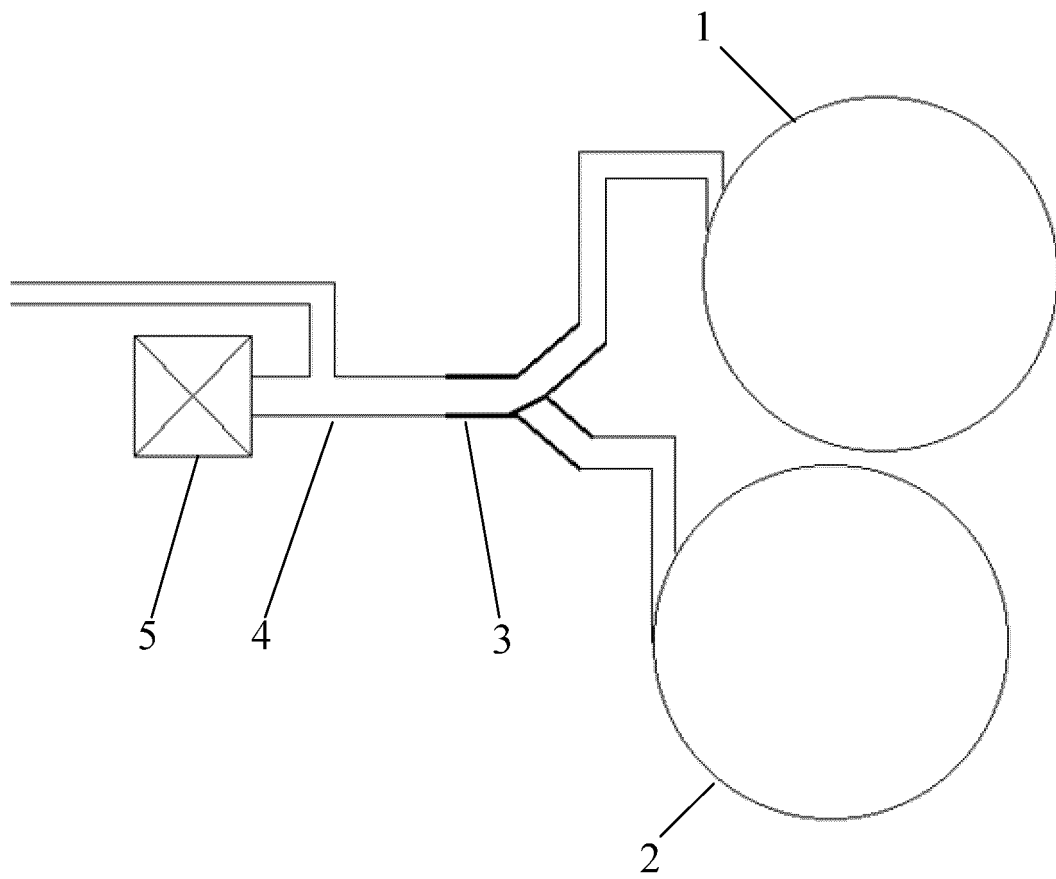


FIG.1

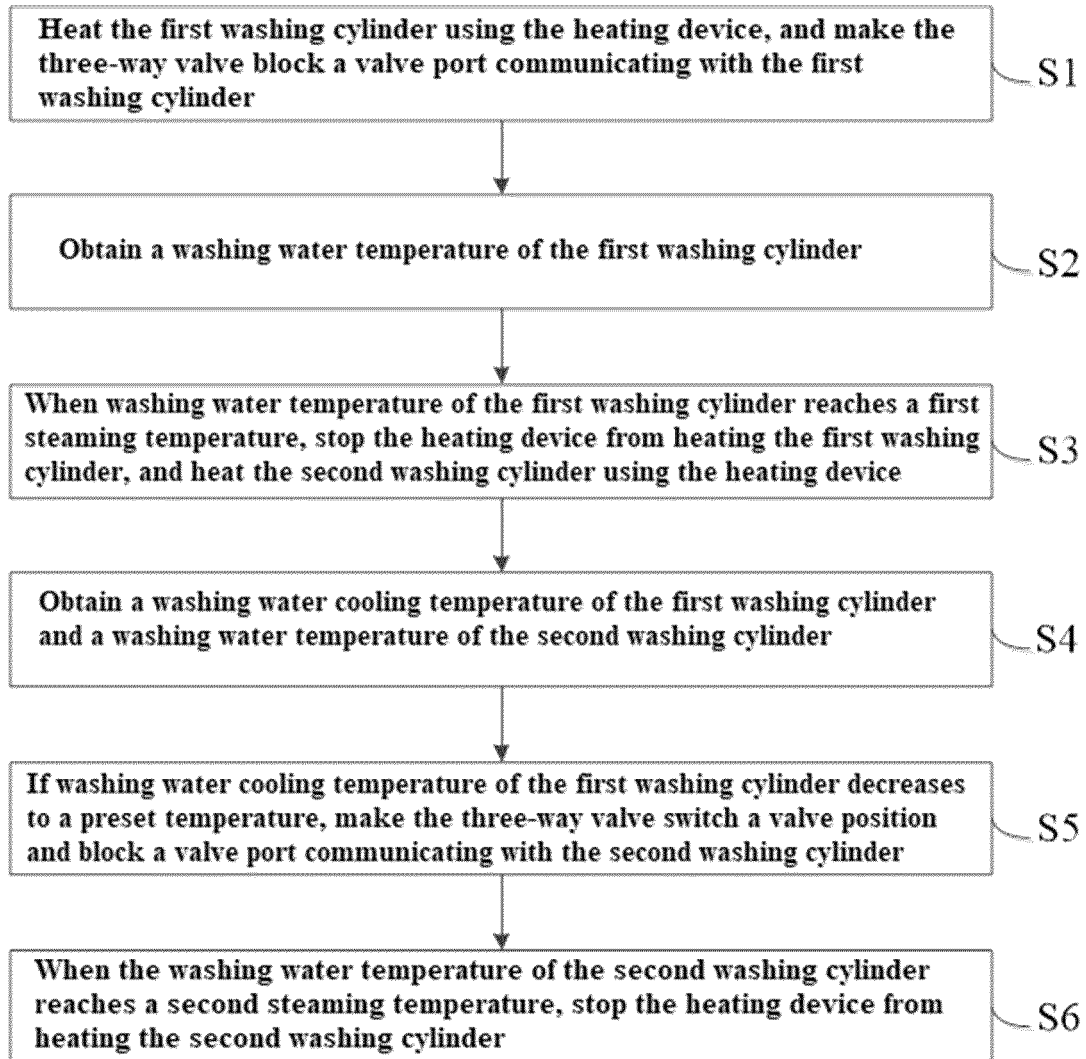


FIG.2

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2021/134685

5	A. CLASSIFICATION OF SUBJECT MATTER D06F 33/32(2020.01)i; D06F 34/04(2020.01)i; D06F 103/16(2020.01)n; D06F 105/28(2020.01)n According to International Patent Classification (IPC) or to both national classification and IPC																							
10	B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) D06F Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched																							
15	Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CNABS; CNTXT; CNKI; VEN; WOTXT; USTXT; EPTXT: 双筒, 多筒, 加热, 蒸煮, 高温, 三通阀, 温度, 切换, 转换, binocular, wash, heat, steam, temperature, hot, three, valve, switch, trans+																							
20	C. DOCUMENTS CONSIDERED TO BE RELEVANT <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>CN 105734893 A (QINGDAO HAIER DRUM WASHING MACHINE CO., LTD.) 06 July 2016 (2016-07-06) description, paragraphs [0046]-[0048], figure 1</td> <td>1-10</td> </tr> <tr> <td>A</td> <td>CN 101781839 A (SAMSUNG ELECTRONICS CO., LTD.) 21 July 2010 (2010-07-21) entire document</td> <td>1-10</td> </tr> <tr> <td>A</td> <td>CN 111534968 A (SHENYANG LIANGLANTE INTELLIGENT TECHNOLOGY CO., LTD.) 14 August 2020 (2020-08-14) entire document</td> <td>1-10</td> </tr> <tr> <td>A</td> <td>CN 109537238 A (CIXI SHUNDA INDUSTRIAL CO., LTD.) 29 March 2019 (2019-03-29) entire document</td> <td>1-10</td> </tr> <tr> <td>A</td> <td>KR 20050113956 A (LG ELECTRONICS INC.) 05 December 2005 (2005-12-05) entire document</td> <td>1-10</td> </tr> <tr> <td>A</td> <td>JP 2005130956 A (SHARP K. K.) 26 May 2005 (2005-05-26) entire document</td> <td>1-10</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	A	CN 105734893 A (QINGDAO HAIER DRUM WASHING MACHINE CO., LTD.) 06 July 2016 (2016-07-06) description, paragraphs [0046]-[0048], figure 1	1-10	A	CN 101781839 A (SAMSUNG ELECTRONICS CO., LTD.) 21 July 2010 (2010-07-21) entire document	1-10	A	CN 111534968 A (SHENYANG LIANGLANTE INTELLIGENT TECHNOLOGY CO., LTD.) 14 August 2020 (2020-08-14) entire document	1-10	A	CN 109537238 A (CIXI SHUNDA INDUSTRIAL CO., LTD.) 29 March 2019 (2019-03-29) entire document	1-10	A	KR 20050113956 A (LG ELECTRONICS INC.) 05 December 2005 (2005-12-05) entire document	1-10	A	JP 2005130956 A (SHARP K. K.) 26 May 2005 (2005-05-26) entire document	1-10
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35	☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.																							
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45	Date of the actual completion of the international search 08 January 2022																							
50	Date of mailing of the international search report 28 January 2022																							
55	Name and mailing address of the ISA/CN China National Intellectual Property Administration (ISA/CN) No. 6, Xitucheng Road, Jimenqiao, Haidian District, Beijing 100088, China Facsimile No. (86-10)62019451																							
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Information on patent family members

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