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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



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División de Nuevas Creaciones

141
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ENTRADA EN FASE NACIONAL

21. EXPEDIENTE No.

04-43958

54 **TITULO** PROCESO DE REMOCION DE MANCHAS DE ROPA EN MAQUINAS LAVADORAS DE
EJE VERTICAL

51 **CLASIFICACION INTERNACIONAL** D06F 35/00

71 **SOLICITANTE** MULTIBRAS S A ELECTRODOMESTICOS

DOMICILIO SAO PAULO - SP, BRASIL

74 **APODERADO** RAMIRO CASTRO DUQUE

22 **SANTAFE DE BOGOTA, D.C.**

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1 SOLICITUD DE			
☒ Patente de Invención		☐ Patente de Modelo de Utilidad	
☐ Capítulo I		☒ Capítulo II	
2 SOLICITANTE (71)	Nombre MULTIBRÁS S.A. ELETRODOMÉSTICOS Dirección Avenida das Nações Unidas 12.995 - 32 andar 04578-000 - São Paulo - SP Brasil Nacionalidad o Domicilio BRASIL Lugar de Constitución BRASIL Teléfono Fax. E-mail		IDENTIFICACION CC ☐ NIT ☐ CE ☐ Otro ☐ Cual _____ Número _____
3 REPRESENTANTE O APODERADO	Nombre RAMIRO CASTRO DUQUE Dirección Cra. 7 No 16-56 Piso 9 Teléfono 380-2200 Fax 380-2700 E-mail		IDENTIFICACION CC ☒ NIT ☐ CE ☐ Otro ☐ Cual _____ Numero <u>170 322 TP 1003</u>
4 INVENTOR (ES) (72)	Nombre Flávio Erasmo Bernardino Dirección Rua Célio Barbosa da Silva 415, 13564-060- São Carlos - SP Brasil Nacionalidad o Domicilio Brasil		
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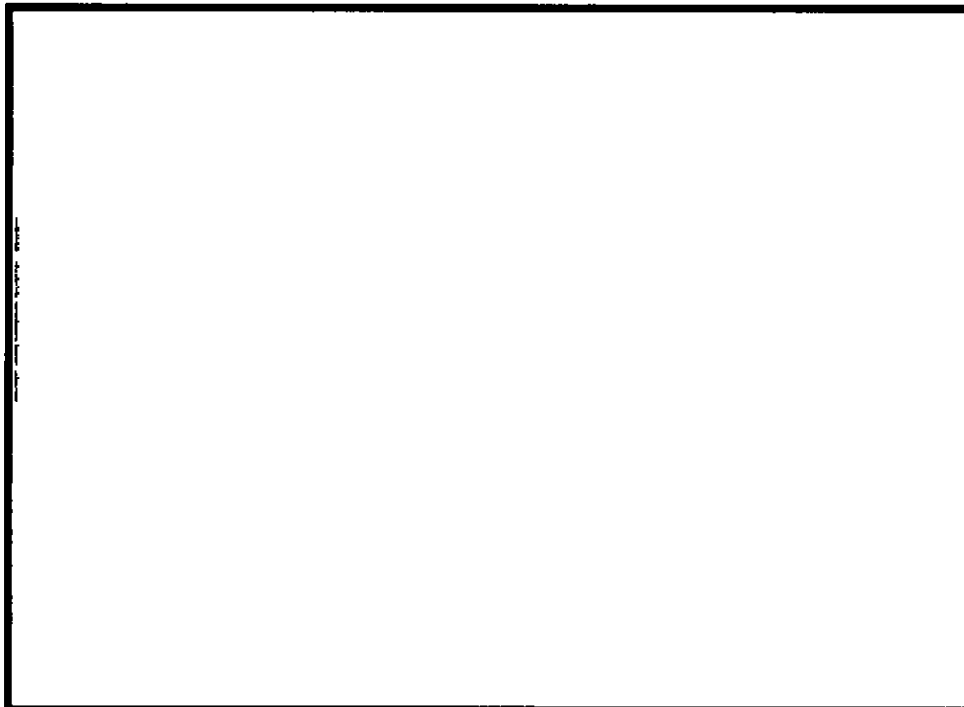
Instrucciones para el diligenciamiento del presente formulario ver reverso de esta página

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ANEXOS

- ☒ Comprobante de pago de la tasa de presentación de la solicitud \$422 000
- ☐ Documento que acredite la existencia y representación legal cuando el solicitante sea persona jurídica.
- ☒ Poderes, si fuere el caso. Protocolo No 16619
- ☐ Documento de cesión del inventor al solicitante o a su causante.
- ☐ Declaraciones
- ☒ Copia de la solicitud internacional (Resumen, descripción reivindicaciones, dibujos)
- ☒ Traducción de la solicitud internacional al castellano. (Resumen descripción reivindicaciones, dibujos)
- ☒ Copia del examen preliminar efectuado por la IPEA.
- ☒ Traducción del examen preliminar efectuado por la IPEA.
- ☐ De ser el caso, copia del contrato de acceso.
- ☐ De ser el caso, documento que acredite la licencia o autorización de uso de conocimientos tradicionales de las comunidades indígenas.
- ☐ De ser el caso, certificado de depósito del material biológico.
- ☐ Arte final 12x12.
- ☐ De ser el caso, información sobre otras solicitudes de patente o títulos obtenidos en el extranjero por el mismo titular o su causante, relacionadas parcial o totalmente con la invención de esta solicitud
- ☒ Otros Tarjeta de propietarios.

11 FIGURA CARACTERÍSTICA.



12 Solicito la concesión de la patente.

NOMBRE: RAMIRO CASTRO DUQUE

FIRMA:

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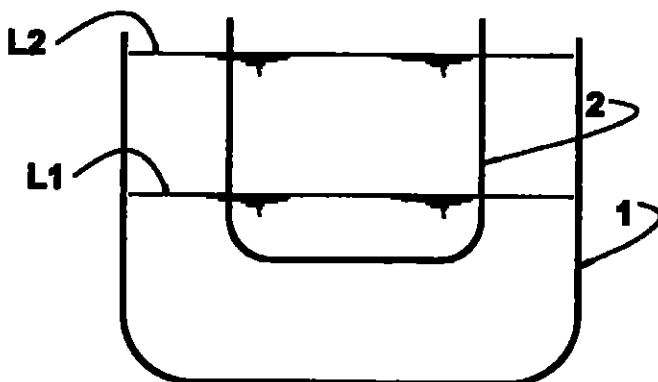
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR REMOVING SPOTS FROM CLOTHES IN LAUNDRY MACHINES WITH A VERTICAL SHAFT



(57) Abstract: A process for removing spots from clothes in laundry machines with a vertical shaft comprising the steps of: a- supplying a washing liquid to a load of soiled clothes inside a perforated basket (2) for containing clothes and provided internal to a tub (1) that is supplied with washing liquid until reaching a predetermined level, which is substantially lower than the lowest laundering level and compatible with the load of clothes; b- submitting this load of clothes to at least one agitation period during a certain first agitation time interval; c- maintaining said load of clothes at rest after a respective agitation period has elapsed and during a predetermined first rest time interval, sufficient for the temperature of the

washing liquid to reach a value necessary to allow the activation of at least one of the enzymatic and bleaching functions of the washing liquid; d- submitting the load of clothes to a subsequent agitation period during a certain second agitation time interval, sufficient to provide a certain cleaning of the load of clothes, but insufficient to cause a relevant drop in the temperature reached by the washing liquid.

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PROCESS FOR REMOVING SPOTS FROM CLOTHES IN LAUNDRY
MACHINES WITH A VERTICAL SHAFT

Field of the Invention

5 The present invention refers to a process for removing spots from clothes in laundry machines with a vertical shaft and which presents a perforated basket to contain the clothes to be laundered.

Background of the Invention

10 In conventional laundry machines with a vertical shaft and with a laundering system by agitation, the laundering cycle has a water heating system usually provided in a bottom portion of a tub, inside which is provided the perforated basket, said water heating system containing a resistance of about 1500W, which
15 actuates during the soaking step of the laundering cycle to increase the temperature to about 45°C.

Among the conventional constructions for laundry machines are those with the capacity to wash 5 kg of dry clothes and those with the capacity to wash 7 kg
20 of dry clothes. These machines generally present laundering programs, each for a determined intensity of laundering action, which can be selected according to the amount of soil in the clothes to be laundered. The dirtier the clothes the more intense should be the
25 laundering program to be selected.

These constructions further present a water level selector, which allows adjusting the quantity of water according to the quantity of clothes to be laundered. Although the known laundering programs lead to good
30 results in cleaning the common soil from the clothes, the quality of the spot removing operation is not the desired one.

The quality of the soil-spot removal from a load of clothes in a laundry machine depends on four factors:
35 the chemical action obtained as a function of the

characteristics of the detergent used; the mechanical action corresponding to the transfer of movement from the mechanical parts of the laundry machine to the load of clothes being laundered; the thermal action
5 related to the heating of the washing liquid and which is effected by the electrical resistance of the laundry machine; and the time action related to the duration of each laundering program.

Among these factors, the thermal action is the one
10 that allows improving the spot removal. However, the known constructions cannot increase the temperature of the washing water as a function of the aspects presented below.

The laundry machines with a vertical shaft require a
15 large quantity of water to effect the laundering of clothes. The high energy consumption and mainly the long time needed to heat this volume of water by means of the electrical resistance available in these machines make the use of temperatures above 45°C
20 impracticable.

On the other hand, the use of a more powerful resistance to reduce the heating time and increase the temperature of the volume of water requires a special electrical installation in residences, making this
25 solution unfeasible.

Objects of the Invention

Thus, it is an object of the present invention to provide a process for laundering clothes, which allows
30 an improved spot removal from the clothes to be laundered.

Another object of the present invention is to present a process as mentioned above, which allows, within the existing limitations of installation and energetic consumption, to obtain temperatures for laundering
35 clothes higher than those reached in the existing

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laundry machines of household use, without requiring to modify the capacity of the resistance presently used in the available laundry machines.

Summary of the Invention

- 5 These and other objects are achieved by a process for removing spots from clothes in laundry machines with a vertical shaft, of the type comprising a tub for containing a washing liquid in at least one laundering level, and a perforated basket for containing clothes
- 10 and provided internal to the tub, said process comprising the steps of: a- supplying a washing liquid to a load of soiled clothes contained inside the perforated basket until reaching a predetermined level that is substantially lower than the lowest laundering
- 15 level and compatible with the load of clothes; b- submitting the load of clothes immersed in the washing liquid to at least one agitation period during a certain first agitation time interval; c- maintaining the load of clothes immersed in the washing liquid at
- 20 rest after a respective agitation period has elapsed and during a predetermined first rest time interval sufficient for the temperature of the washing liquid to reach a value necessary to allow the activation of at least one of the enzymatic and bleaching functions
- 25 of the washing liquid; d- submitting the load of clothes immersed in the washing liquid to a subsequent agitation period during a certain second agitation time interval, which is sufficient to provide a certain cleaning of the load of clothes, but
- 30 insufficient to cause a relevant drop in the temperature reached by the washing liquid; and e- extracting the washing liquid from the load of clothes.

Brief Description of the Drawings

- 35 The invention will be described below, with reference

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to the enclosed drawings, in which:

Fig. 1 illustrates, schematically and in a vertical longitudinal sectional view, a laundry machine with a vertical shaft, presenting the predetermined level (L1) of washing liquid for the process of the present invention, and a minimum level (L2) of washing liquid for a conventional laundering;

Fig. 2 illustrates, graphically, the temperature versus time relation of different steps in a form of carrying out the process of the present invention; and

Fig. 3 illustrates, graphically, the temperature versus time relation of different steps of another form of carrying out the process of the present invention.

15 Description of the Illustrated Embodiment

The present invention will be described in relation to a laundry machine of the type illustrated in fig. 1 and which comprises a tub 1 for containing washing liquid, said tub 1 being tubular and cylindrical and provided inside a non-illustrated cabinet, inside which is concentrically mounted a perforated basket 2, for containing clothes to be laundered, of the tubular cylindrical type with a vertical shaft and which is in selective fluid communication with a non-illustrated water supply source.

According to the present invention, the water supply source feeds water to the tub 1 in a predetermined level L1, which is calculated to be compatible with a load of soiled clothes corresponding to about 30% the nominal load of clothes which requires, for example, the lowest laundering level L2 defined for that laundry machine. The predetermined level L1 is calculated so that the whole load of soiled clothes remains substantially immersed in the washing liquid.

35 The present invention provides a spot removing process

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comprising a first step, in which there is supplied a washing liquid, generally comprising water and a laundering detergent, to a load of soiled clothes contained within the perforated basket 2, until
5 reaching the predetermined level L1, which is substantially lower than the lowest laundering level L2.

According to the present invention, once the predetermined level L1 has been reached, there is
10 started at least one agitation period of the load of soiled clothes immersed in the washing liquid, during which period the clothes are agitated without water heating, for example maintaining said water at room temperature, and during a first agitation time
15 interval sufficient for contacting the entire load of clothes with the washing liquid.

In a form of carrying out the present invention (Fig. 2), this first agitation time interval is of about 7 minutes.

20 Upon completion of said agitation period, the process of the present invention foresees a subsequent step, in which the load of soiled clothes immersed in the washing liquid is submitted to a respective resting condition, while a heating system for the washing
25 liquid of the present laundry machine is activated.

The resting condition of this step is maintained during a predetermined first rest time interval, in order that the temperature of the washing liquid reaches a value necessary to allow the activation of
30 at least one of the enzymatic and bleaching functions of the washing liquid.

In a form of carrying out the present invention, the duration of this resting condition time interval is calculated so that the temperature reaches about 40°C-
35 45°C, preferably 45°C, which temperature generally

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activates the enzymatic function of the known detergents that form the washing liquid together with the water supplied to the tub. Said time interval is of the order of 20 minutes.

- 5 Upon completion of this resting step of the load of clothes, the latter is submitted to a subsequent agitation period during a second agitation time interval, which is calculated to be sufficient to provide a certain cleaning of the load of clothes, but
- 10 insufficient to cause a relevant drop in the temperature reached by the washing liquid. During the second agitation time interval, the maintained temperature assures maintenance of the activation of the washing liquid functions, as previously discussed.
- 15 This second time interval is, for example, equal to the time interval of the first agitation time interval and calculated to be about 7 minutes.

- According to the present invention, after a preceding agitation period, the washing liquid is submitted to a
- 20 subsequent resting step during a predetermined second rest time interval, so that the heating system, operating since the previous rest time, increases the temperature of the washing liquid to a value necessary to activate at least the other of said washing liquid
- 25 functions, such as the bleaching function thereof, which has not been achieved with the temperature reached at the previous rest time interval.

- In a form of carrying out the present invention, the duration of this subsequent resting condition time
- 30 interval is calculated so that the temperature reaches about 60°C-65°C, preferably 65°C, which temperature is desirable to generally activate the bleaching function of the known detergents that form the washing liquid jointly with the water supplied to the tub 1. The
- 35 duration of said time interval is, for example, that

of the previous resting condition i.e., of the order of 20 minutes.

In this embodiment, after the time interval of this last resting period has elapsed, the present process
5 comprises a respective subsequent agitation period, which is calculated so that the reached temperature remains substantially unaltered, producing in this period the bleaching effect. This subsequent agitation period occurs during a respective third time interval
10 sufficient to provide a certain cleaning of the load of clothes, but insufficient to cause a relevant drop in the temperature reached by the washing liquid.

According to the present invention, the third time interval is, for example, substantially equal to that
15 of the previous agitation periods i.e., of about 7 minutes.

With the process for removing spots from clothes in a laundry machine of the present invention it is possible to reach higher laundering temperatures in
20 the laundry machines with a vertical shaft, without modifying the heating system thereof i.e., with the same resistance conventionally used in these systems.

In an option of carrying out the present invention, after the last agitation period with the washing
25 liquid being heated at about 65°C, the present process has the final step of extracting the washing liquid from the load of clothes, for example by draining or spinning, as described below.

In the constructions in which the spot removing
30 process is a laundering process independent of the conventional laundering process of the laundry machine, after the last agitation period, for example after the second agitation period, said process foresees the step of extracting the laundering liquid
35 with the subsequent rinsing and spinning operations,

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thus finishing said spot removing process.

In the constructions in which the spot removing process is a laundering step of a laundry machine laundering program, after the last agitation period of said spot removing step, there is foreseen an additional step, in which water is re-supplied to the tub, until reaching a conventional laundering level, after which the conventional laundering operation of the selected program is processed.

- 5
- 10 In another possible option of carrying out the invention, as illustrated in Fig. 3, upon completion of the agitation period with the washing liquid at the room temperature, a resting period starts, for example of about 40 minutes, which is sufficient for the
- 15 washing liquid, in which the load of soiled clothes is immersed, to reach a temperature of about 65°C. At the end of the single resting-heating period, the load of clothes and the washing liquid are submitted to an agitation period under heat, as already described in
- 20 relation to the procedure with reference to Fig. 2.

CLAIMS

1. A process for removing spots from clothes in laundry machines with a vertical shaft, comprising a tub (1) for containing a washing liquid in at least one laundering level, and a perforated basket (2) for containing clothes and provided internal to the tub (1), said process characterized in that it comprises the steps of: a- supplying a washing liquid to a load of soiled clothes contained inside the perforated basket (2) until reaching a predetermined level that is substantially lower than the lowest laundering level and compatible with the load of clothes; b- submitting the load of clothes immersed in the washing liquid to at least one agitation period during a certain first agitation time interval; c- maintaining the load of clothes immersed in the washing liquid at rest after a respective agitation period has elapsed and during a predetermined first rest time interval sufficient for the temperature of the washing liquid to reach a value necessary to allow activation of at least one of the enzymatic and bleaching functions of the washing liquid; d- submitting the load of clothes immersed in the washing liquid to a subsequent agitation period during a certain second agitation time interval, which is sufficient to provide a certain cleaning of the load of clothes, but insufficient to cause a relevant drop in the temperature reached by the washing liquid; and e- extracting the washing liquid from the load of clothes.

2. The process as set forth in claim 1, characterized in that it includes, after step "d", the additional steps of: - maintaining the load of clothes immersed in the washing liquid after a preceding agitation period has elapsed and during a predetermined second

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- rest time interval, sufficient for the temperature of the washing liquid to reach a value necessary to allow activation of the other of said enzymatic and bleaching functions of the washing liquid not obtained with the temperature reached in the previous rest time interval; - submitting the load of clothes immersed in the washing liquid to another respective and subsequent agitation period during a certain third agitation time interval, sufficient to provide a certain cleaning of the load of clothes, but insufficient to cause a relevant drop in the temperature reached by the washing liquid.
3. The process as set forth in any one of claims 1 and 2, characterized in that it includes, after step "e", the steps of rinsing the load of clothes and spinning the washing liquid.
4. The process as set forth in claim 3, characterized in that it includes, after step "e", and prior to the rinsing and spinning steps, the steps of: - supplying a determined quantity of water to the load of clothes in the perforated basket, until reaching a previously selected laundering level; and - submitting the load of clothes to the steps of a laundering process.
5. The process as set forth in claim 1, characterized in that the temperature in the first rest time interval reaches about 40°C-45°C.
6. The process as set forth in claim 2, characterized in that the temperature in the second rest time interval reaches about 55°C-65°C.
7. The process as set forth in claim 1, characterized in that the first agitation period is carried out at room temperature.
8. The process as set forth in claim 1, characterized in that the predetermined level is calculated for a load of soiled clothes of about 30% the nominal load

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of the lowest laundering level.

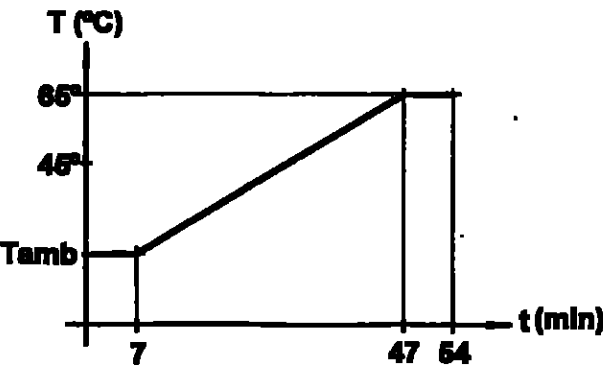
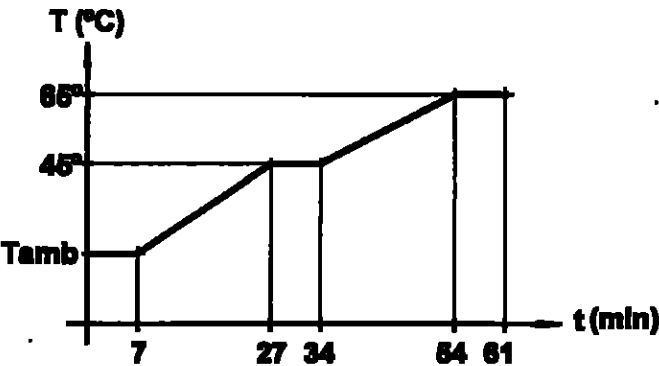
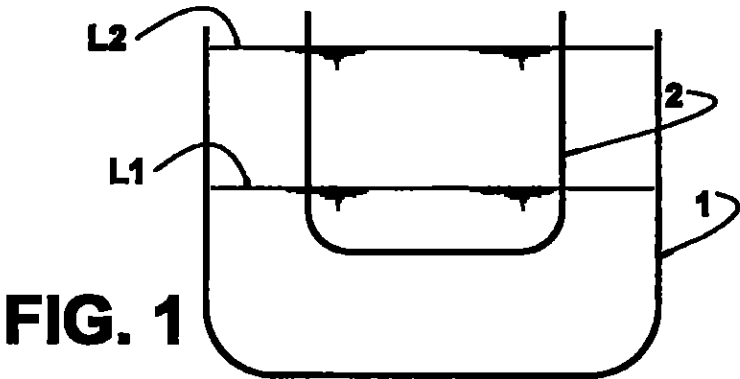
9. The process as set forth in claim 8, characterized in that the agitation periods present the same duration.

5 10. The process as set forth in claim 9, characterized in that the agitation periods are of the order of 7 minutes.

11. The process as set forth in claim 9, characterized in that the resting periods are equal.

10 12. The process as set forth in claim 11, characterized in that the resting periods are of the order of 20 minutes.

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- (72) Inventores; y
- (75) Inventores/Solicitantes (Solo para US): BERNARDINO, Flavio, Ernemo [BR/BR]; Rua Cello Barbosa da Silva, 415, 13564 Sao Carlos -SP (BR) Para los códigos de dos letras y otras abreviaturas, referirse a las "Notas de Guía sobre Códigos y Abreviaturas" que aparece al comienzo de cada emisión regular de la Gaceta del PCT.
- (74) Apoderado: ARNAUD, Antonio, M., P y colaboradores; Rua José Bonifacio, 93-9º piso, 0.003-901, Sao Paulo - SP (BR)

(64) Título: PROCESO PARA REMOVER MANCHAS DE LA ROPA EN MAQUINAS LAVADORAS CON UN EJE VERTICAL

(57) Resumen: Un proceso para remover manchas de la ropa en una máquina lavadora con un eje vertical que comprende los pasos de. a - proporcionar un líquido de lavado a una carga de ropa sucia contenida dentro de una canasta perforada (2) para contener ropa y proporcionada al interior de un cubo (1) al que se le suministra líquido de lavado hasta que se alcanza un nivel predeterminado, el cual es sustancialmente inferior que el nivel de lavado más bajo y compatible con la carga de ropa; b - someter esta carga de ropa a al menos un periodo de agitación durante un cierto primer intervalo de tiempo de agitación; c - mantener dicha carga de ropa en reposo después que ha transcurrido un periodo de agitación respectivo y durante un primer intervalo de tiempo de reposos predeterminado, suficiente para que la temperatura del líquido de lavado alcance un valor necesario para permitir la activación de al menos una de las funciones enzimática y de blanqueado del líquido de lavado; d - someter la carga de ropa a un periodo de agitación subsiguiente durante un cierto segundo intervalo de tiempo de agitación, suficiente para proporcionar una cierta limpieza de la carga de ropa, pero insuficiente para ocasionar una caída relevante en la temperatura alcanzada por el líquido de lavado.

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PROCESO DE REMOCIÓN DE MANCHAS DE ROPA EN MAQUINAS LAVADORAS
DE EJE VERTICAL

Campo de la Invención

La presente invención se refiere a un proceso de remoción de manchas de ropas en lavarropas de eje vertical y que presentan un tambor perforado para contener la ropa a ser lavada.

Técnica Previa

En los lavarropas convencionales de eje vertical y sistema de lavado por agitación, el ciclo de lavado posee un sistema de calentamiento de agua, generalmente localizado en una porción de fondo de un tanque en el interior del cual está dispuesto el tambor perforado, y que contiene una resistencia de cerca de 1500 W, la cual actúa durante la etapa de remojo del ciclo de lavado, para elevar la temperatura hasta aproximadamente 45°C.

Entre las construcciones convencionales de máquinas lavarropas están las que tienen capacidad para lavar 5 kg de ropa seca y las que tienen capacidad para lavar 7 kg de ropa seca. Estas máquinas presentan generalmente programas de lavado, que posibilita cada uno una determinada intensidad de acción de lavado, los cuales pueden ser seleccionados de acuerdo con el nivel de suciedad de la ropa a ser lavada. Cuanto más sucia está la ropa, de mayor intensidad deberá ser el programa de lavado elegido.

Estas construcciones presentan también un selector de nivel de agua que permite ajustar la cantidad de agua, de acuerdo con la cantidad de ropa a ser lavada.

Aunque los programas de lavado conocidos permiten un buen resultado en la limpieza de la suciedad común de las ropas, la calidad de la operación de remoción de manchas no es la deseable.

La calidad de remoción de suciedad y de manchas de una carga de ropa en un lavarropas depende de cuatro factores: acción química, obtenida en función de las características del detergente utilizado; acción mecánica, correspondiente a la transferencia de movimiento de las partes mecánicas del lavarropas hacia la carga de ropa que está siendo lavada; acción térmica, relacionada con el calentamiento del líquido de lavado, realizado por la resistencia eléctrica del lavarropas; y acción del tiempo, relacionada con la duración de cada programa de lavado.

Entre estos factores, es la acción térmica la que permite una mejoría en la remoción de manchas. Mientras tanto, las construcciones conocidas no pueden aumentar la temperatura del agua de lavado en función de dos aspectos que se detallan a continuación.

Los lavarropas que tienen un eje vertical requieren una gran cantidad de agua para efectuar el lavado de la ropa. El alto consumo de energía y, principalmente, el tiempo prolongado para calentar este volumen de agua, a partir de la

resistencia eléctrica disponible en esas máquinas, vuelven impracticable la utilización de temperaturas superiores a 45°C. Por otro lado, la utilización de una resistencia de mayor potencia, para disminuir el tiempo de calentamiento y aumentar la temperatura del volumen de agua, requiere una instalación eléctrica especial en las casas, volviendo inviable a esta solución.

Finalidades de la invención

En consecuencia, una finalidad de la presente invención es proveer un proceso de lavado de ropa que permita una mejor remoción de las manchas de las ropas a ser lavadas.

Otro objetivo de la presente invención es presentar un proceso tal como el mencionado y que permita, dentro de las limitaciones de instalación y de consumo energético existentes, la obtención de temperaturas de lavado de ropa más altas que las alcanzadas en los lavarropas de uso doméstico existentes, sin exigir la modificación de potencia de la resistencia ya utilizada en las máquinas de lavar disponibles.

Descripción Resumida de la Invención

Esta y otras finalidades son alcanzadas por medio de un proceso de remoción de manchas de ropa en máquinas lavarropas de eje vertical del tipo que comprende un tanque para contener líquido de lavado en al menos un nivel de lavado y un tambor perforado de contención de ropa e interno al tanque, comprendiendo dicho proceso las etapas de: a-

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alimentar un líquido de lavado a una carga de ropa, manchada, contenida en el interior del tambor perforado, hasta alcanzar un nivel predeterminado, sustancialmente inferior al menor nivel de lavado y compatible con la carga de ropa; b- someter la carga de ropa sumergida en el líquido de lavado a por lo menos un período de agitación por un cierto primer intervalo de tiempo de agitación; c- mantener la carga de ropa sumergida en el líquido de lavado en reposo después de transcurrido un respectivo período de agitación y durante un primer intervalo de tiempo de reposo predeterminado, suficiente para que la temperatura del líquido de lavado alcance un valor necesario para posibilitar la activación de al menos una de las funciones enzimática y blanqueadora del líquido de lavado; d- someter la carga de ropa sumergida en el líquido de lavado a otro período de agitación por un cierto segundo intervalo de tiempo de agitación suficiente para proveer una cierta limpieza de la carga de ropa, pero insuficiente para provocar una caída relevante en la temperatura alcanzada por el líquido de lavado; y e- extraer el líquido de lavado de la carga de ropa.

Breve Descripción de los Dibujos

La invención será descrita con referencia a los dibujos acompañantes, en los cuales:

La figura 1 representa, esquemáticamente y en corte longitudinal vertical, una máquina lavarropas, de eje vertical, que presenta el nivel predeterminado (L1) de

líquido de lavado del proceso de la presente invención y un nivel mínimo (L2) de llenado de líquido de lavado para el lavado convencional;

La figura 2 representa, gráficamente, una relación de temperatura y tiempo de duración de diferentes etapas de una forma de realización del proceso de la presente invención; y

La figura 3 representa, gráficamente, una relación de temperatura y tiempo de duración de diferentes etapas de otra forma de realización del proceso de la presente invención.

Descripción de la realización ilustrada

La presente invención será descrita para un lavarropas del tipo ilustrado en la figura 1 y que comprende un tanque 1, para contener el líquido de lavado, siendo dicho tanque 1 tubular y cilíndrico, provisto en el interior de un gabinete no ilustrado y en el interior del cual está montado concéntricamente un tambor perforado 2, para contener la ropa a ser lavada, del tipo tubular, cilíndrico, de eje vertical y en comunicación fluida selectiva con una fuente de suministro de agua no ilustrada.

De acuerdo con la presente invención, la fuente de suministro de agua alimenta agua al tanque 1 en un nivel predeterminado L1, calculado de modo de ser compatible con una carga de ropa manchada que corresponde a aproximadamente 30% de la carga nominal de ropa que exigen, por ejemplo, el menor nivel de lavado L2, definido para esta máquina lavarropas. El nivel predeterminado L1 es calculado de modo

que toda la carga de ropa manchada quede sustancialmente sumergida en el líquido de lavado.

La presente invención provee un proceso de remoción de manchas que comprende una primera etapa en la cual se alimenta un líquido de lavado, que comprende generalmente agua y detergente de lavado, a una carga de ropa manchada, contenida en el interior del tambor perforado 2, hasta que se alcanza el nivel predeterminado L1, el cual es sustancialmente inferior al menor nivel de lavado L2.

De acuerdo con la presente invención, una vez logrado el nivel predeterminado L1, se inicia al menos un período de agitación de la carga de ropa manchada sumergida en el líquido de lavado, durante el cual la ropa es agitada sin calentamiento del agua, por ejemplo, manteniendo esta a temperatura ambiente y durante un primer intervalo de tiempo de agitación suficiente para que toda la carga de ropa sea colocada en contacto con el líquido de lavado. En una forma de realización de la presente invención, (figura 2), este primer intervalo de tiempo de agitación es de aproximadamente 7 minutos.

Después de terminado dicho período de agitación, el proceso descrito prevé una etapa subsiguiente en la cual la carga de ropa manchada sumergida en el líquido de lavado es llevada a una respectiva condición de reposo, en cuanto es activado un sistema de calentamiento del líquido de lavado de la máquina lavadora en cuestión.

La condición de reposo de esta etapa es mantenida durante un primer intervalo de tiempo de reposo predeterminado, para que la temperatura del líquido de lavado alcance un valor necesario para posibilitar la activación de al menos una de las funciones enzimática y blanqueadora del líquido de lavado.

En una forma de realización de la presente invención, el intervalo de tiempo de duración de esta condición de reposo se calcula para que la temperatura llegue a aproximadamente 40-45°C, preferiblemente 45°C, temperatura esta que activa, generalmente, un lavado enzimático de los detergentes conocidos y que compone el líquido de lavado conjuntamente con el agua alimentada al tanque. Dicho intervalo de tiempo es del orden de los 20 minutos.

Después de terminada esta etapa de reposo de la carga de ropa, esta es sometida a un período subsiguiente de agitación, por un segundo intervalo de tiempo de agitación calculado como para ser suficiente para proveer una cierta limpieza de la carga de ropa, pero insuficiente para provocar una caída relevante en la temperatura alcanzada por el líquido de lavado. Durante el segundo intervalo de tiempo de agitación la temperatura mantenida garantiza el mantenimiento de la activación de las funciones del líquido de lavado según lo comentado anteriormente. Este segundo intervalo de tiempo es, por ejemplo, igual al intervalo de tiempo del primer

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intervalo de tiempo de agitación y se calcula en aproximadamente 7 minutos.

De acuerdo con la presente invención, después de un período de agitación previo, el líquido de lavado es sometido a una etapa subsiguiente de reposo por un segundo intervalo de tiempo de reposo predeterminado y de modo que el sistema de calentamiento, que opera desde la etapa anterior de reposo, eleve la temperatura del líquido de lavado a un valor necesario para activar al menos una de las otras funciones del líquido de lavado, tal como la función blanqueadora de este, no lograda con la temperatura alcanzada en el intervalo anterior de tiempo de reposo.

En una forma de realización de la presente invención, el intervalo de tiempo de duración de esta condición de reposo subsiguiente se calcula para que la temperatura llegue a aproximadamente 60-65°C, preferiblemente 65°C, que es la temperatura deseable para activar, generalmente, la función blanqueadora de los detergentes conocidos y que componente el líquido de lavado conjuntamente con el agua alimentada al tanque 1. Dicho intervalo de tiempo es, por ejemplo, el de la duración de la condición de reposo previo, o sea, del orden de los 20 minutos.

En esta configuración, después de transcurrido el intervalo de tiempo de este último período de reposo, el proceso en cuestión comprende un respectivo período subsiguiente de agitación calculado de modo que la

temperatura alcanzada permanezca sustancialmente sin cambios, produciendo en este período un lavado blanqueador. Este período subsiguiente de agitación tiene lugar durante un respectivo tercer intervalo de tiempo suficiente para proveer una cierta limpieza de la carga de ropa, pero insuficiente para provocar una caída relevante en la temperatura alcanzada por el líquido de lavado.

De acuerdo con la presente invención, el tercer intervalo de tiempo es, por ejemplo, sustancialmente igual al de los períodos de agitación anteriores, o sea, de aproximadamente 7 minutos.

Con el proceso de remoción de manchas durante el lavado de ropa de la presente invención es posible llegar a temperaturas más elevadas de lavado en máquinas lavadoras de eje vertical, sin modificar el sistema de calentamiento de las mismas, o sea, con la misma resistencia utilizada convencionalmente en estos sistemas.

En una realización alternativa de la presente invención, después del último período de agitación con el líquido de lavado calentado a aproximadamente 65°C, el proceso en cuestión comprende la etapa final de extraer el líquido de lavado de la carga de ropa, por ejemplo por drenaje o centrifugación, según lo expuesto a continuación.

En las construcciones en las cuales el proceso de remoción de manchas es un proceso de lavado independiente del proceso de lavado convencional del lavarropas, después de un

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período de agitación final, por ejemplo, después del segundo período de agitación, dicho proceso prevé una etapa de extracción de líquido de lavado y centrifugado, terminando dicho proceso de remoción de manchas.

En las construcciones en las cuales el proceso de remoción de manchas es una etapa de lavado de un programa de lavado del lavarropas, después del último período de agitación de dicha etapa de remoción de manchas se prevé una etapa adicional en la cual hay una realimentación de agua al tanque hasta lograrse un nivel de lavado convencional, después que se procesa el lavado convencional del programa seleccionado.

En otra realización posible de la invención, representada en la figura 3, después de terminado el período de agitación con el líquido de lavado en la temperatura ambiente, se inicia un período de reposo, por ejemplo de aproximadamente 40 minutos, suficiente para que el líquido de lavado, en el cual la carga de ropa está sumergida, alcance una temperatura de aproximadamente 65°C. Una vez terminado el período único de reposo o calentamiento, la carga de ropa y líquido de lavado es sometida a la etapa de agitación en caliente, tal como se ha descrito en relación al procedimiento descrito con referencia a la figura 2.

REIVINDICACIONES

1. Proceso de remoción, de manchas de ropa en máquinas lavadoras de eje vertical constituidas por un tanque (1) que contiene líquido de lavado en al menos un nivel de lavado y un tambor perforado (2) para contener la ropa e interno al tanque (1), caracterizado por comprender las etapas de:

a- alimentar un líquido de lavado a una carga de ropa, manchada, contenida en el interior del tambor perforado (2), hasta alcanzar un nivel predeterminado, sustancialmente inferior al menor nivel de lavado y compatible con la carga de ropa;

b- someter la carga de ropa sumergida en el líquido de lavado a por lo menos un período de agitación por un cierto primer intervalo de tiempo de agitación;

c- mantener la carga de ropa sumergida en el líquido de lavado en reposo después de transcurrido un respectivo período de agitación y durante un primer intervalo de tiempo de reposo predeterminado, suficiente para que la temperatura del líquido de lavado alcance un valor necesario para posibilitar la activación de al menos una de las funciones enzimática y blanqueadora del líquido de lavado;

d- someter la carga de ropa sumergida en el líquido de lavado a otro período de agitación por un cierto segundo intervalo de tiempo de agitación suficiente para proveer una cierta limpieza de la carga de ropa, pero insuficiente para provocar

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una caída relevante en la temperatura alcanzada por el líquido de lavado; y

e- extraer el líquido de lavado de la carga de ropa.

2. Un proceso de acuerdo con la reivindicación 1, caracterizado por incluir, después de la etapa "d", las etapas adicionales de:

- mantener la carga de ropa sumergida en el líquido de lavado en reposo después de transcurrido un período de agitación previo y durante un segundo intervalo de tiempo de reposo predeterminado, suficiente para que la temperatura del líquido de lavado alcance un valor necesario para posibilitar la activación de otra de las funciones enzimática y blanqueadora del líquido de lavado no lograda con la temperatura alcanzada en el intervalo de tiempo de reposo anterior; y

- someter la carga de ropa sumergida en el líquido de lavado a otro respectivo y subsiguiente período de agitación por un cierto tercer intervalo de tiempo de agitación, suficiente para proveer una cierta limpieza de la carga de ropa, pero insuficiente para provocar una caída relevante en la temperatura alcanzada por el líquido de lavado.

3. Un proceso de acuerdo con cualquiera de las reivindicaciones 1 y 2, caracterizado por que incluye, después de la etapa "e", las etapas de enjuagar la carga de ropa y de centrifugar el líquido de lavado.

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4. Un proceso de acuerdo con la reivindicación 3, caracterizado por incluir, después de la etapa "e" y anteriormente a las etapas de enjuague y de centrifugado, las etapas de:

- alimentar una determinada cantidad de agua a la carga de ropa en el tambor perforado, hasta lograr un nivel de lavado seleccionado previamente; y
- someter la carga de ropa a las etapas de un proceso de lavado.

5. Un proceso de acuerdo con la reivindicación 1, caracterizado porque la temperatura en el primer intervalo de tiempo de reposo está comprendida aproximadamente entre 40 y 45°C.

6. Un proceso de acuerdo con la reivindicación 2, caracterizado porque la temperatura en el segundo intervalo de tiempo de reposo llega a aproximadamente 55-65°C.

7. Un proceso de acuerdo con la reivindicación 1, caracterizado porque el primer período de agitación se realiza a temperatura ambiente.

8. Un proceso de acuerdo con la reivindicación 1, caracterizado porque el nivel predeterminado se calcula para una carga de ropa manchada de aproximadamente el 30% de la carga nominal del nivel menor de lavado.

9. Un proceso de acuerdo con la reivindicación 8, caracterizado porque los períodos de agitación tienen la misma duración.

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10. Un proceso de acuerdo con la reivindicación 9, caracterizado porque los períodos de agitación son del orden de los 7 minutos.

11. Un proceso de acuerdo con la reivindicación 9, caracterizado porque los períodos de reposo son iguales.

12. Un proceso de acuerdo con la reivindicación 11, caracterizado porque los períodos de reposo son del orden de los 20 minutos.

BUENOS AIRES, NOVIEMBRE DE 2002

p.p. MULTIBRÁS S.A. ELECTRODOMÉSTICOS

Iván Alfredo Poli
Agente N° 563

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RESUMEN

PROCESO DE REMOCIÓN DE MANCHAS DE ROPA EN MÁQUINAS LAVADORAS DE EJE VERTICAL, que comprende las etapas de:

a- alimentar un líquido de lavado a una carga de ropa, manchada, contenida en el interior del tambor perforado (2) que contiene la ropa y que es interior a un tanque (1) que contiene el líquido de lavado, hasta alcanzar un nivel predeterminado, sustancialmente inferior al menor nivel de lavado y compatible con la carga de ropa; b- someter la carga de ropa sumergida en el líquido de lavado a por lo menos un período de agitación por un cierto primer intervalo de tiempo de agitación; c- mantener dicha carga de ropa en reposo después de transcurrido un respectivo período de agitación y durante un primer intervalo de tiempo de reposo predeterminado, suficiente para que la temperatura del líquido de lavado alcance un valor necesario para posibilitar la activación de al menos una de las funciones enzimática y blanqueadora del líquido de lavado; d- someter la carga de ropa a otro período de agitación por un cierto segundo intervalo de tiempo de agitación suficiente para proveer una cierta limpieza de la carga de ropa, pero insuficiente para provocar una caída relevante en la temperatura alcanzada por el líquido de lavado.

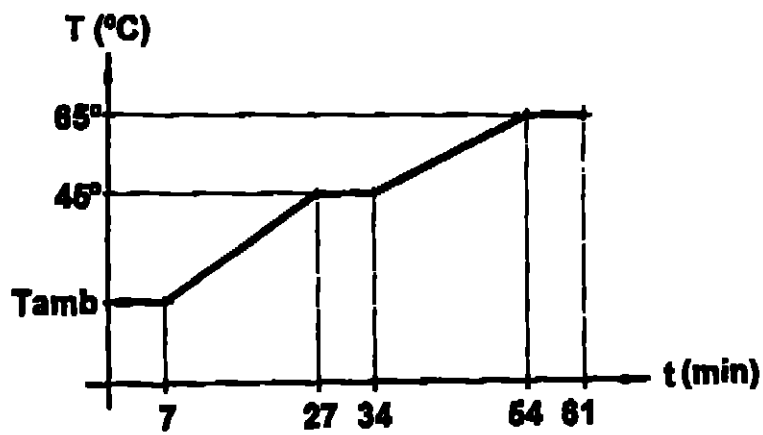
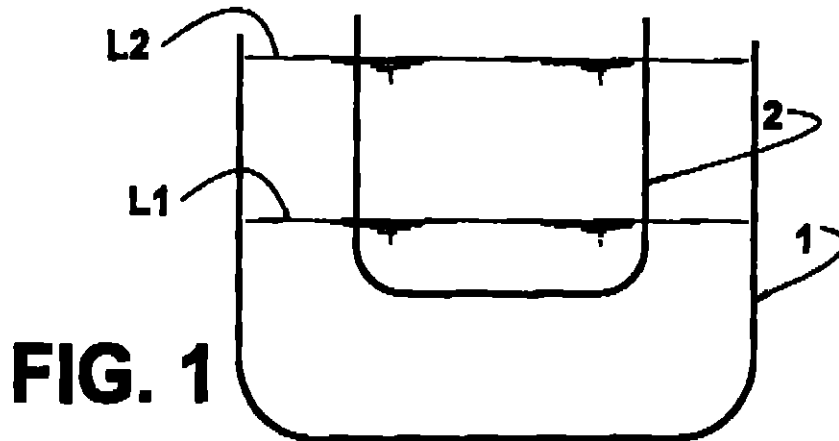


FIG. 2

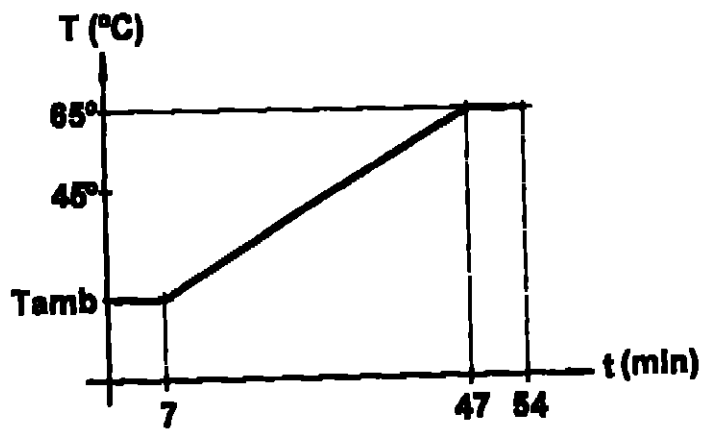


FIG. 3

PATENT COOPERATION TREATY

28 NOV 2003

AS: 94081

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

34

To:

ARNAUD, Antonio M P et al.
Rua Jose' Bonifacio, 93-
9th floor
01003-901 Sao Paulo- SP
BRESIL

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Rule 71.1)

Date of mailing
(day/month/year) 20.11.2003

Applicant's or agent's file reference
MULTI-005

IMPORTANT NOTIFICATION

International application No.
PCT/BR02/00150

International filing date (day/month/year)
08.11.2002

Priority date (day/month/year)
13.11.2001

Applicant
MULTIBRAS S.A. ELETRODOMESTICOS et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:

European Patent Office
D-80289 Munich
Tel. +49 89 2399 - 0 Tx: 523866 epmu d
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Authorized Officer

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

3635

Applicant's or agent's file reference MULTI-005		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/16)	
International application No. PCT/BR02/00150	International filing date (day/month/year) 08.11.2002	Priority date (day/month/year) 13.11.2001	
International Patent Classification (IPC) or both national classification and IPC D06F35/00			
Applicant MULTIBRAS S.A. ELETRODOMESTICOS et al.			
1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 7 sheets, including this cover sheet. ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of sheets.			
3. This report contains indications relating to the following items: I ☒ Basis of the opinion II ☐ Priority III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV ☐ Lack of unity of invention V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI ☐ Certain documents cited VII ☐ Certain defects in the international application VIII ☐ Certain observations on the international application			
Date of submission of the demand 05.08.2003		Date of completion of this report 20.11.2003	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2369 - 0 Tx: 523658 epmu d Fax: +49 89 2369 - 4466		Authorized Officer Falkentoft, C Telephone No. +49 89 2369-2066 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/BR02/00150**

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I. Basis of the report

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-8 as originally filed

Claims, Numbers

1-12 as originally filed

Drawings, Sheets

1/1 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/BR02/00150**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-12
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-12
Industrial applicability (IA)	Yes: Claims	1-12
	No: Claims	

2. Citations and explanations

see separate sheet

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Re item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

- D1: US-A-3 063 785 (FOREMAN CLAYTON E) 13 November 1962.
- D2: GB 759 836 A (FISHER & LUDLOW LTD) 24 October 1956.
- D3: EP-A-0 346 212 (CIAPEM) 13 December 1989.
- D4: DE 39 02 910 A (LICENTIA GMBH) 2 August 1990.
- D5: EP-A-0 722 008 (ELECTROLUX ZANUSSI ELETTRODOME) 17 July 1996.
- D6: EP-A-0 038 671 (SERVIS DOMESTIC APPLIANCES LTD) 28 October 1981.

2. The subject-matter of independent claim 1 cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

D1 (see column 1, lines 44-50; column 2, lines 2-27; column 3, lines 23-26) discloses:

A process for removing spots from clothes, comprising a tub for containing a washing liquid in at least one laundering level, said process comprising the steps of:

- a) supplying a washing liquid to a load of soiled clothes contained inside the tub until reaching a predetermined level that is substantially lower than the lowest laundering level and compatible with the load of clothes (see column 2, lines 2-6);
- b) submitting the load of clothes immersed in the washing liquid to at least one agitation period during a first agitation time interval;
- c) draining and introducing water with a higher temperature;
- d) submitting the load of clothes immersed in the washing liquid to a subsequent agitation period during a certain second agitation time interval, which is sufficient to provide a certain cleaning of the load of clothes, but insufficient to cause a relevant drop in the temperature reached by the washing liquid; and

e) extracting the washing liquid from the load of clothes.

Hence, the subject-matter of claim 1 differs from that of D1 only in that a perforated basket for containing the clothes is provided and in that a step of maintaining the clothes immersed in the washing liquid at rest during a predetermined first rest time interval sufficient for the temperature of the washing liquid to reach a value necessary to allow activation of at least one of the enzymatic and bleaching functions of the washing liquid.

However, to employ the described washing process in a vertical axis washer with corresponding advantages (grass stain removal) would be an obvious design option for the skilled person. Additionally, if no hot water inlet is available it is common practise to employ a heater in the washing machine. Hence, the use of a heater to heat the water in the water tub and thereby introduce a process step of heating during rest according to the process step c) of claim 1, see for example document D2 page 7, lines 3-9, would also be an obvious design option. In this way, the skilled person would arrive at a process for removing spots according to claim 1 without the exercise of inventive skill.

3. It should be noted that also an obvious combination of the teachings of documents D3 and D4 would lead to the subject-matter of claim 1 for the following reasons.

D3 (see column 1, line 36 - column 2, line 51; column 3, lines 28-35; Figure) discloses a laundering process that differs from the subject-matter of claim 1 only in that the temperature is not being elevated during the rest period, but directly following the rest period.

However, document D4 (see page 2, lines 31-67; page 3, lines 13-20 and claim 1) discloses a laundering process wherein less agitation and motor stillstand is applied during the heating period in order to protect the clothing from unnecessary wear and to lower the capacity requirements of the driving motor.

It would be obvious to the person skilled in the art, namely when the same result and advantages are to be achieved, to apply these features with corresponding effect to a laundering process according to document D3, thereby arriving at a process for removing spots according to claim 1. The subject-matter of claim 1

does therefore not involve an inventive step (Article 33(3) PCT).

4. Dependent claims 2-12 do not appear to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step, the essential features thereof being already suggested in Document D1, D2, D3, D4, D5 or D6, refer to the passages cited below and in the Search Report, or they concern only slight constructional changes which fall within the scope of the customary practice followed by persons skilled in the art.

Claim 2: See e.g. D1, column 2, lines 27-56.
Claim 3: See e.g. D2, column 2, line 66 - column 3, line 26.
Claim 4: See e.g. D3, column 2, lines 36-43.
Claim 5-7: See e.g. D1, column 2, lines 2-56 and/or D3, Figure.
Claim 8: See e.g. D1, column 2, lines 2-6 and/or D3, column 2, lines 36-43, Figure.
Claim 9-12: See e.g. D1, column 2, lines 20-56 and/or D5, Fig. 1 and/or D6, page 3, lines 15-17, page 5, line 16 - page 6, line 5.

Dependent claims 2-12 do therefore not meet the requirements of Article 33(3) PCT, because the subject-matter does not involve an inventive step.

5. The subject-matter of claims 1-12 is obviously industrially applicable (Article 33(4) PCT).

Further Points

6. The application does not meet the requirements of Article 6 PCT, because claims 1, 4 and 8 are not clear for the following reasons.

- 6.1 The formulation "a predetermined water level compatible with the load of clothes" is not clear. From the description page 4, lines 32-34 it appears that the water level has to be such that the load of clothes is substantially immersed in the water liquid, however this is not clear from the formulation of the claim.

does therefore not involve an inventive step (Article 33(3) PCT).

4. Dependent claims 2-12 do not appear to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step, the essential features thereof being already suggested in Document D1, D2, D3, D4, D5 or D6, refer to the passages cited below and in the Search Report, or they concern only slight constructional changes which fall within the scope of the customary practice followed by persons skilled in the art.

Claim 2: See e.g. D1, column 2, lines 27-56.
Claim 3: See e.g. D2, column 2, line 66 - column 3, line 26.
Claim 4: See e.g. D3, column 2, lines 36-43.
Claim 5-7: See e.g. D1, column 2, lines 2-56 and/or D3, Figure.
Claim 8: See e.g. D1, column 2, lines 2-6 and/or D3, column 2, lines 36-43, Figure.
Claim 9-12: See e.g. D1, column 2, lines 20-56 and/or D5, Fig. 1 and/or D6, page 3, lines 15-17, page 5, line 16 - page 6, line 5.

Dependent claims 2-12 do therefore not meet the requirements of Article 33(3) PCT, because the subject-matter does not involve an inventive step.

5. The subject-matter of claims 1-12 is obviously industrially applicable (Article 33(4) PCT).

Further Points

6. The application does not meet the requirements of Article 6 PCT, because claims 1, 4 and 8 are not clear for the following reasons.
- 6.1 The formulation "a predetermined water level compatible with the load of clothes" is not clear. From the description page 4, lines 32-34 it appears that the water level has to be such that the load of clothes is substantially immersed in the water liquid, however this is not clear from the formulation of the claim.

- 6.2 In claim 4 it is unclear what is meant with "submitting the load of clothes to the steps of a laundering process". The process steps of claim 1 are apparently also "steps of a laundering process". The description on page 7, lines 28-32 talks about a "spot removing process" (which appears to be comprising the steps of claim 1), but at the same time the spot removing process is also defined as a laundering process.
- 6.3 In claim 8 it is not clear what is meant with "the predetermined level is calculated for a load of soiled clothes of about 30% the nominal load of the lowest laundering level". Apparently is meant that the predetermined water level during the "spot removing process" is 30% of the water level that is required during the laundering process that follows after the spot removing process (see description page 4, lines 26-34; Figure 1). However, this is not clear from the formulation of the claim. Especially, it is not clear, what different types of "levels" that reference is made to: "predetermined level" versus "laundering level". All the steps of the claimed process for removing spots appear to refer to a laundering process, whereby also the predetermined level could be understood as a laundering level.

TRATADO DE COOPERACIÓN DE PATENTES

Remitente:

OFICINA ENCARGADA DEL EXAMEN PRELIMINAR INTERNACIONAL

A:

ARNAUD, Antonio M P y colaboradores
Rua José Bonifacio, 93 –
9° Piso
01003 – 901 Sao Paulo – SP
BRASIL

PCT

NOTIFICACION DE TRANSMISION DEL REPORTE DEL EXAMEN PRELIMINAR INTERNACIONAL

(Regla 71.1 PCT)

Fecha de envío
(Día/Mes/Año)

20.11.2003

No. de Expediente del Solicitante o Apoderado

MULTI – 005

COMUNICACIÓN IMPORTANTE

No. de Solicitud Internacional

PCT/BR02/00150

Fecha Internacional de Presentación
(día/mes/año)

08.11.2002

Fecha de Prioridad (día/mes/año)

13.11.2001

Solicitante

MULTIBRAS S.A. ELECTRODOMESTICOS y colaboradores

1. Se comunica al solicitante que la oficina encargada del examen preliminar internacional le envía con el presente el informe de examen preliminar internacional, elaborado para la solicitud internacional, en caso dado con los anexos correspondientes.
2. Una copia del informe, en caso dado con los anexos correspondientes, se hace llegar a la Oficina Internacional para su envío posterior a todas las oficinas seleccionadas.
3. A solicitud de una oficina seleccionada, la Oficina Internacional preparará una traducción del informe (pero no de los anexos) al inglés y la remitirá a esta oficina.

4. RECORDATORIO

Para ingresar en la fase nacional el solicitante, dentro de los 30 meses a partir de la fecha de prioridad (o en algunas oficinas incluso después), tiene que realizar ante cada oficina seleccionada ciertos actos (entrega de traducciones y desembolso de honorarios nacionales) (Artículo 39 (1)) (véase también la información remitida por la Oficina Internacional en el Formulario PCT/IB/301).

Si se tiene que enviar a una oficina seleccionada una traducción de la solicitud internacional, entonces esta traducción tiene que incluir traducciones de todos los anexos al informe de examen preliminar internacional. Es obligación del solicitante elaborar dichas traducciones y hacerlas llegar directamente a las oficinas seleccionadas respectivas.

Mayores detalles en cuanto a los plazos normativos y los requisitos de las oficinas seleccionadas se desprenden del Volumen II de la guía PCT para solicitantes.

Nombre y dirección postal de la Administración
Internacional del Examen Preliminar

Oficina Europea de Patentes
D – 80298 Munich
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Empleado Autorizado

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**TRATADO SOBRE COOPERACIÓN INTERNACIONAL
EN MATERIA DE PATENTES**

PCT

INFORME DE EXAMEN PRELIMINAR INTERNACIONAL
(Artículo 38 y Regla 70 PCT)

No. de Expediente del Solicitante o Apoderado MULTI – 005	PROCEDIMIENTO POSTERIOR Véase comunicación sobre el envío del Informe de examen preliminar internacional (Formulario PCT/IPEA/416)	
No. Solicitud Internacional PCT/BR02/00150	Fecha Internacional de Presentación (día/mes/año) 08.11.2002	Fecha de Prioridad (día/mes/año) 13.11.2001
Clasificación Internacional de Patente (IPC) o Clasificación Nacional e IPC D08F35/00		
Solicitante MULTIBRAS S.A. ELECTRODOMESTICOS y colaboradores		

1. Este Informe de examen preliminar internacional fue elaborado por la Oficina Encargada del Examen Preliminar Internacional y se envía al solicitante según Artículo 38.
2. Este INFORME comprende un total de 7 hojas, inclusive esta portada

☒ Además se adjuntan ANEXOS al Informe; en este caso se trata de hojas con descripciones, reivindicaciones y/o dibujos, que se modificaron y que sirven de base a este Informe, y/o hojas con correcciones efectuadas por esta oficina (véase Regla 70.16 y Sección 807 de las Instrucciones administrativas al PCT).

Estos anexos comprenden en total de _____ hojas.

3. Este Informe contiene datos con respecto a los siguientes puntos:

- I ☒ Base del Informe
- II ☐ Prioridad
- III ☐ Sin elaboración de un dictamen sobre novedad, actividad inventiva y posibilidad de aplicación industrial
- IV ☐ Uniformidad deficiente de la invención
- V ☒ Declaración justificada según Artículo 35(2) con respecto a la novedad, la actividad inventiva y la posibilidad de aplicación industrial; documentos y explicaciones que sustentan esta declaración
- VI ☐ Ciertos documentos enumerados
- VII ☐ Ciertas deficiencias del registro internacional
- VIII ☐ Ciertas observaciones relacionadas con la solicitud internacional

Fecha de presentación de la petición 06.06.2003	Fecha de la preparación de este informe 20.11.2003
Nombre y dirección postal de la Administración Internacional del Examen Preliminar Oficina Europea de Patentes D – 80298 Munich Tel +49 89 2399 – 0 Tx: 523656 empu d Fax: -49 89 2399 – 4465	Empleado Autorizado Falkentoft, C Teléfono No. +49 89 2399 – 2066

Formulario PCT/IPEA/409 (hoja de portada) (Enero 1994)

4/6 45

**INFORME DEL EXAMEN PRELIMINAR
INTERNACIONAL**

Solicitud Internacional No.

PCT/BR02/00150

I. Base para este reporte.

1. Respecto a los elementos de la solicitud internacional (Las hojas de reemplazo que han sido entregadas a la oficina receptora en respuesta a una invitación bajo el Artículo 14 se referencian en éste reporte como "entregadas originalmente" y nos anexadas a este reporte ya que no contienen enmendaduras (Reglas 70.16 y 70.17)):

Descripción, páginas

1-8 como se entregaron originalmente

Reivindicaciones, No.:

1-12 como se entregaron originalmente

Dibujos, hojas

1/1 como se entregaron originalmente

2. Respecto al idioma, todos los elementos anteriormente marcados estaban disponibles o fueron suministrados a esta oficina en el idioma en el que se entregó la solicitud internacional, a menos que se diga lo contrario en este punto. Estos elementos estaban disponibles o fueron entregados a esta oficina en el siguiente idioma _____ los cuales son

- ☐ El idioma de la traducción entregada para propósitos de la búsqueda internacional (Regla 23.1 (b)).
- ☐ El idioma de publicación de la solicitud internacional (bajo la Regla 48.3 (b)).
- ☐ El idioma de la traducción entregada para propósitos del examen preliminar internacional (bajo las Reglas 55.2 y/o 55.3

3. respecto a cualquier secuencia de nucleótido y/o aminoácidos divulgados en esta solicitud internacional, el examen preliminar internacional se realizó sobre la base de la secuencia:

- ☐ contenida en la solicitud en forma impresa
- ☐ entregada junto con la solicitud internacional en una forma legible en un computador
- ☐ suministrada subsiguientemente a esta oficina de forma escrita
- ☐ suministrada subsiguientemente a esta oficina en forma legible en un computador
- ☐ la declaración que la secuencia escrita suministrada no va más allá de lo divulgado en la solicitud internacional como se entregó ha sido suministrada
- ☐ La declaración que la información registrada en la forma legible a computador es idéntica a la secuencia escrita ha sido suministrada.

4. ☐ Las correcciones han resultado en la cancelación de:

- ☐ la descripción, páginas:
- ☐ las reivindicaciones, Nos:
- ☐ los dibujos, hojas:

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5 ☐ Este informe ha sido admitido como si (algunas de) las enmendaduras no hubieran sido hechas, ya que se considera que estas van más allá de la divulgación preliminar, como se indica el Apartado Suplementario (Regla 70.2 (c)):

(Cualquier hoja de reemplazo que contenga dichas enmiendas debe ser referenciada bajo el asunto 1 y anexada a este reporte.)

6. Observaciones adicionales, de ser necesarias:

V. Declaración concluyente bajo el Artículo 35(2) con respecto a la novedad, el nivel inventivo o la aplicabilidad industrial; las citas y explicaciones que sustentan dicha declaración

1. DECLARACIÓN

Novedad (N)	Si:	Reivindicaciones	1 – 12
	No:	Reivindicaciones	
Nivel Inventivo (IS)	Si:	Reivindicaciones	
	No:	Reivindicaciones	1 – 12
Aplicabilidad Industrial (IA)	Si:	Reivindicaciones	1 – 12
	No:	Reivindicaciones	

2. CITAS Y EXPLICACIONES

Ver hoja aparte

Re Asunto V

Afirmación sustentada bajo el artículo 35(2) respecto a novedad, nivel inventivo o aplicabilidad industrial; citas y explicaciones que sustentan tal afirmación.

1. Se hace referencia a los siguientes documentos:

D1: US-A-3 063 785 (FOREMAN CLAYTON E) 13 de Noviembre de 1962.

D2: GB 759 838 A (FISHER & LUDLOW LTD) 24 de Octubre de 1956.

D3: EP-A-0 346 212 (CIAPEM) 13 de Diciembre de 1989.

D4: DE 39 02 910 A (LICENTIA GMBH) 2 de Agosto de 1990.

D5: EP-A-0 722 008 (ELECTROLUX ZANUSSI ELETTRODOME) 17 de Julio de 1996.

D6: EO-A-0 038 671 (SERVIS DOMESTIC APPLIANCES LTD) 28 de Octubre de 1981.

2. La materia de la reivindicación independiente 1 no puede ser considerada como que involucra un nivel inventivo (Artículo 33(3) del PCT) por las siguientes razones.

D1 (ver columna 1, líneas 44-50; columna 2, líneas 2-27; columna 3, líneas 23-26) divulga:

Un proceso para remover manchas de la ropa, que comprende un cubo para contener un líquido de lavado en al menos un nivel de lavado, dicho proceso comprende los pasos de:

a) proporcionar un líquido de lavado a una carga de ropa sucia dentro del cubo hasta alcanzar un nivel predeterminado que es sustancialmente inferior que el nivel de lavado más bajo y compatible con la carga de ropa (ver columna 2, líneas 2-6);

b) someter la carga de ropa inmersa en el líquido de lavado a al menos un periodo de agitación durante un primer intervalo de tiempo de agitación;

c) drenar e introducir agua con una temperatura más alta;

d) someter la carga de ropa inmersa en el líquido de lavado a un periodo de agitación subsiguiente durante un cierto segundo intervalo de tiempo de agitación, el cual es suficiente para proporcionar una cierta limpieza a la carga de ropa, pero insuficiente para ocasionar una caída relevante en la temperatura alcanzada por el líquido de lavado; y

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e) extraer el líquido de lavado de la carga de ropa.

Por lo tanto, la materia de la reivindicación 1 difiere de aquella de D1 solo en que se proporciona una canasta perforada para contener la ropa y en un paso de mantener la ropa inmersa en el líquido de lavado en reposo durante un primer intervalo de tiempo de reposo predeterminado suficiente para que la temperatura del líquido de lavado alcance un valor necesario para permitir la activación de al menos una de las funciones enzimáticas y de blanqueado del líquido de lavado.

Sin embargo, el emplear el proceso de lavado descrito en una lavadora de eje vertical con las ventajas correspondientes (remoción de manchas de pasto) sería una opción de diseño obvia para una persona con habilidad. Adicionalmente, si no hay una entrada de agua caliente disponible es una práctica común emplear un calentador en la máquina lavadora. Por lo tanto, el uso de un calentador en el cubo de agua y por lo tanto introducir un paso de calentamiento durante el reposo de acuerdo con el paso c) del proceso de la reivindicación 1, ver por ejemplo el documento D2, página 7, líneas 3-9, también sería una opción de diseño obvia. De ésta forma, la persona con habilidad llegaría a un proceso para remover las manchas de acuerdo con la reivindicación 1 sin el ejercicio de una habilidad inventiva.

3. Debe anotarse que también una combinación obvia de las enseñanzas de los documentos D3 y D4 llevaría a la materia de la reivindicación 1 por las siguientes razones.

D3 (ver columna 1, línea 36 – columna 2, línea 51; columna 3, líneas 26-35; Figura) divulga un proceso de lavado que difiere de la materia de la reivindicación 1 solo en que la temperatura no se eleva durante el periodo de reposo, sino directamente después del periodo de reposo.

Sin embargo, el documento D4 (ver página 2, líneas 31-67; página 3, líneas 13-20 y reivindicación 1) divulga un proceso de lavado en donde se aplica menos agitación y quietud del motor durante el periodo de calentamiento con el fin de proteger la ropa de desgaste innecesario y para reducir los requerimientos del motor impulsor.

Sería obvio para la persona con habilidad en el arte, a saber cuando se han de lograr los mismos resultados y ventajas, aplicar estas características con el efecto correspondiente a un proceso de lavado de acuerdo con el documento D3, llegando por lo tanto al proceso para remover manchas de acuerdo con la reivindicación 1. La materia de la reivindicación 1 por lo tanto no involucra un nivel inventivo (artículo 33(3) del PCT).

PRELIMINAR INTERNACIONAL – HOJA APARTE

4. Las reivindicaciones dependientes 2 – 12 no parecen contener ninguna característica que, en combinación con las características de cualquier reivindicación a la que se refieren, cumpla los requerimientos del PCT respecto al nivel inventivo, las características esenciales de las mismas ya han sido sugeridas en los Documentos D1, D2, D3, D4, D5 o D6, referirse a los pasajes citados abajo y al informe de búsqueda, o conciernen solamente a leves cambios en la construcción los cuales caen en el alcance de la práctica acostumbrada seguida por personas con habilidad en el arte.

Reivindicación 2:	ver por ejemplo, D1, columna 2, líneas 27-56.
Reivindicación 3:	ver por ejemplo D2, columna 2, línea 66-columna 3, línea 26.
Reivindicación 4:	ver por ejemplo D3, columna 2, líneas 36 – 43.
Reivindicaciones 5-7:	ver por ejemplo D1, columna 2, líneas 2-56 y/o D3, Figura.
Reivindicación 8:	ver por ejemplo D1, columna 2, líneas 2-6 y/o D3, columna 2, líneas 36-43, Figura.
Reivindicaciones 9-12:	ver, por ejemplo D1, columna 2, líneas 20-56 y/o D5, Fig. 1 y/o D6, página 3, líneas 15-17, página 5, línea 16-página 6, línea 5.

Por lo tanto las reivindicaciones dependientes 2-12 no cumplen los requerimientos del artículo 33(3) del PCT, porque la materia no involucra un nivel inventivo.

5. La materia de las reivindicaciones 1-12 es obviamente aplicable industrialmente (artículo 33(4) del PCT).

Puntos adicionales

- 6 La solicitud no cumple los requerimientos del artículo 6 del PCT, porque las reivindicaciones 1, 4, y 8 no son claras por las siguientes razones.
- 6.1 La formulación "un nivel de agua predeterminado compatible con una carga de ropa" no es clara. De la página 4 de la descripción, líneas 32-34, parece que el nivel de agua tiene que ser tal que la carga de ropa esté sustancialmente inmersa en el líquido acuoso, sin embargo esto no es claro de la formulación de la reivindicación.

- 6.2 En la reivindicación 4 no es claro que se quiere decir con "someter la carga de ropa a los pacos del proceso de lavado". Los pasos del proceso de la reivindicación 1 aparentemente también son "pasos del proceso de lavado". La descripción en la página 7, líneas 29-32 habla de un "proceso de remoción de manchas" (el cual también parece comprender los pasos de la reivindicación 1), pero al mismo tiempo el proceso de remoción de manchas también está definido como un proceso de lavado.
- 6.3 En la reivindicación 8 no es claro que se quiere decir con "el nivel predeterminado es calculado para una carga de ropa sucia de alrededor del 30% de la carga nominal del nivel de lavado más bajo". Aparentemente se quiere decir que el nivel de agua predeterminado durante el "proceso de remoción de manchas" es el 30% del nivel de agua que se requiere durante el proceso de lavado que sigue después del proceso de remoción de manchas (ver la página 4 de la descripción, líneas 26-34, Figura 1). Sin embargo, esto no es claro de la formulación de la reivindicación. No es claro, especialmente, a que tipos diferentes de "niveles" se hace referencia: "nivel predeterminado" contra "nivel de lavado". Todos los pasos del proceso reivindicado para remover manchas parecen referirse a un proceso de lavado, por lo tanto también se puede entender que el nivel predeterminado es un nivel de lavado.

PATENT C OPERATION TREATY

05 AGO 2003

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

WRITTEN OPINION (PCT Rule 66)

To:

ARNAUD, Antonio M P et al.
Rua Jose' Bonifacio, 93-
9th floor
01003-901 Sao Paulo- SP
BRESIL

Date of mailing
(day/month/year)

17.07.2003

Applicant's or agent's file reference
MULTI-005

REPLY DUE

within 3 month(s)
from the above date of mailing

International application No.
PCT/BR02/00150

International filing date (day/month/year)
08.11.2002

Priority date (day/month/year)
13.11.2001

International Patent Classification (IPC) or both national classification and IPC
D06F35/00

Applicant

MULTIBRAS S.A. ELETRODOMESTICOS et al.

1. This written opinion is the first drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 69.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 13.03.2004

Name and mailing address of the international preliminary examining authority:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523658 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Falkentoft, C

Formalities officer (incl. extension of time limits)
TATABOD, S
Telephone No. +49 89 2399-6467



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5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this opinion.)

6. Additional observations, if necessary:

V. Reasoned statement under Rule 66.2(a)(II) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	
Inventive step (IS)	Claims	1-12
Industrial applicability (IA)	Claims	

2. Citations and explanations
see separate sheet

5/53

WRITTEN OPINION

International application No. PCT/BR02/00150

I. Basis of the opinion

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, Pages

1-8 as originally filed

Claims, Numbers

1-12 as originally filed

Drawings, Sheets

1/1 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

- D1: US-A-3 063 785 (FOREMAN CLAYTON E) 13 November 1962.
- D2: GB 759 836 A (FISHER & LUDLOW LTD) 24 October 1956.
- D3: EP-A-0 346 212 (CIAPEM) 13 December 1989.
- D4: DE 39 02 910 A (LICENTIA GMBH) 2 August 1990.
- D5: EP-A-0 722 008 (ELECTROLUX ZANUSSI ELETTRODOME) 17 July 1996.
- D6: EP-A-0 038 671 (SERVIS DOMESTIC APPLIANCES LTD) 28 October 1981.

2. The subject-matter of independent claim 1 cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

D1 (see column 1, lines 44-50; column 2, lines 2-27; column 3, lines 23-26) discloses:

A process for removing spots from clothes, comprising a tub for containing a washing liquid in at least one laundering level, said process comprising the steps of:

a) supplying a washing liquid to a load of soiled clothes contained inside the tub until reaching a predetermined level that is substantially lower than the lowest laundering level and compatible with the load of clothes (see column 2, lines 2-6);

b) submitting the load of clothes immersed in the washing liquid to at least one agitation period during a first agitation time interval;

c) draining and introducing water with a higher temperature;

d) submitting the load of clothes immersed in the washing liquid to a subsequent agitation period during a certain second agitation time interval, which is sufficient to provide a certain cleaning of the load of clothes, but insufficient to cause a relevant drop in the temperature reached by the washing liquid; and

e) extracting the washing liquid from the load of clothes.

Hence, the subject-matter of claim 1 differs from that of D1 only in that a perforated basket for containing the clothes is provided and in that a step of maintaining the clothes immersed in the washing liquid at rest during a predetermined first rest time interval sufficient for the temperature of the washing liquid to reach a value necessary to allow activation of at least one of the enzymatic and bleaching functions of the washing liquid.

However, to employ the described washing process in a vertical axis washer with corresponding advantages (grass stain removal) would be an obvious design option for the skilled person. Additionally, if no hot water inlet is available it is common practise to employ a heater in the washing machine. Hence, the use of a heater to heat the water in the water tub and thereby introduce a process step of heating during rest according to the process step c) of claim 1, see for example document D2 page 7, lines 3-9, would also be an obvious design option. In this way, the skilled person would arrive at a process for removing spots according to claim 1 without the exercise of inventive skill.

3. It should be noted that also an obvious combination of the teachings of documents D3 and D4 would lead to the subject-matter of claim 1 for the following reasons.

D3 (see column 1, line 36 - column 2, line 51; column 3, lines 26-35; Figure) discloses a laundering process that differs from the subject-matter of claim 1 only in that the temperature is not being elevated during the rest period, but directly following the rest period.

However, document D4 (see page 2, lines 31-67; page 3, lines 13-20 and claim 1) discloses a laundering process wherein less agitation and motor stillstand is applied during the heating period in order to protect the clothing from unnecessary wear and to lower the capacity requirements of the driving motor.

It would be obvious to the person skilled in the art, namely when the same result and advantages are to be achieved, to apply these features with corresponding effect to a laundering process according to document D3, thereby arriving at a process for removing spots according to claim 1. The subject-matter of claim 1 does therefore not involve an inventive step (Article 33(3) PCT).

4. Dependent claims 2-12 do not appear to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step, the essential features

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thereof being already suggested in Document D1, D2, D3, D4, D5 or D6, refer to the passages cited below and in the Search Report, or they concern only slight constructional changes which fall within the scope of the customary practice followed by persons skilled in the art.

- Claim 2: See e.g. D1, column 2, lines 27-56.
Claim 3: See e.g. D2, column 2, line 66 - column 3, line 28.
Claim 4: See e.g. D3, column 2, lines 36-43.
Claim 5-7: See e.g. D1, column 2, lines 2-56 and/or D3, Figure.
Claim 8: See e.g. D1, column 2, lines 2-6 and/or D3, column 2, lines 36-43, Figure.
Claim 9-12: See e.g. D1, column 2, lines 20-56 and/or D5, Fig. 1 and/or D6, page 3, lines 15-17, page 5, line 16 - page 6, line 5.

Dependent claims 2-12 do therefore not meet the requirements of Article 33(3) PCT, because the subject-matter does not involve an inventive step.

5. The subject-matter of claims 1-12 is obviously industrially applicable (Article 33(4) PCT).

Further Points

6. The application does not meet the requirements of Article 6 PCT, because claims 1, 4 and 8 are not clear for the following reasons.
- 6.1 The formulation "a predetermined water level compatible with the load of clothes" is not clear. From the description page 4, lines 32-34 it appears that the water level has to be such that the load of clothes is substantially immersed in the water liquid, however this is not clear from the formulation of the claim.
- 6.2 In claim 4 it is unclear what is meant with "submitting the load of clothes to the steps of a laundering process". The process steps of claim 1 are apparently also "steps of a laundering process". The description on page 7, lines 29-32 talks about a "spot removing process" (which appears to be comprising the steps of claim 1), but at the same time the spot removing process is also defined as a laundering process.

6.3 In claim 8 it is not clear what is meant with "the predetermined level is calculated for a load of soiled clothes of about 30% the nominal load of the lowest laundering level". Apparently it is meant that the predetermined water level during the "spot removing process" is 30% of the water level that is required during the laundering process that follows after the spot removing process (see description page 4, lines 26-34; Figure 1). However, this is not clear from the formulation of the claim. Especially, it is not clear, what different types of "levels" that reference is made to: "predetermined level" versus "laundering level". All the steps of the claimed process for removing spots appear to refer to a laundering process, whereby also the predetermined level could be understood as a laundering level.

PINHEIRO, NUNES, ARNAUD & SCATAMBURLO S/C

INTELLECTUAL PROPERTY

MAURÍCIO TIBAU ARNAUD (1918-1986)
DÉLIO SCATAMBURLO (1943-1992)

WILHELM ALVARO PINHEIRO
LUIZ ANTONIO RICCIO MANS
ANTONIO MAURÍCIO PEDRAS ARNAUD
ROBERTO SANTO SCATAMBURLO
CLÁUDIO GALEFFI
PAULO SÉRGIO SCATAMBURLO
GABRIEL PEDRAS ARNAUD
MARTHA ELIZABETE DULAS DO NASCIMENTO
APARECIDA SCATAMBURLO
ANTÔNIO NORTA
LUIZ ANTONIO SCATAMBURLO
JOSÉ MOITA NORTA
VERA LUCIA REGINA KIRBY
MARIA CRISTINA SCATAMBURLO
EDMUND MAX WEIL
MARJANA PEREIRA DE SOUZA
CHRISTINA MARIA NORTA
OSWETE SIBERA
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JOSE CARLOS DE LIMA JUNIOR
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MIRIAN DE FÁTIMA ALVAREIRA
WILSON PINHEIRO JARUK
FABIO JOSÉ ZANETTI DE AZEVEDO
JOSÉALDO JOSÉ NORTA

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OUR REF : PT-2814/03

YOUR REF :

October 17, 2003

Messrs.
EUROPEAN PATENT OFFICE
Erhardtstrasse 27
D-80298 Munich
GERMANY
(Alemanha)

BY FAX
Confirmation copy will follow

Re: International Application PCT/BR 02/00106
Applicant: MULTIBRÁS S.A. ELETRODOMÉSTICOS

Dear Sirs,

In response to the Written Opinion issued on July 17, 2003, we have the following comments:

1. US3063785 differs from the Multibrás's solution since it refers to a cleaning process presenting a plurality of steps (7) to be followed in order to obtain the desired clean of the clothes, all of said steps presenting a respective water level, temperature and duration. In the end of each step said US'785 process provides a drainage of the washing liquid and thus each new step requires a new supply of water. Each step presents a determined temperature of operation previously defined considering the objective of the respective washing of said step. The temperature intervals of the process are not increasing with the steps of washing process nor it varies during the clothes rest of each respective step as in the Multibrás solution.

2. Even considering the temperature increasing presented in EP0346212 solution, the combination of said characteristic of washing process with that of US'785 process will not result in the present solution, since said US'785 solution discloses a process (with a plurality of steps) which differs from that of Multibrás's solution regarding the steps required to obtain the desired cleaning and the operation of said steps in respect to the particular time duration and washing supply and drainage of washing liquid. Moreover, it will be impossible to obtain, in the US'785 process, the increase of temperature of the present solution since in each step the liquid is drained requiring that in each new subsequent step, the heating of the washing liquid starts from the same initial temperature and not from a temperature level raised in the previous step of the washing process.

3. In view of the facts discussed above, we understand that the claim set should be kept as originally filed.

Respectfully submitted,

Antonio M. P. Arnaud.

AMPA/vk

PATENT COOPERATION TREATY

07 JAN 2003

PCT

NOTIFICATION OF RECEIPT OF RECORD COPY

(PCT Rule 24.2(a))

From the INTERNATIONAL BUREAU

To:

ARNAUD, Antonio, M., P.
Rua José Bonifácio, 93 - 9th floor
01003-901 São Paulo - SP
Brazil

Date of mailing (day/month/year) 10 December 2002 (10.12.02)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference multi-005	International application No. PCT/BR02/00150

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

MULTIBRÁS S.A. ELETRODOMÉSTICOS (for all designated States except US)
BERNARDINO, Flávio, Erasmo (for US)

International filing date : 08 November 2002 (08.11.02)

Priority date(s) claimed : 13 November 2001 (13.11.01)

Date of receipt of the record copy
by the International Bureau : 27 November 2002 (27.11.02)

List of designated Offices :

AP : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW

EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP : AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR

OA : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

National : AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC,
EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- ☒ time limits for entry into the national phase - see updated important information (as of April 2002)
- ☒ confirmation of precautionary designations (if applicable)
- ☐ requirements regarding priority documents (if applicable)

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer: P. Pouvreau (Fax 338.87.40)
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38

INFORMATION ON TIME LIMITS FOR ENTERING THE NATIONAL PHASE

The applicant is reminded that the "national phase" must be entered before each of the designated Offices indicated on the cover sheet of this Notification by paying national fees and furnishing translations, as prescribed by Articles 22 and 39 and the applicable national laws. In addition, the applicant may also have to comply with other special requirements applicable in certain Offices. It is the applicant's responsibility to ensure the necessary steps to enter the national phase are taken in a timely fashion. Most Offices do not issue reminders to applicants in connection with the entry into the national phase.

The applicable time limit for entering the national phase will, subject to what is said in the following paragraph, be 30 MONTHS from the priority date, not only in respect of any elected Office where a demand for international preliminary examination is filed before the expiration of 18 months from the priority date (see Article 39(1)), but also in respect of any designated Office, in the absence of filing of such demand, where Article 22(1) as modified with effect from 1 April 2002 applies in respect of that designated Office. For further details, see PCT Gazette No. 44/2001 of 1 November 2001, pages 19826, 19932 and 19934, as well as the PCT Newsletter, October and November 2001 and February 2002 issues.

In practice, time limits other than the 30-month time limit will continue to apply, for various periods of time, in respect of certain designated or elected Offices. For regular updates on the applicable time limits (20, 21, 30 or 31 months, or other time limit), Office by Office, refer to the PCT Gazette ("Section IV" part published on a weekly basis), to the PCT Newsletter (on a monthly basis) and to the relevant National Chapters in Volume II of the PCT Applicant's Guide (the paper version of which is updated usually twice a year and the Internet version of which is updated usually on a weekly basis). Finally, a cumulative table of all applicable time limits for entering the national phase is available from WIPO's Internet site, via links from various pages the site including those of the Gazette, Newsletter and Guide, at <http://www.wipo.int/pct/en/index.html>.

Information about the requirements for filing a demand for international preliminary examination is set out in the PCT Applicant's Guide, Volume IA, Chapter IX. Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination (at present, all PCT Contracting States are bound by Chapter II).

CONFIRMATION OF PRECAUTIONARY DESIGNATIONS

This notification lists only specific designations made under Rule 4.9(a) in the request. It is important to check that these designations are correct. Errors in designations can be corrected where precautionary designations have been made under Rule 4.9(b). The applicant is hereby reminded that any precautionary designations may be confirmed according to Rule 4.9(c) before the expiration of 16 months from the priority date (this time limit may not be extended). If it is not confirmed, it will automatically be regarded as withdrawn by the applicant. There will be no reminder and no invitation. Confirmation of a designation consists of the filing of a notice specifying the designated State concerned (with indication of the kind of protection or treatment desired) and the payment of the designation and confirmation fees. The Notice of confirmation and payment must reach the receiving Office within the 16-month time limit.

REQUIREMENTS REGARDING PRIORITY DOCUMENTS

For applicants who have not yet complied with the requirements regarding priority documents, the following is recalled.

Where the priority of an earlier national, regional or international application is claimed, the applicant must submit a copy of the said earlier application, certified by the authority with which it was filed ("the priority document") to the receiving Office (which will transmit it to the International Bureau) or directly to the International Bureau, before the expiration of 16 months from the priority date, provided that any such priority document may still be submitted to the International Bureau before that date of international publication of the international application, in which case that document will be considered to have been received by the International Bureau on the last day of the 16-month time limit (Rule 17.1(a)).

Where the priority document is issued by the receiving Office, the applicant may, instead of submitting the priority document, request the receiving Office to prepare and transmit the priority document to the International Bureau. Such request must be made before the expiration of the 16-month time limit and may be subjected by the receiving Office to the payment of a fee (Rule 17.1(b)).

If the priority document concerned is not submitted to the International Bureau or if the request to the receiving Office to prepare and transmit the priority document has not been made (and the corresponding fee, if any, paid) within the applicable time limit indicated under the preceding paragraphs, any designated State may disregard the priority claim, provided that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within the time limit which is reasonable under the circumstances.

Where several priorities are claimed, the priority date to be considered for the purposes of computing the 16-month time limit is the filing date of the earliest application whose priority is claimed.

005332865

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference multi-005	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/BR 02/00150	International filing date (day/month/year) 08/11/2002	(Earliest) Priority Date (day/month/year) 13/11/2001
Applicant MULTIBRAS S.A. ELETRODOMESTICOS		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐

Certain claims were found unsearchable (See Box I).

3. ☐

Unity of invention is lacking (see Box II).

4. With regard to the title,

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

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☐

None of the figures.

INTERNATIONAL SEARCH REPORT

International application No
PCT/BR 02/00150

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 D06F35/00 D06F23/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 D06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched.

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3 063 785 A (FOREMAN CLAYTON E) 13 November 1962 (1962-11-13)	1-8
A	column 1, line 1 -column 3, line 26	9-12
Y	GB 759 836 A (FISHER & LUDLOW LTD) 24 October 1956 (1956-10-24)	1-8
	page 5, line 128 -page 6, line 9 page 7, line 3-9; figures 1,2,4	
Y	EP 0 346 212 A (CIAPEN) 13 December 1989 (1989-12-13)	1-8
A	the whole document	9-12
Y	DE 39 02 910 A (LICENTIA GMBH) 2 August 1990 (1990-08-02)	1-8
	the whole document	
	-/-	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claims or which is cited to establish the publication date of another citation or other special reason (see specification)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

A document member of the same patent family

Date of the actual completion of the international search

22 January 2003

Date of mailing of the international search report

31/01/2003

Name and mailing address of the ISA

European Patent Office, P.O. Box 6816 Paterhaus 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-8040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-8016

Authorized officer

Falkentoft, C

INTERNATIONAL SEARCH REPORT

International application No.

PCT/BR 02/00150

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 722 008 A (ELECTROLUX ZANUSSI ELETTRODOME) 17 July 1996 (1996-07-17) the whole document	1-12
A	EP 0 038 671 A (SERVIS DOMESTIC APPLIANCES LTD) 28 October 1981 (1981-10-28) page 3, line 1 -page 7, line 20 page 11, line 29 -page 12, line 4 page 12, line 24-35 page 15, line 19 -page 17, line 17	1-12
A	EP 0 501 240 A (LICENTIA GMBH) 2 September 1992 (1992-09-02) the whole document	1-12

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internet application No

PCT/BR 02/00150

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3063785	A	13-11-1962	NONE
GB 759836	A	24-10-1956	NONE
EP 0346212	A	13-12-1989	FR 2632665 A1 15-12-1989 AT 97705 T 15-12-1993 DE 68910882 D1 05-01-1994 DE 68910882 T2 17-03-1994 EP 0346212 A1 13-12-1989 ES 2046503 T3 01-02-1994
DE 3902910	A	02-08-1990	DE 3902910 A1 02-08-1990 FR 2642442 A1 03-08-1990 IT 1238454 B 18-08-1993
EP 0722008	A	17-07-1996	IT PN950002 A1 05-07-1996 DE 69512372 D1 28-10-1999 DE 69512372 T2 25-05-2000 EP 0722008 A2 17-07-1996 ES 2139139 T3 01-02-2000
EP 0038671	A	28-10-1981	GB 2074612 A 04-11-1981 AU 6963981 A 22-10-1981 CA 1166036 A1 24-04-1984 DK 174181 A 17-10-1981 EP 0038671 A2 28-10-1981 ES 8302816 A1 16-04-1983 IE 51088 B1 01-10-1986 NO 811323 A 19-10-1981
EP 0501240	A	02-09-1992	DE 4105760 A1 27-08-1992 EP 0501240 A1 02-09-1992

PATENT COOPERATION TREATY

26 DEZ 2002

16/12/02

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

**NOTIFICATION OF RECEIPT
OF SEARCH COPY**

(PCT Rule 28.1)

To:

ARNAUD, Antonio M P
Rua Jose' Bonifacio, 93-
9th floor
01003-901 Sao Paulo- SP
BRAZIL

Date of mailing
(day/month/year)

16/12/2002

Applicant's or agent's file reference

mult-005

IMPORTANT NOTIFICATION

International application No.

PCT/BR 02/00150

International filing date (day/month/year)

08/11/2002

Priority date (day/month/year)

13/11/2001

Applicant

MULTIBRAS S.A. ELETRODOMESTICOS

1. Where the International Searching Authority and the Receiving Office are not the same office:

The applicant is hereby notified that the search copy of the international application was received by this International Searching Authority on the date indicated below.

Where the International Searching Authority and the Receiving Office are the same office:

The applicant is hereby notified that the search copy of the international application was received on the date indicated below.

27/11/2002 (date of receipt).

2. ☐ The search copy was accompanied by a nucleotide and/or amino acid sequence listing in computer readable form.

3. Time limit for establishment of International Search Report

The applicant is informed that the time limit for establishing the International Search Report is 3 months from the date of receipt indicated above or 9 months from the priority date, whichever time limit expires later.

4. A copy of this notification has been sent to the International Bureau and, where the first sentence of paragraph 1 applies, to the Receiving Office.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-3040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

ISA/EP

PATENT COOPERATION TREATY

12 6 DEZ 2002

66

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

COMMUNICATION IN CASES FOR WHICH
NO OTHER FORM IS APPLICABLE

To:
ARNAUD, Antonio M P
Rua Jose' Bonifacio, 93-
9th floor
01003-901 Sao Paulo- SP
BRAZIL

Date of mailing
(day/month/year) 16/12/2002

Applicant's or agent's file reference
mult-005

REPLY DUE
...See paragraph 1 below...

International application No.
PCT/BR 02/ 00150

International filing date
(day/month/year) 08/11/2002

Applicant
MULTIBRAS S.A. ELETRODOMESTICOS

1. ☐ REPLY DUE within _____ days from the above date of mailing
☒ NO REPLY DUE

2. COMMUNICATION:

The applicant is informed that establishment of the international search report (ISR) for non first-filings may be delayed due to a current search backlog.

Although the time limit for entering the national phase before designated offices under Article 22(1) PCT and elected offices under Article 39(1) PCT has, with effect from 1 April 2002 (see PCT Gazette 44/2001 Section IV) been set at 30 months from the priority date (before the EPO the time limit is 31 months from the priority date - see Rule 107 EPC as amended with effect from 2 January 2002 - OJ EPO 8-8/2001, 373) not all PCT contracting states have yet made the necessary changes to their national laws and will for the time being continue to require entry to the national phase at 20/21 months from the priority date if a demand has not been filed before the end of 18 months from the priority date - see PCT Gazette/PCT Newsletter available on the WIPO Internet site at <http://www.wipo.int/pct/en/index.html> for an up to date list of the applicable time limits.

In these circumstances, the EPO acting as IPEA will accept, without any late payment fee under Rule 58bis PCT, the handling fee and the preliminary examination fee due in respect of the demand relating to the present application, even if they are not paid within the time limit prescribed in Rules 57.3 and 58.1(b) PCT, provided that they are paid within one month from the date of transmittal of the ISR; i.e., the EPO will only send an invitation pursuant to Rule 58bis.1(a) PCT after expiry of this one-month period. In all cases where the EPO has sent an invitation to pay and the applicant has not paid in full the amount due, the demand shall be considered as if it had not been submitted (Rule 58bis.1(b)-(d) PCT). A loss of rights may well be the consequence in designated states where the time limit for entry into the national phase under Article 22 PCT has already expired (see also Article 37(4) PCT).

Note that if the competent IPEA chosen by the applicant is not the EPO and if the fees mentioned above are not paid within the time limit prescribed in Rules 57.3 and 58.1(b) PCT, the competent IPEA is entitled to apply Rule 58bis.1(a) PCT immediately thereafter.

If your application is affected, we apologise for any inconvenience caused.

Finally, applicants are reminded that as of 3 January 2002 a rationalised PCT II procedure may apply, see OJ EPO 11/2001, 538 and that the EPO as ISA will not carry out international search on an application which relates to no more than a method of doing business, see OJ EPO 10/2001, 482. Applicants should also bear in mind the restriction of the EPO's competence as ISA and IPEA in certain technical fields in respect of certain international applications, see OJ EPO 1/2002, 82 and PCT Newsletter 1/2002 for further details.

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 6816 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

ISA/EP

PATENT COOPERATION TREATY

05 FEB 2003

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

To:

ARNAUD, Antonio M P
Rua Jose' Bonifacio, 93-
9th floor
01003-901 Sao Paulo- SP
BRAZILDate of mailing
(day/month/year)

31/01/2003

Applicant's or agent's file reference

mult-005

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/BR 02/00150

International filing date
(day/month/year)

08/11/2002

Applicant:

MULTIBRAS S.A. ELETRODOMESTICOS

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 18:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.
3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Further action(s): The applicant is reminded of the following:

Shortly after 18 months from the priority date, the International application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the International application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for International publication.

Within 18 months from the priority date, a demand for International preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 30 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 18 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority

European Patent Office, P.B. 5818 Patentstein 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Marie-Laure Dupont-H]per

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These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the letter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 18 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 206(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

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- (i) the claim is unchanged;
- (ii) the claim is amended;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 28, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers;
claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 18 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 18 and 17; new claims 20 and 21 added."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PCT REQUEST

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Original (for SUBMISSION) - printed on 08.11.2002 01:40:52 PM

multi-005

0	For receiving Office use only	
0-1	International Application No.	PCT/BR 02/00150
0-2	International Filing Date	08 NOV 2002 08 11 02
0-3	Name of receiving Office and "PCT International Application"	INPI/EP - PCT INTERNATIONAL APPLICATION
0-4	Form - PCT/RO/101 PCT Request	
0-4-1	Prepared using	PCT-EASY Version 2.92 (updated 01.10.2002)
0-5	Petition	
	The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	National Institute of Industrial Property (Brazil) (RO/BR)
0-7	Applicant's or agent's file reference	multi-005
I	Title of invention	PROCESS FOR REMOVING SPOTS FROM CLOTHES IN LAUNDRY MACHINES WITH A VERTICAL SHAFT
II	Applicant	
II-1	This person is:	applicant only
II-2	Applicant for	all designated States except US
II-4	Name	MULTIBRÁS S.A. ELETRODOMÉSTICOS
II-5	Address:	Avenida Das Nações Unidas, 12.995 - 32º andar 04578-000 São Paulo - SP Brazil
II-6	State of nationality	BR
II-7	State of residence	BR
II-8	Telephone No.	(55) (11) 5586-6315
II-9	Facsimile No.	(55) (11) 5586-6474
III-1	Applicant and/or inventor	
III-1-1	This person is:	applicant and inventor
III-1-2	Applicant for	US only
III-1-4	Name (LAST, First)	BERNARDINO, Flávio, Erasmo
III-1-5	Address:	Rua Célio Barbosa da Silva, 415 13564-060 São Carlos - SP Brazil
III-1-6	State of nationality	BR
III-1-7	State of residence	BR

PCT REQUEST

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PCT/BR 02/00150

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mult-005

IV-1	Agent or common representative; or address for correspondence The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	a_ent
IV-1-1	Name (LAST, First)	ARNAUD, Antonio, M. P
IV-1-2	Address:	Rua José Bonifácio, 93 - 9th floor 01003-901 São Paulo - SP Brazil
IV-1-3	Telephone No.	(55) (11) 3106-1377
IV-1-4	Facsimile No.	(55) (11) 3106-1377
IV-1-5	e-mail	aarnaud@pinheironunes.com.br
IV-2	Additional agent(s)	additional agent(s) with same address as first named agent
IV-2-1	Name(s)	PINHEIRO, Waldemar, Álvaro; NUNES, Luis, Antonio, Ricco; SCATAMBURLO, Paulo, Sérgio
V	Designation of States	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AP: GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT EP: AT BE BG CH&LI CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR and any other State which is a Contracting State of the European Patent Convention and of the PCT OA: BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	AE AG AL AM AT AU AZ BA BB BG BY BE CA CH&LI CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

PCT REQUEST

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MULTI-005

V-6	Precautionary Designation Statement In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 18 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	Exclusion(s) from precautionary designations	NONE
VI-1	Priority claim of earlier national application	
VI-1-1	Filing date	13 November 2001 (13.11.2001)
VI-1-2	Number	PI 0105826-6
VI-1-3	Country	BR
VI-2	Priority document request The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1
VII-1	International Searching Authority Chosen	European Patent Office (EPO) (ISA/EP)
VII-2	Request to use results of earlier search; reference to that search	
VII-2-1	Date	13 November 2001 (13.11.2001)
VII-2-2	Number	PI 0105826-6
VII-2-3	Country (or regional Office)	EP
VIII	Declarations	Number of declarations
VIII-1	Declaration as to the identity of the inventor	-
VIII-2	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	-
VIII-3	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	-
VIII-4	Declaration of inventorship (only for the purposes of the designation of the United States of America)	-
VIII-5	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	-

PCT REQUEST

Original (for SUBMISSION) - printed on 08.11.2002 01:40:52 PM

multis-003

IX	Check list	number of sheets	electronic file(s) attached
IX-1	Request (including declaration sheets)	4	-
IX-2	Description	8	-
IX-3	Claims	3	-
IX-4	Abstract	1	EZABST00.TXT
IX-5	Drawings	1	-
IX-7	TOTAL	17	
	Accompanying items	paper document(s) attached	electronic file(s) attached
IX-6	Fee calculation sheet	✓	-
IX-17	PCT-EASY diskette	-	Diskette
IX-19	Figure of the drawings which should accompany the abstract	1	
IX-20	Language of filing of the international application	English	
X-1	Signature of applicant, agent or common representative		
X-1-1	Name (LAST, First)	ARNAUD, Antonio, M. P	

FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	03 NOV 2002 08 11 02
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/EP
10-6	Transmittal of search copy delayed until search fee is paid	

FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by the International Bureau	
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PCT (ANNEX - FEE CALCULATION SHEET)

Original (for SUBMISSION) - printed on 08.11.2002 01:40:52 PM

multi-005

(This sheet is not part of and does not count as a sheet of the International application)

0	For receiving Office use only		
0-1	International Application No.	PCT/BR 02/00150	
0-2	Date stamp of the receiving Office		
0-4	Form - PCT/RO/101 (Annex) PCT Fee Calculation Sheet		
0-4-1	Prepared using	PCT-EASY Version 2.92 (updated 01.10.2002)	
0-9	Applicant's or agent's file reference	multi-005	
2	Applicant	MULTIBRAS S.A. ELETRODOMESTICOS, et al.	
12	Calculation of prescribed fees	fee amount/multiplier	Total amounts (BRR)
12-1	Transmittal fee T	⇒	236
12-2-1	Search fee S	⇒	3.373,92
12-2-2	International search to be carried out by	EP	
12-3	International fee		
	Basic fee		
	(first 30 sheets) b1	1.585,59	
12-4	Remaining sheets	0	
12-5	Additional amount (X)	36,59	
12-6	Total additional amount b2	0	
12-7	b1 + b2 = B	1.585,59	
12-8	Designation fees		
	Number of designations contained in international application	94	
12-9	Number of designation fees payable (maximum 5)	5	
12-10	Amount of designation fee (X)	341,51	
12-11	Total designation fees D	1.707,55	
12-12	PCT-EASY fee reduction R	-487,88	
12-13	Total International fee (B+D-R) I	⇒	2.805,26
12-14	Fee for priority document		
	Number of priority documents requested	1	
12-15	Fee per document (X)	75	
12-16	Total priority document fee P	⇒	75
12-17	TOTAL FEES PAYABLE (T+S+I+P)	⇒	6.490,18
12-18	Mode of payment	cash	

VALIDATION LOG AND REMARKS

PCT (ANNEX - FEE CALCULATION SHEET)

Original (for SUBMISSION) - printed on 08.11.2002 01:40:52 PM

multi-005

13-2	Validation messages States	Green? More designations could be made. The following States have not been designated: BR. Please verify.
13-2	Validation messages Contents	Yellow! The power of attorney or a copy of the general power of attorney will need to be furnished unless all applicants sign the request form.

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REQUISITOS NECESARIOS PARA PRESENTACION Y AGILIZACION DEL TRAMITE

PATENTE DE INVENCION

MODELO DE UTILIDAD

USUARIO RADICADOR

- | | | |
|---|-----|-----|
| - Indicación de que se solicita la concesión de una patente. | () | () |
| - Datos de identificación del solicitante o de la persona que se presenta la solicitud. | () | () |
| - Descripción de la invención. | () | () |
| - Dibujos de ser estos pertinentes. | () | () |
| - Comprobante de Pago de las tasas establecidas. | () | () |

COMPLETA ()

INCOMPLETA ()

DISEÑO INDUSTRIAL ()

- | | | |
|--|-----|-----|
| - Indicación de que se solicita el registro de Diseño Industrial | () | () |
| - Datos de identificación del solicitante o de la persona que presenta la solicitud. | () | () |
| - Representación gráfica o fotográfica del Diseño Industrial o muestra del Material que incorpora el diseño. | () | () |
| - Comprobante de pago de las tasas establecidas | () | () |

COMPLETA ()

INCOMPLETA ()

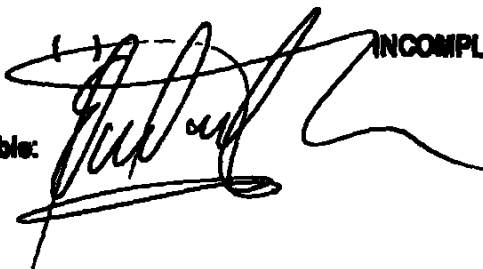
ESQUEMA DE TRAZADO ()

- | | | |
|--|-----|-----|
| - Indicación de que solicita el registro de un Esquema de trazado. | () | () |
| - Datos de identificación del solicitante o de la persona que presenta La solicitud. | () | () |
| - Representación gráfica del esquema de trazado | () | () |
| - Comprobante de pago de las tasas establecidas. | () | () |

COMPLETA

INCOMPLETA

Firma Responsable:



Fecha:

SUPERINDUSTRIA Y COMERCIO
Radicacion : 94043934 00000000 Folios: 76
Fecha (ARB): 2004-05-12 17:30:06
Tramite : 011 PCT-PATENT 379 FASE NACT 411 PRESENTAR
Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

78
77

+-----+	
ACCION: Consultar Siguiente Anterior Ir al detalle Primero ...	
Seleccionar un(os) Registros	
+-----+	
SUPERINDUSTRIA Y COMERCIO	
Fecha 04/06/2004	
+-----+	
MANTENIMIENTO DE PROTOCOLOS	
Numero : 16619	
Fecha : 08/05/1996	
Conferido: MULTIBRAS S/A ELETRODOMESTICOS	
+-----+	
Pais : BR BRASIL	
Ciudad : 2 SAO PAULO, SP	
Represent: S Sustituir: S Desistir: S	
No. Radicacion : 96 23069 Clase: 0 Seev: 0 Seac: 0	
+-----+	
scenciaCodigo Ctr Nombre	
1 340 A CASTRO DUQUE RAMIRO	
+-----+	
Encontrados (1/1) registro(s)	
+-----+	

PETITORIO

AS: 94.081

04-43958

12-05-2004

Industria y Comercio
SUPERINTENDENCIA

RECEIVED
PATENT DEPARTMENT
12-05-2004
12-05-2004

FORMULARIO ÚNICO DE SOLICITUD DE PATENTE

PCT

FECHA ENTRADA EN FASE NACIONAL: 13-06-2004

1 SOLICITUD DE:			
☒ Patente de Invención.		☐ Patente de Modelo de Utilidad.	
☐ Capítulo I.		☒ Capítulo II.	
2 SOLICITANTE (71)	Nombre: MULTIBRÁS S.A. ELETRODOMÉSTICOS Dirección: Avenida das Nações Unidas, 12.995 - 32º andar 04578-000 - São Paulo - SP, Brasil Nacionalidad o Domicilio: BRASIL Lugar de Constitución: BRASIL Teléfono: Fax: E-mail:		IDENTIFICACION C.C. ☐ NIT ☐ C.E. ☐ Otro ☐ Cual _____ Número _____
3 REPRESENTANTE O APODERADO	Nombre: RAMIRO CASTRO DUQUE Dirección: Cra. 7 No. 16-56 Piso 9 Teléfono: 380-2200 Fax: 380-2700 E-mail:		IDENTIFICACION C.C. ☒ NIT ☐ C.E. ☐ Otro ☐ Cual _____ Número 170.322 TP 1003
4 INVENTOR (ES) (72)	Nombre: Flávio Erasmo Bernardino Dirección: Rua Célio Barbosa da Silva, 415, 13584-060- São Carlos - SP, Brasil Nacionalidad o Domicilio: Brasil		
5 PCT (86) Solicitud Internacional No. <u>PCT/BR02/00150</u> Fecha <u>08-11-2002</u> Publicación Internacional No. <u>WO 03/042447 A1</u> Fecha <u>22-05-2003</u>			
Título (54): <u>PROCESO DE REMOCIÓN DE MANCHAS DE ROPA EN MÁQUINAS LAVADORAS DE EJE VERTICAL</u>			
7 Clasificación Internacional (51) <u>D06F 35/00</u>			
8 Prioridad	(33) País de Origen	(32) Fecha	(31) Número de Solicitud
SI ☒ NO ☐	BR	13-11-2001	PI 0105826-6
9 Comprobante de pago No. <u>04-31.625</u> Fecha <u>12-05-2004</u>			

Instrucciones para el diligenciamiento del presente formulario, ver reverso de esta página.

REIVINDICACIONES

1. Proceso de remoción de manchas de ropa en máquinas lavadoras de eje vertical constituidas por un tanque (1) que contiene líquido de lavado en al menos un nivel de lavado y un tambor perforado (2) para contener la ropa e interno al tanque (1), caracterizado por comprender las etapas de:

a- alimentar un líquido de lavado a una carga de ropa, manchada, contenida en el interior del tambor perforado (2), hasta alcanzar un nivel predeterminado, sustancialmente inferior al menor nivel de lavado y compatible con la carga de ropa;

b- someter la carga de ropa sumergida en el líquido de lavado a por lo menos un período de agitación por un cierto primer intervalo de tiempo de agitación;

c- mantener la carga de ropa sumergida en el líquido de lavado en reposo después de transcurrido un respectivo período de agitación y durante un primer intervalo de tiempo de reposo predeterminado, suficiente para que la temperatura del líquido de lavado alcance un valor necesario para posibilitar la activación de al menos una de las funciones enzimática y blanqueadora del líquido de lavado;

d- someter la carga de ropa sumergida en el líquido de lavado a otro período de agitación por un cierto segundo intervalo de tiempo de agitación suficiente para proveer una cierta limpieza de la carga de ropa, pero insuficiente para provocar

una caída relevante en la temperatura alcanzada por el líquido de lavado; y

e- extraer el líquido de lavado de la carga de ropa.

2. Un proceso de acuerdo con la reivindicación 1, caracterizado por incluir, después de la etapa "d", las etapas adicionales de:

- mantener la carga de ropa sumergida en el líquido de lavado en reposo después de transcurrido un período de agitación previo y durante un segundo intervalo de tiempo de reposo predeterminado, suficiente para que la temperatura del líquido de lavado alcance un valor necesario para posibilitar la activación de otra de las funciones enzimática y blanqueadora del líquido de lavado no lograda con la temperatura alcanzada en el intervalo de tiempo de reposo

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2020
Bogotá D C

Doctor(a)
RAMIRO CASTRO DUQUE.
Apoderado(a)

Oficio N° 05576

ASUNTO:	Radicación N°	04-43958
	Solicitud Internacional	PCT/BR02/0150
	Fecha Inicio fase nacional	13/06/2004
	Trámite	011
	Evento	379
	Actuación	416
	Folios	001

Como resultado del examen de forma, realizado con fundamento en el artículo 38 de la Decisión 486 de la Comisión de la Comunidad Andina, artículo 27 del Tratado de Cooperación en Materia de Patentes (PCT), regla 51 bis del Reglamento y Circular Única de la Superintendencia de Industria y Comercio, se le comunica que:

- La solicitud no contiene copia del documento en que consta la cesión del derecho de patente del inventor al solicitante o a su causante (Art. 26-k) Decisión 486).

En cumplimiento de lo dispuesto por el artículo 39 de la Decisión 486, se le requiere para que dentro del término de dos meses siguientes a la fecha de notificación del presente oficio, complete los requisitos anteriormente enunciados. En caso de no dar cumplimiento al presente requerimiento, la solicitud se considerará abandonada y perderá su prelación.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única N° 10 de 2001.


ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de la División de Nuevas Creaciones.

71 JUN 2004

El anterior requerimiento fue notificado por fijación en lista de fecha, _____
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