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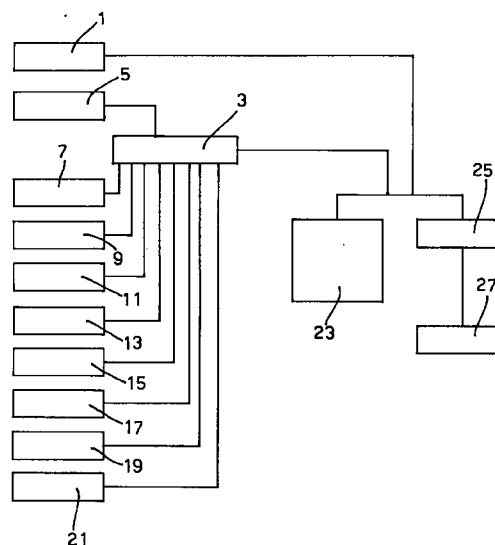
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(54) Flushing, sanitizing, pickling and degreasing system using steam

(57) Flushing, sanitizing, pickling and degreasing system using steam, composed of a unit equipped with a saturated, high temperature steam source (1); in parallel, a water circuit (5) supplies a water mixing system (3) with detergents (7), pickling agents, phosphating agents (9), protective agents (11) and the like; everything, saturated steam plus mixture, used downstream of the unit as desired in an automatic plant (23) or by means of a handle (25) that allows an operator to choose operation type and mixture type.



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Description

The present invention refers to a flushing, sanitizing, pickling and degreasing system using steam, joined to suitable substances or mixtures.

It is known how to-date surface cleaning systems in different fields have a few solutions available pertaining to a specific case, and how these solutions do not always get a satisfying result nor solve the residual disposal issue.

Some illustrative examples are, in mechanics, the frequent use of solvent or degreasing petrols, the use of highly pressurized water, the use of sanding or even ultrasounds.

In the foodstuff field, other examples are the use of anti-bacterial liquids or foams, of ultraviolet rays and also of highly pressurized water jets.

All these prior art mentioned systems are costly due to disposals and moreover they are quite polluting.

Object of the present invention is solving the above-mentioned inconveniences providing a practical and economical system that allows avoiding huge wastes of water and related components, finally obtaining a harmless residual that is easily disposable, in addition to an optimally clean surface ready to be further worked.

The system of the invention is composed of a unit equipped with an internal steam source or a source of steam taken from outside, said steam being saturated and at a high temperature; in parallel a low-pressure water circuit supplies a water mixing system with detergents, pickling agents, phosphating agents, protective agents and the like; everything, that is saturated steam plus mixture, is used downstream of the unit as desired in an automatic plant or by means of an handle that allows an operator to choose a type of operation to be carried out and a type of desired mixture.

The system potentiality is that steam can be easily coupled with different detergents or various solutions or water, thereby allowing to operate on surfaces to be treated by making dirt removable and leaving these surfaces practically free from moist.

Some examples of workings that can be carried out with the system of the invention will now be described:

- for the mechanics field: steam + detergent, or steam + phosphating agent, or steam + protective agent, or steam only;
- for the foodstuff field: steam only, or steam + water, or steam + detergent or disinfectant, and so on.

The system of the invention will now be described in detail with particular reference to the enclosed drawing that shows a system block diagram.

This system is substantially composed of a unit, equipped with an internal steam source or a source of steam taken from the outside, said steam being saturated and at a high temperature.

In the figure, said high temperature, saturated

steam source is designed as 1.

In parallel, there is provided a mixer 3 where the following converge: water 5, the detergent 7, the phosphating agent 9, the protective agent 11, the anti-bacterial agent 13, the disinfectant agent 15, and other agents 17, 19, 21.

Downstream of the mixer 3 there is provided a plant 23 using the mixture of steam + water + suitable substance, for example a detergent, or an handle 25 that allows the operator to choose the type of operation to be carried out and the type of desired mixture.

Downstream of the handle 25, reference number 27 shows the article towards which the steam jet is directed, suitably mixed with detergent 7, phosphating agent 9 and so on, depending on the operation to be carried out.

Claims

1. Flushing, sanitizing, pickling and degreasing system using steam, characterized in that it is composed of a unit equipped with a steam source (1) that is internal or external to said unit, said steam (1) being saturated and at a high temperature; in parallel a low-pressure water circuit (5) supplies a water mixing system (3) with detergents (7), pickling agents, phosphating agents (9), protective agents (11) and the like; everything, that is saturated steam plus mixture, being used downstream of the unit as desired in an automatic plant (23) or by means of an handle (25) that allows an operator to choose a type of operation to be carried out and a type of desired mixture.
2. System according to claim 1, characterized in that steam can be easily coupled with different detergents or various solutions or water, thereby allowing to operate on surfaces to be treated by making dirt removable and leaving said surfaces practically free from moist.

