

CLAIMS

1. Cartridge (1) for cleaning installations, such as incinerators, heat exchangers, flue gas channels, and silos, comprising a casing, e.g. a sleeve (2), containing a pyrotechnical mixture (5) and/or components of a pyrotechnical mixture and comprising an electrical detonator (3) for initiating deflagration of the mixture, **characterized by** a housing (4) which accommodates the detonator (3) and which housing (4) is attached to the casing (2) and movable between a first position, wherein the detonator (3) is isolated from the pyrotechnical mixture (5), and a second position, wherein the detonator (3) extends in the pyrotechnical mixture (5).

2. Cartridge (1) according to claim 1, wherein the housing (4) or detonator (3) on the one hand and the casing (2) on the other hand comprise engaging parts (9; 6) that enable moving of the detonator (3) to inside the mixture (5) by relative sliding and/or rotation of the detonator (3) and the casing (2).

3. Cartridge (1) according to claim 1 or 2, wherein the housing (4) or detonator (2) on the one hand comprises at least one protrusion (9) or a groove and the casing (2) on the other hand comprises a groove (6) or protrusion, respectively.

4. Cartridge (1) according to any one of the preceding claims, wherein the donator (3) is located at or near the distal end of the housing (4) and exposed at least laterally.

5. Cartridge (1) according to any one of the preceding claims, wherein the mixture (5) is a suspended powder, a compactable powder, or a compacted powder with a defined cavity for receiving the detonator (3).

6. Cartridge (1) according to any one of the preceding claims or the pre-amble of claim 1, wherein the

detonator (3) is configured to initiate deflagration at a current of at least five Ampère, preferably at least ten Ampère, preferably at least twenty Ampère.

5 7. Cartridge (1) according to any one of the preceding claims, wherein, in the first position of the housing (4), the detonator (3) is enclosed or encapsulated by a synthetic material, such as a thermoplastic polymer.

8. Cartridge (1) according to any one of the preceding claims, wherein the casing (2) and/or the housing
10 (4) is made of or laminated with a synthetic material.

9. Cartridge (1) according to any one of the preceding claims, wherein the casing (2) is water- and/or dust tight.

10. Cartridge (1) according to any one of the preceding claims, wherein the casing (2) is enveloped by a
15 thermally insulating material and/or a liquid absorbing material.

11. Cartridge (1) according to any one of the preceding claims or the pre-ambles of claim 1, comprising a
20 plurality of compartments and wherein the compartments contain different components of the pyrotechnical mixture (5).

12. Cartridge (1) according to any one of the preceding claims, wherein the nett mass (NEM) of the
25 mixture is in a range from 20 to 1000 grams.

13. Cartridge (1) according to any one of the preceding claims, wherein the mixture (5) comprises a reducing agent or fuel, such as black powder, aluminum, boron, titanium and/or magnesium; and an oxidant such as
30 sodium nitrate, potassium chlorate and/or potassium perchlorate.

14. Cartridge (1) according to any one of the preceding claims, that is coupled to a controller by a set of wires (8), which controller is configured to continually

measure electrical resistance of the wires (8) and the detonator (3).

15. System for cleaning installations, such as incinerators, heat exchangers, flue gas channels, and silos, comprising a cartridge (1) according to any one of the preceding claims, a lance, which is provided at its proximal end with a supply for a coolant and a connector and/or electrical wires to connect the detonator to a controller and which is provided at its distal end with a head for holding the cartridge and provided with outlets or ducts for supplying coolant to or about the cartridge (1).