special permits or qualifications, so that anyone who has accomplished a corresponding training is capable of carrying out the method.

Moreover, it is also advantageous that the starting components are fed to the cleaning lance via separate feed conduits and the dangerous explosive gas mixture therefore not created until in the cleaning lance shortly before triggering the explosion. In comparison to explosives, the handling of the individual components of the gas mixture is indeed far less dangerous, since these at most are individually combustible, but are not explosive.

The handling with a cleaning lance as is described in EP 1 362 213 B1 however has the disadvantage that the radius of action in the inside of the receptacle is limited. The radius of action, although being able to be increased by way of a larger lance length, this however entails small radii not being able to be overcome with a longer cleaning lance, in order to get to the difficultly accessible locations. Furthermore, a longer cleaning lance, although increasing the radius of action, such however is also more bulky and accordingly more difficult in its handling.

It is therefore the object of the present invention to modify the cleaning appliance which is described in the published document EP 1 362 213 Bl such that the locations which are to be cleaned are more easily accessible with the cleaning appliance and even inaccessible locations can be more easily and simply reached.

Furthermore, the handling of the cleaning appliance is to be simplified and safer and the flexibility is to be increased.

The object is achieved by the feature(s) of the independent claim(s). Further developments and particular embodiments of the invention result from the dependent claims, the description and the drawings.

In one aspect, there is provided an appliance for removing deposits in interiors of receptacles or facilities by way of explosion technology, comprising a supply device for providing an explosive mixture or its starting components, a transport conduit which is connected to the supply device and is for transporting explosive mixture to a cleaning location, and a mixing unit for creating an explosive mixture from at least two starting components which are provided by the supply device is arranged between the supply device and the transport conduit, characterised in that the transport conduit at least in a section or in sections is designed as a transport hose, wherein the transport hose is constructed in a multi-layered manner and comprises a first hose which in particular is pressure-resistant, and an inner-lying second hose which is surrounded by the first hose and is gas-impermeable.

The term "hose" in this invention is to be understood as a flexible, elongate hollow body. The hose differs from a tube (pipe) by its flexibility. In this context, flexible in particular means that the transport hose can be deflected out of its longitudinal axis or out of the longitudinal direction in all directions.

In particular, the term "hose" is not to be limited to a certain material or material group. The hose for example can therefore be of plastic or metal or a combination thereof.

PATENT CLAIMS

1. An appliance for removing deposits in interiors of receptacles or facilities by way of explosion technology, comprising a supply device for providing an explosive mixture or its starting components, a transport conduit which is connected to the supply device and is for transporting explosive mixture to a cleaning location, and a mixing unit for creating an explosive mixture from at least two starting components which are provided by the supply device is arranged between the supply device and the transport conduit,

characterised in that

the transport conduit is designed at least in a section or in sections as a transport hose, wherein the transport hose is constructed in a multi-layered manner and comprises a first hose which in particular is pressure-resistant, and an inner-lying second hose which is surrounded by the first hose and is gas-impermeable.

2. An appliance according to claim 1, characterised in that the second, gas-impermeable hose consists of plastic or comprising a plastic.

3. An appliance according to claim 1 or 2, characterised in that the second, gas-impermeable hose forms a transport channel for the explosive mixture.

4. An appliance according to claim 1 to 3, characterised in that an annular cooling channel is formed between the first and the second hose.

5. An appliance according to one of the claims 1 to 4, characterised in that the first hose is of metal.

6. An appliance according to one of the claims 1 to 5, characterised in that the first hose is a hose braiding.

7. An appliance according to one of the claims 1 to 6, characterised in that the second hose is a corrugated hose, in particular of metal.

8. An appliance according to one of the claims 1 to 7, characterised in that the transport hose comprises an inner-lying third hose which is surrounded by the second hose and whose inner wall has a reduced unevenness compared to the second hose.

9. An appliance according to claim 8, characterised in that the third hose is a stripwound hose.

10. An appliance according to one of the claims 1 to 9, characterised in that the transport hose comprises an outer-lying fourth hose which surrounds the first hose and which is liquid-impermeable, wherein an annular cooling channel for a cooling medium is formed between the first and the fourth hose.

11. An appliance according to claim 10, characterised in that the fourth hose is a corrugated hose.

12. An appliance according to claim 10, characterised in that the fourth hose is a plastic hose.

13. An appliance according to claim 12, characterised in that the plastic hose consists of an elastomer such as ethylene propylene diene monomer rubber (EPDM) or comprises this.

14. An appliance according to one of the claims 1 to 13, characterised in that an inlet device, in particular with metering fittings for the controlled metered introduction of the starting components or of the explosive mixture into the transport hose is arranged between the supply device and the transport hose.

15. An appliance according to claim 1 or 14, characterised in that the inlet device or the mixing unit comprises an ignition device for igniting the explosive mixture.

16. An appliance according to one of the claims 1 or 14 to 15, characterised in that the inlet device or the mixing unit comprises at least one temperature sensor which in particular is arranged in a mixing zone and is for measuring the temperature, in particular in the mixing zone.

17. An appliance according to one of the claims 1 or 14 to 16, characterised in that the inlet device or the mixing unit comprises at least one pressure sensor for measuring the pressure in particular upstream of the mixing zone, said pressure sensor being arranged in particular upstream of the mixing zone in the flow direction (S).

18. An appliance according to one of the claims 1 to 17, characterised in that the appliance each comprises a metering fitting for the metered introduction of the gaseous mixture or its starting components, wherein the metering fitting

- is contained in the / a metering unit or
- in the inlet device or mixing unit.

19. An appliance according to claim 1 or 14 to 17, characterised in that the inlet device or the mixing unit comprises metering fittings which are arranged on the feed conduits of the starting components, in particular upstream of a mixing zone in the flow direction (S).

20. An appliance according to claim 1 or 14 to 19, characterised in that the inlet device or mixing unit comprises check valves which are arranged on the feed conduits of the starting components, in particular upstream of a mixing zone in the flow direction (S).

21. An appliance according to one of the claims 1 to 20, characterised in that the supply device comprises a metering unit for the metered provision of the explosive mixture or its starting components.

22. An appliance according to one of the claims 1 to 21, characterised in that a hose coupling for the in particular tool-free connection of a connection component is arranged at the cleaning-side end of the transport hose.

23. An appliance according to one of the claims 1 to 22, characterised in that the transport hose at the feed side is rotatably connected to a component of the appliance, in particular to an inlet device or mixing unit, via a rotary joint connection.

24. An appliance according to one of the claims 1 to 23, characterised in that a guide tube is arranged at the cleaning-side end of the transport hose.

25. An appliance according to one of the claims 1 to 23, characterised in that a container connection element for connecting a container envelope is arranged at the cleaning-side end of the transport hose.

26. An appliance according to one of the claims 1 to 25, characterised in that one or more positioning hoses are connected directly or indirectly to the cleaning-side end of the transport hose.

27. An appliance according to one of the claims 1 to 26, characterised in that the appliance comprises a flex-tube, by way of which the transport hose can be led through passages in the interior of the receptacle or facility to be cleaned.

28. An appliance according to one of the claims 1 to 27, characterised in that the appliance comprises an introduction tube, by way of which the transport hose can be introduced via an opening into the interior of the receptacle or facility to be cleaned, wherein the horizontal

introduction depth of the transport hose into the interior can be determined via the insert position of the introduction tube.

29. A method for removing deposits in interiors of receptacles and facilities by way of explosion technology with an appliance according to the claims 1 to 28, with the steps:

- providing a gaseous, explosive mixture in the transport conduit, and
- transporting the gaseous, explosive mixture to a cleaning-side outlet opening of the transport conduit;
- controlled ignition of the explosive mixture by way of an ignition device, wherein the explosive mixture is brought to explode.

30. A method according to claim 29, characterised by the following steps:

- attaching a container envelope to the cleaning-side outlet opening of the transport conduit;
- filling the container envelope with the explosive mixture which exits through the cleaning-side outlet opening of the transport conduit.

31. A method according to claim 29, characterised by the following steps:

- outflow of the explosive mixture through at least one cleaning-side outlet opening of the transport conduit into the interior of the receptacle or facility to be cleaned and formation of a cloud from the explosive mixture.

32. A method according to claim 29, characterised by the following steps:

- positioning several positioning hoses each with a container envelope which is attached to the positioning hose, at different locations in the interior of the receptacle or facility to be cleaned;
- parallel or sequential connecting of the positioning hoses onto the transport conduit in a direct or indirect manner;
- charging the connected positioning hoses in a sequential sequence with gaseous, explosive mixture and supplying the container envelopes with explosive mixture and, by way of this, producing several cleaning explosions in a sequential sequence.