Claims

1. Method for handling material in a pneumatic material conveying system, which conveying system comprises at least one input point (108) of material, a material conveying pipe (100), which can be connected to an input point (108), and a separating device or a container (11), in which the material to be transported is separated from the transporting air, and also means for achieving a pressure difference and/or a transporting air flow in the conveying pipe (100) at least during the transportation of material, c h a r a c t e r i z e d in that in the method the separating device is a deep collection container-separating device (10), into which material is conveyed from input points (108) via a conveying pipe (100), that the collecting container (11) is functioning as a cyclone separator, and in that in the emptying phase the collection container (11) is lifted with lifting means and the material (w) that has collected in the collection container (11) is emptied via an openable and closable aperture (6) arranged in the bottom part of the collection container (11).

2. Method according to claim 1, c h a r a c t e r i z e d in that the means for achieving a pressure difference and/or a transporting air flow in the conveying pipe comprise at least one partial-vacuum source (21), by the aid of the suction or pressure difference or transporting air flow achieved by which material is conveyed in the conveying pipe.

3. Method according to claim 1 or 2, c h a r a c t e r i z e d in that the means for achieving a pressure difference and/or a transporting air flow in the conveying pipe comprise at least one pressure source or fan, by the aid of the pressure difference or transporting air flow achieved by which material is conveyed in the conveying pipe.

4. Method according to any of claims 1 - 3, c h a r a c t e r i z e d in that in the method the means for achieving a pressure difference and/or a transporting air flow in the conveying pipe are arranged in a mobile means (20), such as in a vehicle or a trailer, which means for achieving a pressure difference and/or a transporting air flow are connected to the material conveying system, and the partial vacuum/pressure difference/transporting air flow needed for the conveyance of material in the system is achieved, in which case material (W) is transferred along the conveying piping (100, 101A, 101B) to a collection container (11).

12. Separating device for a pneumatic material conveying system, which comprises means for connecting a material conveying pipe (100) to the input aperture of the separating device and means for conducting away the transporting air from the chamber space of the separating device, c h a r a c t e r i z e d in that the separating device is a deep collection container-separating device, which comprises means (30) for lifting the collection container (11) and which collection container (11) comprises an openable aperture (6) in the bottom part and that the collection container (11) comprises means for configuring it to function as a cyclone separator.

13. Device according to claim 12, c h a r a c t e r i z e d in that the deep collection container-separating device comprises an actual collection container (11) and an external container (12).

14. Device according to claim 12 or 13, c h a r a c t e r i z e d in that the top part of the collection container (11) comprises an input aperture (9).

15. Device according to any of claims 12 – 14, c h a r a c t e r i z e d in that the collection container (11) narrows at least in the bottom part towards the output aperture (6).

~~16. Device according to any of claims 12 – 15, c h a r a c t e r i z e d in that the collection container (11) comprises means for configuring it to function as a cyclone separator.~~

~~17~~16. Device according to any of claims 12 – ~~16~~15, c h a r a c t e r i z e d in that an output branch coupling (16) is arranged in the output channel of the collection container (11) in a mainly tangential direction with respect to the wall (13) of the output channel.

~~18~~17. Device according to any of claims 12 – ~~17~~16, c h a r a c t e r i z e d in that the device comprises means for bringing the transporting air and the material coming with it (w+a) initially into a rotating movement in the collection container (11) in a first direction with respect to the vertical axis of the collection container, and for bringing the outgoing transporting air (a) into a rotating movement in a mainly opposite direction of rotation.

~~19~~18. Device according to any of claims 12 – ~~18~~17, c h a r a c t e r i z e d in that the external container (12) is embedded to below ground level (S) at least partly.

~~20~~19. Waste conveying system, which comprises at least one input point (108) of waste material, a material conveying pipe (100), which can be connected to an input point (108), and a separating device or container (11), in which the material to be transported is separated from the transporting air, and also means for achieving a pressure difference and/or a transporting air flow in the conveying pipe (100) at least during the transportation of material, c h a r a c t e r i z e d in that the separating device (10) is a deep collection container-separating device, that the collecting container (11) is configured to function as a cyclone separator, into which material is configured to be conveyed from input points (108) via a conveying pipe (100), and in that in the emptying phase the collection container (11) is lifted with lifting means and the material (w) that has collected in the collection container (11) is emptied via an openable aperture (6) arranged in the bottom part of the collection container (11).

~~21~~20. Waste conveying system according to claim ~~20~~19, c h a r a c t e r i z e d in that the means for achieving a pressure difference and/or a transporting air flow in the conveying pipe comprise at least one partial-vacuum source (21), by the aid of the suction or pressure difference or transporting air flow achieved by which material is conveyed in the conveying pipe.

~~22~~21. Waste conveying system according to claim ~~20~~ 19 or ~~21~~20, c h a r a c t e r i z e d in that the means for achieving a pressure difference and/or a transporting air flow in the conveying pipe comprise at least one pressure source or fan, by the aid of the pressure difference or transporting air flow achieved by which material is conveyed in the conveying pipe.

~~23~~22. System according to any of claims ~~20~~ 19 – ~~23~~21, c h a r a c t e r i z e d in that means for achieving a pressure difference and/or a transporting air flow in the conveying pipe are arranged in a mobile means (20), such as in a vehicle or a trailer, which means for achieving a pressure difference and/or a transporting air flow are connected to a waste conveying system, and the partial vacuum/pressure difference/transporting air flow needed for the conveyance of waste material in the system is achieved, in which case waste material is transferred along the conveying piping (100, 101A, 101B) to a collection container (11).

~~24~~23. System according to any of claims ~~20~~ 19 – ~~23~~22, c h a r a c t e r i z e d in that the collection container (11) is configured to be emptied into the container space (41) of a transport means (40), in which container space the material is preferably compressed to be denser, and which transport means (40) transports the material away.

~~25~~24. System according to any of claims ~~20~~ 19 - ~~24~~23, c h a r a c t e r i z e d in that the means for achieving a pressure difference and/or a transporting air flow in the conveying pipe are configured to function as the means for achieving a pressure difference and/or a transporting air flow in the conveying pipe of a number of different material conveying systems, in such a way that the means for achieving a pressure difference and/or a transporting air flow in the conveying pipe are transferred with a mobile means (20) to the proximity of each material conveying system for connecting with connection means to the material conveying system.

~~26~~25. System according to any of claims ~~20~~ 19 – ~~25~~24, c h a r a c t e r i z e d in that the input points (108) of material are the input points of waste, such as waste receptacles or refuse chutes.

~~27~~26. System according to any of claims ~~18~~ 19 – ~~26~~25, c h a r a c t e r i z e d in that there are a number of separating devices (10A, 10B), to which a conveying pipe (100) can be connected in a selective manner with a valve means (120).