Abstract

Biomass conveying installation for feeding into a pressurised container

The introduction of a heterogeneous solid substance, such as biomass, into a container which is under pressure is difficult. The rotary valves and airlocks used hitherto have substantial deficiencies. The use of standard screw conveyors has hitherto failed due to the fact that a cavity formed behind the screw helix in which gas could escape from the pressurised container. These deficiencies are resolved in that two independently controllable screws are arranged in a screw conveyor pipe (6). Between the primary screw driven by motor (12) and the secondary screw driven by motor (11), the biomass is compacted by high pressure as a consequence of the different revolution speeds of the motors (11, 12) in such a way that an almost gas-tight plug (13) is formed. The invention is particularly well-suited for the introduction of biomass into a gasification installation which is under pressure, for the production of synthesis gas.

- Fig. 1 -

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