

CLAIMS

1. Cylinder release arrangement, wherein at least one cylinder is arranged with a piston within the cylinder, and a cylinder head closing off one end of the cylinder, forming a chamber between the piston and the cylinder head, wherein the cylinder is provided to arrange a leakage of fluid from one side of a piston to the other side of the piston, when the piston is in a given position within the cylinder, and release means are provided for the subsequently controlled release of the cylinder head from the cylinder.
2. Cylinder release arrangement in accordance with claim 1, wherein the piston is provided with a piston rod (18), and movement of the piston includes movement of the piston rod (18), and leakage across the piston (17) occurs when the piston (17) is caused to move away from its sealing position within the cylinder.
3. Cylinder release arrangement in accordance with claim 2, wherein the piston (17) is caused to move out of a sealed abutment with a sealing surface (19) in the cylinder.
4. Cylinder release arrangement in accordance with one of the preceding claims wherein the release means comprise a release part (23) of the piston (17) and fingers (22) connected to the cylinder head, and when moving the piston further away from the sealing surface (19) the release part (23) causes the fingers (22) to move out of locking contact with the cylinder as they interact with the release part (23) thereby providing for the release of the cylinder head from the cylinder.
5. Cylinder release arrangement in accordance with claim 4, wherein the interaction between the fingers (22) and the release part (23) allows for the piston (17), the piston rod (18) and the cylinder head to move away from the sealing surface (19) and release the cylinder head from the cylinder.
6. Cylinder release arrangement in accordance with claim 4 or claim 5, wherein when moving the piston with the release part (23) into interaction with the fingers (22) a thickened portion of the piston rod (18) is moved out of locking contact with the fingers (22).
7. Cylinder release arrangement in accordance with one of the claims 4-6, wherein the fingers (22) are arranged to flex inwardly when interaction between the release part (23) and the fingers (22).

- 5 8. Cylinder release arrangement in accordance with one of the claims 4-7, wherein the locking contact locks the fingers (22) in contact with the cylinder (wall) by (complementary) holding ridges being provided in the cylinder, or the fingers or both the fingers and the cylinder (wall) are formed with holding ridges.
- 10 9. Cylinder release arrangement in accordance with of the proceeding claims 2-8, wherein the deformation of tension rods connected between two riser parts actuates the movement of the piston rod.
- 15 10. Cylinder arrangement with a release mechanism, the cylinder arrangement comprising a cylinder (30) with a piston (17) within the cylinder (30) connectable to a piston rod 18 and a cylinder head (21) closing off one end of the cylinder (30), forming a chamber between the piston (17) and the cylinder head, the cylinder (21) comprising axial extending fingers (22) provided with a radial inward flexibility, the fingers being locked in locking engagement to the cylinder wall by a thickened portion (18A) of the piston rod (18), the piston rod (18) further comprises a release part (23) arranged at a distance from the thickened portion (18A) and the release part (23) is configured for interaction with the fingers (22), such that when the piston move to a finger release position by the piston rod (18) in axial direction relative to the cylinder (30), the thickened portion (18A) will move out of locking interaction with the fingers (22) and further movement of the piston rod (18) brings the release part (23) to interact with the fingers (22) and causes the fingers (22) to flex radially inward out of engagement with the cylinder (30), to ensure release of cylinder head (21) from cylinder (30).
- 20 25 30 11. Cylinder arrangement with a release mechanism in accordance with claim 10, wherein the thickened portion (18A) and release part (23) of the piston rod is provided in a separate rod part and remains in position until the piston (17)/piston rod is connected to the separate rod part and activates the release mechanism.
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CLAIMS

- 5 1. Cylinder release arrangement, wherein at least one cylinder is arranged with a piston within the cylinder, and a cylinder head closing off one end of the cylinder, forming a chamber between the piston and the cylinder head, wherein the cylinder is provided to arrange a leakage of fluid from one side of a piston to the other side of the piston, when the piston is in a given position within the cylinder, and release means are provided for the subsequently controlled release of the cylinder head from the cylinder.
- 10 2. Cylinder release arrangement in accordance with claim 1, wherein the piston is provided with a piston rod, and movement of the piston includes movement of the piston rod, and leakage across the piston occurs when the piston is caused to move away from its sealing position within the cylinder.
- 15 3. Cylinder release arrangement in accordance with claim 2, wherein the piston is caused to move out of a sealed abutment with a sealing surface in the cylinder.
- 20 4. Cylinder release arrangement in accordance with one of the proceeding claims wherein the release means comprise a release part of the piston and fingers connected to the cylinder head, and when moving the piston further away from the sealing surface the release part causes the fingers to move out of locking contact with the cylinder as they interact with the release part thereby providing for the release of the cylinder head from the cylinder.
- 25 5. Cylinder release arrangement in accordance with claim 4, wherein the interaction between the fingers and the release part allows for the piston, the piston rod and the cylinder head to move away from the sealing surface and release the cylinder head from the cylinder.
- 30 6. Cylinder release arrangement in accordance with claim 4 or claim 5, wherein when moving the piston with the release part into interaction with the fingers a thickened portion of the piston rod is moved out of locking contact with the fingers.
- 35 7. Cylinder release arrangement in accordance with one of the claims 4-6, wherein the fingers are arranged to flex inwardly when interaction between the release part and the fingers.

8. Cylinder release arrangement in accordance with one of the claims 4-7, wherein the locking contact locks the fingers in contact with the cylinder (wall) by (complementary) holding ridges being provided in the cylinder, or the fingers or both the fingers and the cylinder (wall) are formed with holding ridges.
9. Cylinder release arrangement in accordance with of the proceeding claims 2-8, wherein the deformation of tension rods connected between two riser parts actuates the movement of the piston rod.
10. Cylinder arrangement with a release mechanism, the cylinder arrangement comprising a cylinder with a piston within the cylinder connectable to a piston rod and a cylinder head closing off one end of the cylinder, forming a chamber between the piston and the cylinder head, the cylinder head comprising axial extending fingers provided with a radial inward flexibility, the fingers being locked in locking engagement to the cylinder wall by a thickened portion of the piston rod, the piston rod further comprises a release part arranged at a distance from the thickened portion and the release part is configured for interaction with the fingers, such that when the piston move to a finger release position by the piston rod in axial direction relative to the cylinder, the thickened portion will move out of locking interaction with the fingers and further movement of the piston rod brings the release part to interact with the fingers and causes the fingers to flex radially inward out of engagement with the cylinder, to ensure release of cylinder head from cylinder.
11. Cylinder arrangement with a release mechanism in accordance with claim 10, wherein the thickened portion and release part of the piston rod is provided in a separate rod part and remains in position until the piston/piston rod is connected to the separate rod part and activates the release mechanism.