

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A bearing system for a rotor in rotating machines, ~~comprising such as compressors, pumps, turbines and expanders, the rotor being provided with~~ at least two bearings and associated seals being provided for the rotor, wherein each of the bearings and sealing point for the rotor is in the form of a bearing and seal combination which is formed of a stator located within a rotating machine housing and surrounding the rotor, wherein the stator is formed with a bore, whereby an annular clearance is formed between the stator and rotor, and wherein the bore has a gradually increasing sectional area in ~~[[the]]~~ a direction of higher pressure (P2) within the rotating machine, wherein the stator is provided with means adapted for damping of gas rotation in the annular clearance, wherein the rotating damping means includes at least one of an axial rib, a brush, or an ~~inclined hole pattern, and a guide apparatus, such as~~ guide blades.

2. (Currently Amended) A bearing system according to claim 1, wherein the bearing and seal combination is an axial bearing formed as a cylindrical disc on the rotor which bears against an associated portion of the stator, whereby a gas film may be formed with rigidity and damping ~~according to the same principle as in a radial bearing having desired dynamic rigidity and damping.~~

3. (Previously Presented) A bearing system according to claim 1, wherein the axial bearing is formed according to the hydrostatic principle which entails a flow restriction before and after its bearing surface as to obtain rigidity with accompanying damping.

4. (Previously Presented) A bearing system according to claim 2 wherein the axial bearing is formed as a combination of the radial bearing with gas film and the hydrostatic principle with flow restriction before and after the bearing surface.

5-6. (Canceled)

7. (Previously Presented) A bearing system according to claim 1, wherein the bore is formed having an uneven surface structure.

8. (Previously Presented) A bearing system according to claim 1, wherein the bore is formed having a honeycomb structure or pattern of holes.

9. (Currently Amended) A bearing system according to claim 1, wherein [[the]] a surface structure of the bore has an outer zone consisting of an external radial pattern of holes and an internal pattern of channels, but so positioned relative to each other as to allow gas exchange to take place in the direction of the higher pressure (P2).

10. (Currently Amended) A bearing system according to claim 1, wherein at [[the]] a start-up or [[the]] a run-down of the rotating machine [[the]] a higher pressure (P2) is provided by means of an accumulator which contains gas at such a

pressure, and which is in communication with each individual one of the bearing and seal combination.

11. (Previously Presented) A bearing system according to claim 1, wherein the system comprises at least two support bearings arranged in connection with the respective bearing and seal combination, and which are of a type suitable for withstanding contact for a brief period during start-up or run-down.

12. (Currently Amended) A bearing system according to claim 1, wherein the system includes a control means ~~such as a regulating valve~~, so as to adjust the geometry of the respective bearing and seal combination by means of applied pressure forces.

13. (Currently Amended) A bearing system according to claim 1, wherein ~~[[the]]~~ a motor and ~~[[the]]~~ a compressor are located in the same housing.

14. (Previously Presented) A bearing system according to claim 1, wherein a passive permanent magnetic bearing for support of the rotor at start-up or shut-down is arranged integrated in the bearing and seal combination or separately adjacent thereto.

15. (Currently Amended) A bearing system according to claim 1, wherein the guide ~~apparatus~~ ~~(d)~~ blades give[[s]] the gas a start rotation in a direction opposite a rotating direction of the rotor.

16. (Canceled)

17. (New) A bearing system according to claim 1, wherein the rotating machine is chosen among at least one of the following: a compressor, a pump, a turbine, an expander.

18. (New) A bearing system according to claim 12, wherein the control means is a regulating valve.