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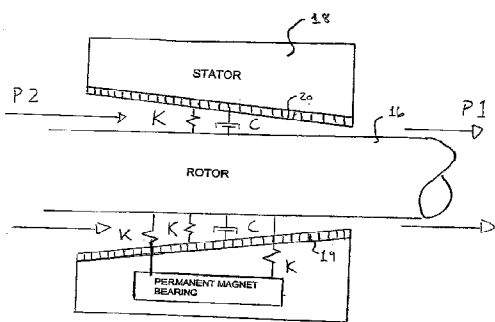
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(54) Title: BEARING SYSTEM FOR ROTOR IN ROTATING MACHINES



(57) Abstract: A bearing system for a rotor in rotating machines, such as compressors, pumps, turbines, expanders, is characterized in that points of bearing and sealing for the rotor (16) each being in the form of a combined bearing and sealing (17) formed by a stator (18) situated within a rotating machine house and surrounding the rotor (16). The stator (18) is formed with a bore (19), whereby an annular clearance is created between stator and rotor, and the bore (19) is having sectional area gradually increasing in the direction of larger pressure (P2) within the rotating machine.

P2 > P1  
K: positive direct rigidity  
C: positive direct damping

Fig. 2



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