

ABSTRACT OF THE DISCLOSURE

WATER INJECTION TYPE SCREW FLUID MACHINE

A water-lubrication type screw fluid machine, in which a shaft sealing device has a long-life, and in which a first non-contact seal, a second non-contact seal, and a lip seal, are disposed between a rotor chamber and a bearing for a rotor shaft of a screw rotor, the bearing located on the high pressure side, and in this order from the rotor chamber side, includes: a low pressure communicating channel for allowing an outflow space formed on the rotor chamber side with respect to the first non-contact seal to communicate with a low pressure channel for the target gas communicating with a low pressure space inside the rotor chamber or the rotor chamber; a pressurized communicating channel for introducing high- pressure target gas into a pressurized space formed between the first and second non-contact seals; and an open communicating channel, through which an open space formed between the second non-contact seal and the lip seal opens to the outside of the casing.

Fig. 1