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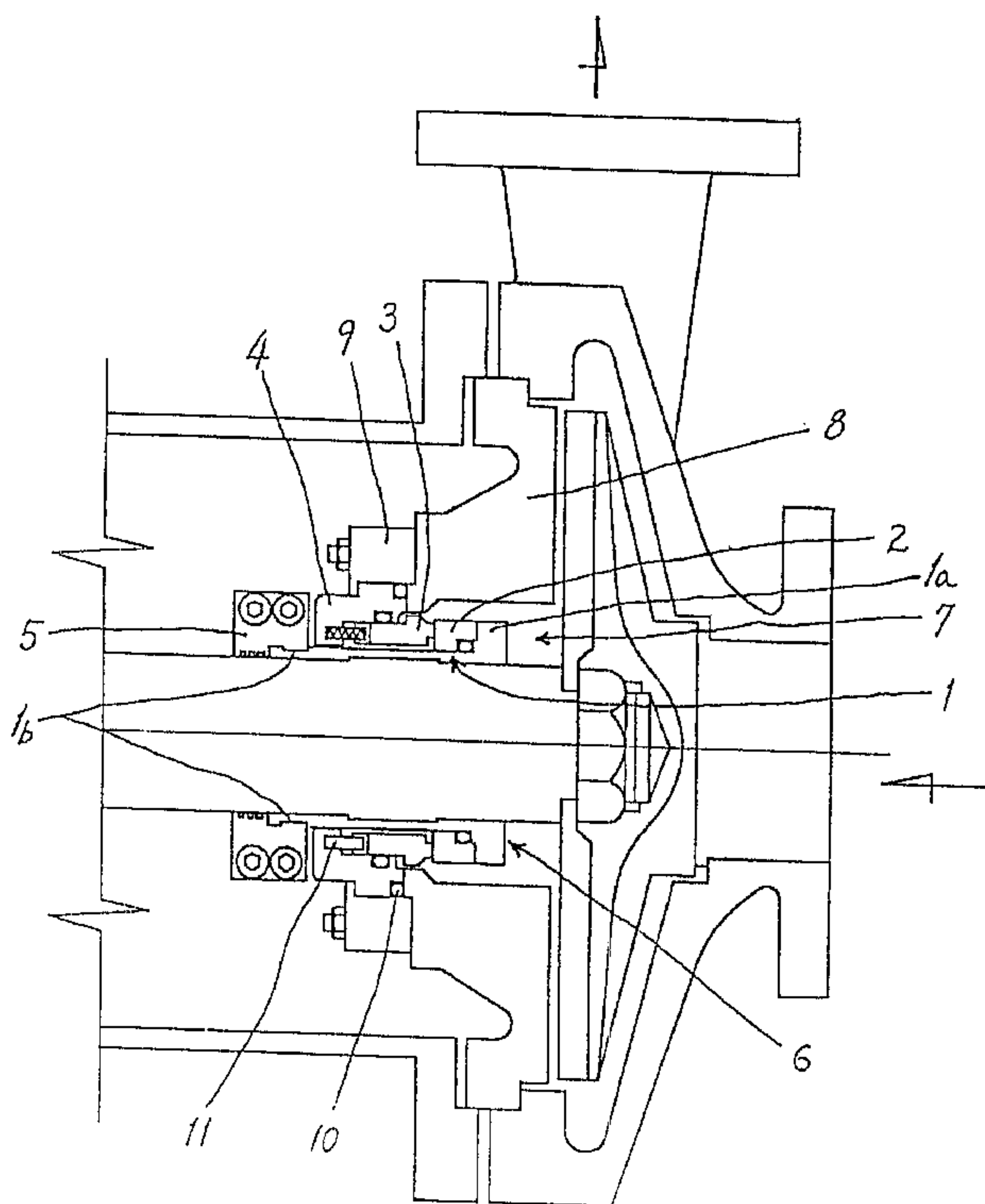
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(54) Titre : EQUIPEMENT DE JOINT DE POMPE RESISTANT AUX ACIDES

(54) Title: ACID PROOF PUMP SEAL EQUIPMENT



(57) Abrégé/Abstract:

Present device refers to acid proof pump seal equipment. Rotary ring and fixed ring are composed as one body - collar - in the acid proof sleeve. Seal body, which is made into a block, is inserted in pump compartment's gasket and it can simply be fixed-installed with a flange. With increased catalytic action of liquid to seal body by deeply placing seal body in pump compartment, seal durability is extended with seal body's overheating prevention as well as cooling effect is enhanced without coolant supply device.

[Summary]

Present device refers to acid proof pump seal equipment. Rotary ring and fixed ring are composed as one body – collar – in the acid proof sleeve. Seal body, which is made into a block, is inserted in pump compartment's gasket and it can simply be fixed-installed with a flange. With increased catalytic action of liquid to seal body by deeply placing seal body in pump compartment, seal durability is extended with seal body's overheating prevention as well as cooling effect is enhanced without coolant supply device.

## [Specifications]

[Name of Device]

Acid proof pump seal equipment

[Brief Descriptions of Drawings]

Drawing 1: Sectional plan of present device's seal body inserted in inner part of pump compartment's gasket

Drawing 2: Sectional plan of present device's seal body

Drawing 3: Sectional plan of assembled status of former seal in external part of pump compartment's gasket

## \* Symbol Descriptions of Essential Parts of Drawings \*

1: Acid Proof Sleeve

2: Rotary Ring

3: Internal Fixed Ring

4: External Fixed Ring

5: Collar

6: Seal Body

7: Pump Compartment

8: Gasket

9: Flange

[Detailed Description of Device]

[Purpose of Device]

[Technology field which present device is subject to / Former technology of this field]

Present device refers to acid proof pump seal equipment. Rotary ring and fixed ring are composed as one body – collar – in the acid proof sleeve. Seal body, which is made into a block, is inserted in pump compartment's gasket and it can simply be fixed-installed with a flange. With this mechanism, even an unskilled technician can assemble seal body in the pump compartment. With increased catalytic action of liquid to seal body by

deeply placing seal body in pump compartment, seal durability is extended with seal body's overheating prevention as well as cooling effect is enhanced without coolant supply device.

The usage of former acid proof seal equipment was extremely limited due to expensive cost of acid proof material. And only skilled technician was able to assemble the seal body for each part was made to place in pump's gasket as shown in drawing 3. In addition, seal durability was shortened because of overheating due to lack of liquid's catalyzing surface in seal body because seal body was placed in external part of the gasket. There were also several defects such as complexity of installing coolant supply device to decrease heating, environment pollution due to using coolant, and so on.

[Technological Task of Device]

Simplicity of installation by 1) composing rotary ring and fixed ring as one body – collar – in the acid proof sleeve, 2) extending seal durability by seal body's overheating prevention with increased liquid's catalytic action to seal body in pump compartment, and 3) enhancing cooling effect without coolant supply device.

[Construction of Device]

- <1> Rotary ring (2), internal fixed ring (3), and external fixed ring (4) are inserted in (1a) of acid proof sleeve (1).
  - <2> Seal body is composed as one body by placing collar (5) to (1b).
  - <3> External fixed ring (4) of seal body (6) is fixed to gasket's (8) surface in pump compartment (7) with flange (9).
  - <4> By deeply placing seal body (6) in pump compartment (7), catalytic action of liquid is increased.
- (10) is "O" ring and (11) is a pin.

Because each part of seal body (6) is block-made as one body, seal body (6) can simply be deeply assembled in pump compartment (7) by fixing only seal body (6) to the gasket (9) with flange (9). And liquid's catalytic action is increased for greater part of seal body (6) is placed in the pump compartment (7).

[Effect of Device]

- 1) Because each part of seal body (6) is block-made as one body, it is easy to install seal body (6) to pump compartment (7).
- 2) Durability of seal is extended due to cooling effect of seal body (6) is enhanced.
- 3) It is economical for separate coolant supply device is not needed.
- 4) It is environment-friendly for the absence of coolant leakage.

[Demand Extent of Utility Model Registration]

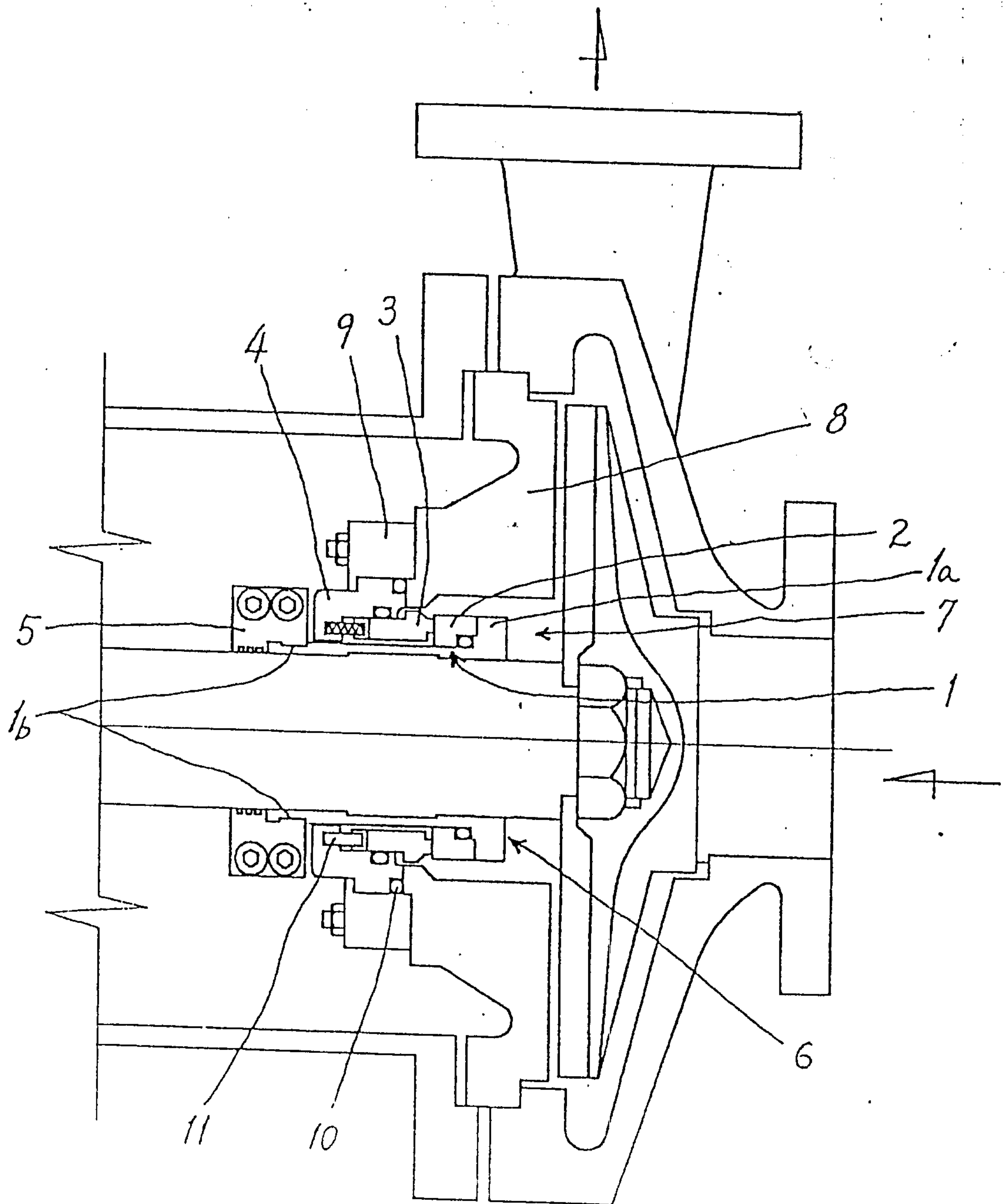
[Demand Case 1]

Acid proof pump seal equipment with following trait.

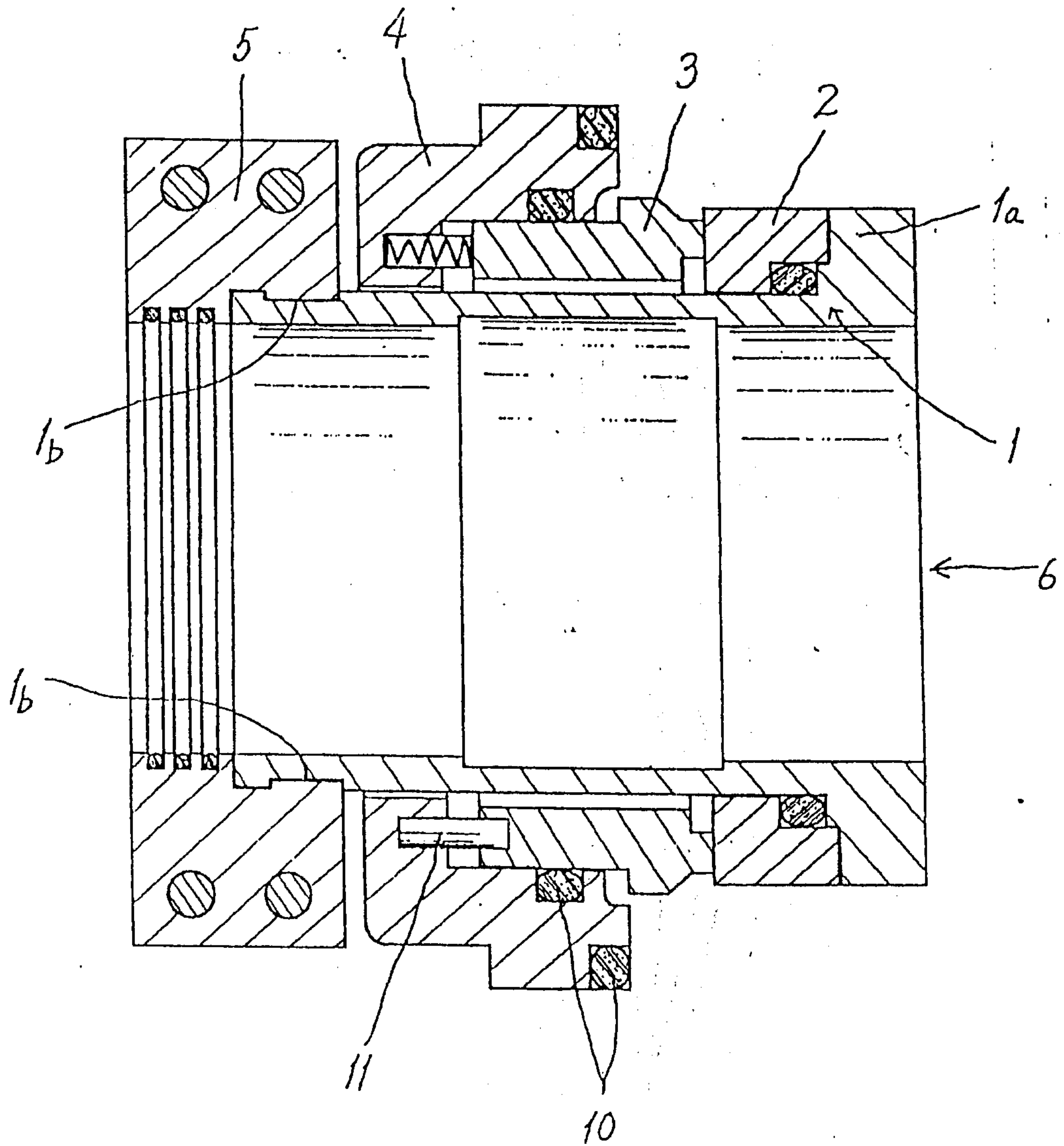
Rotary ring (2), internal fixed ring (3), and external fixed ring (4) are inserted in (1a) of acid proof sleeve (1) and seal body is composed as one body by placing collar (5) to (1b). Next, external fixed ring (4) of seal body (6) is fixed to gasket's (8) surface in pump compartment (7) with flange (9) and seal body (6) is deeply placed in pump compartment (7).

【도면】

【도 1】



【도 2】



【도 3】

