Claims

1. A seal assembly that comprises:

(a) a ceramic tube (1);

(b) a first ring (2) made of a refractory alloy comprising:

- a cylindrical opening (21) that makes it possible to receive the ceramic tube;

- a first shoulder (22) located at the lower end of the ring, oriented toward the inside of the cylindrical opening and making it possible to support said ceramic tube;

- a second shoulder (23) that forms an annular space, at the upper end of the ring, between the ceramic tube and the first ring made of a refractory alloy;

(c) a second ring (3) made of a sealing material that can be deformed by heat treatment, located in the annular space formed by the second shoulder of the refractory alloy ring; and

(d) a third ring (4) made of a metal alloy positioned on the upper edge of the first ring (2).

2. Assembly according to claim 1, characterized in that said assembly has a first gap, between the ceramic tube and the lower portion at the second shoulder (23) of the first ring (2), of less than 0.2 mm.

3. Assembly according to one of claims 1 or 2, characterized in that said assembly has a second gap, between the ceramic tube (1) and the second ring (3), of less than 0.1 mm.

4. Assembly according to one of claims 1 to 3, characterized in that the sealing material of the second ring (3) is chosen from glasses and glass-ceramics.

5. Assembly according to one of claims 1 to 4, characterized in that the alloys of the first ring (2) and of the third ring (4) are chosen from alloys having a service temperature above 500°C and a thermal expansion coefficient from ambient temperature to 800°C of greater than 12×10^{-6} K^{-1}.

Claims

1. Seal assembly that comprises:

(a) a ceramic tube (1);

(b) a first ring (2) made of a refractory alloy comprising:

- a cylindrical opening (21) that makes it possible to receive the ceramic tube;

- a first shoulder (22) located at the lower end of the ring, oriented toward the inside of the cylindrical opening and making it possible to support said ceramic tube;

- a second shoulder (23) that forms an annular space, at the upper end of the ring, between the ceramic tube and the first ring made of a refractory alloy;

(c) a second ring (3) made of a sealing material that can be deformed by heat treatment, located in the annular space formed by the second shoulder of the refractory alloy ring; and

(d) a third ring (4) made of a metal alloy positioned on the upper edge of the first ring (2).

2. Assembly according to claim 1, characterized in that said assembly has a first gap, between the ceramic tube and the lower portion at the second shoulder (23) of the first ring (2), of less than 0.2 mm.

3. Assembly according to one of claims 1 or 2, characterized in that said assembly has a second gap, between the ceramic tube (1) and the second ring (3), of less than 0.1 mm.

4. Assembly according to one of claims 1 to 3, characterized in that the sealing material of the second ring (3) is chosen from glasses and glass-ceramics.

5. Assembly according to one of claims 1 to 4, characterized in that the alloys of the first ring (2) and of the third ring (4) are chosen from alloys having a service temperature above 500°C and a thermal expansion coefficient from ambient temperature to 800°C of greater than $12\times10^{-6}\ K^{-1}$.