



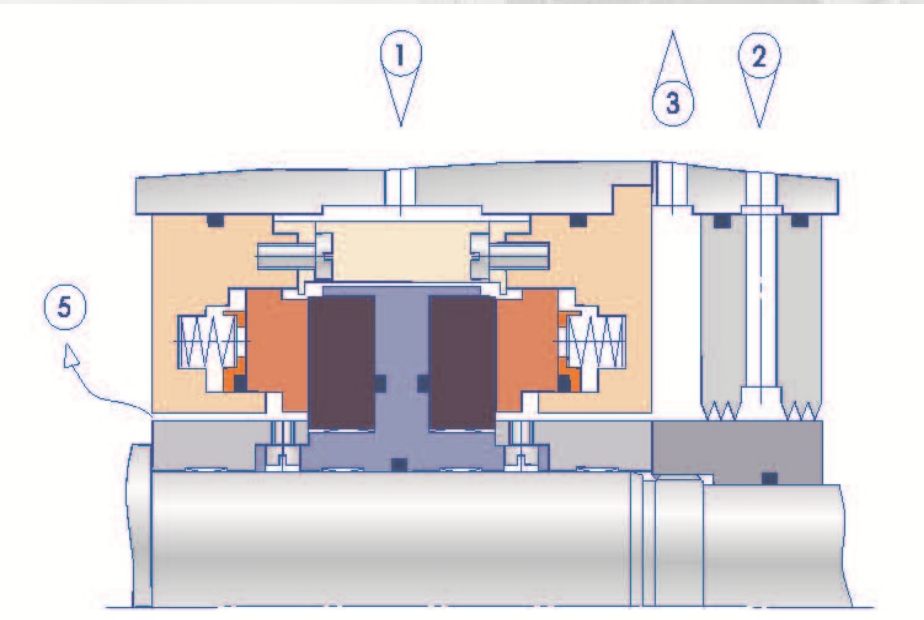
TM

CHEM SEALS

(ISO CERTIFIED)

DRY GAS SEALS

DRY GAS SEALS FOR COMPRESSORS AND TURBOEXPANDERS



Our enterprise is a manufacturer of the dry gas seals for the rotary shafts.

In order to provide sealing for the shafts in

centrifugal compressors and turboexpanders for chemical, petrochemical and gas industry, we usually utilize two types of seals:

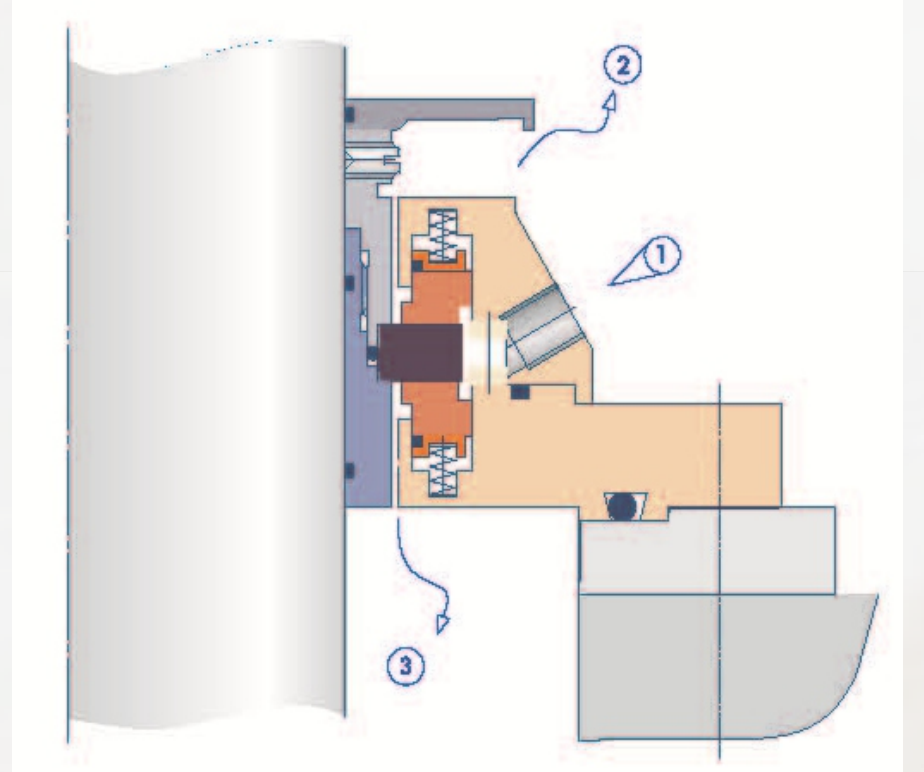
Type 2A - 2E - tandem with end labyrinth.

Type 2T - 2E - double with end labyrinth.

The compressor or turboexpander working gas serves as buffer gas to be supplied into seal. Nitrogen or air serves as barriers gas for purging end labyrinth.

This technology is acknowledged to the best in the world!

DRY GAS SEALS FOR STIRRED REACTORS



Stirred reactors usually operate at the low shaft rotating speed (up to 200 rpm).

In order to prevent dry friction mode of operation, the static seals

when minimum pressure appears in the seal between sealing end surfaces, contactless operation continues even without rotation.

Usage of the chemical resistant materials (silicone carbide, stainless steel, nickel-chrome-molybdenum alloy, zirconium, PTFE, fluorine containing rubber) provides high durability and longevity of seals when operating in the most aggressive environments.

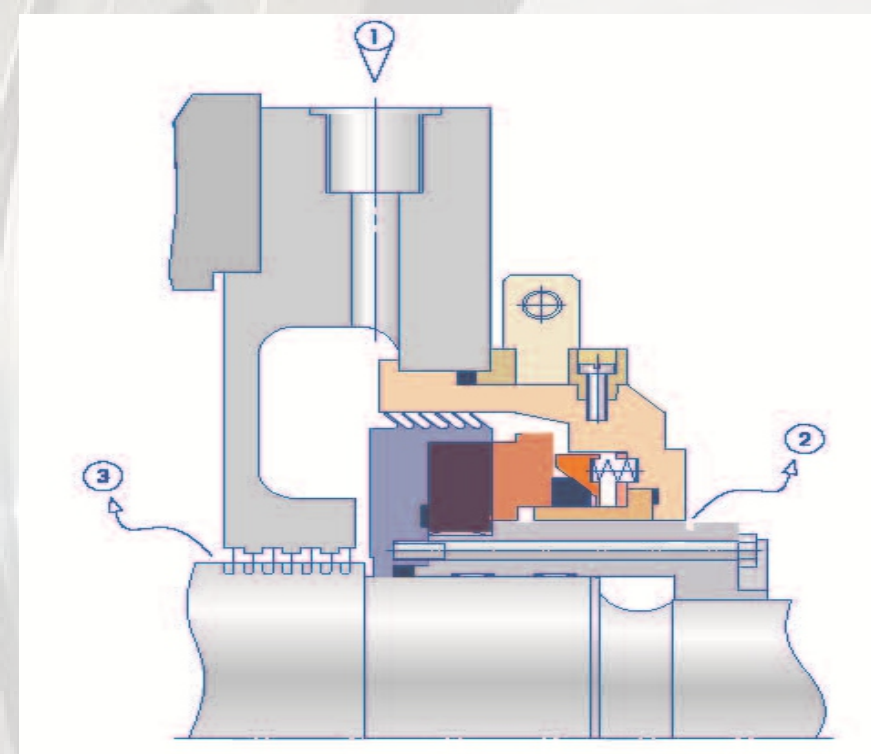
Usually two types of seals are used:

2T - double seal with buffer nitrogen supply

2T - 2E - double with end labyrinth. Any gas can be supplied into seal. Nitrogen is supplied into end seal.

This technology is very advantageous!

DRY GAS SEALS FOR STEAM TURBINES



Usually steam turbines utilize labyrinth seals with leakage ejection. Such system is very uneconomical. It has considerable steam and energy losses.

We use the following for

sealing steam turbines shafts:

Type 1A - single seal

Special design solutions and materials are used in this type of seal for operating at the temperatures up to 450 Deg.C.

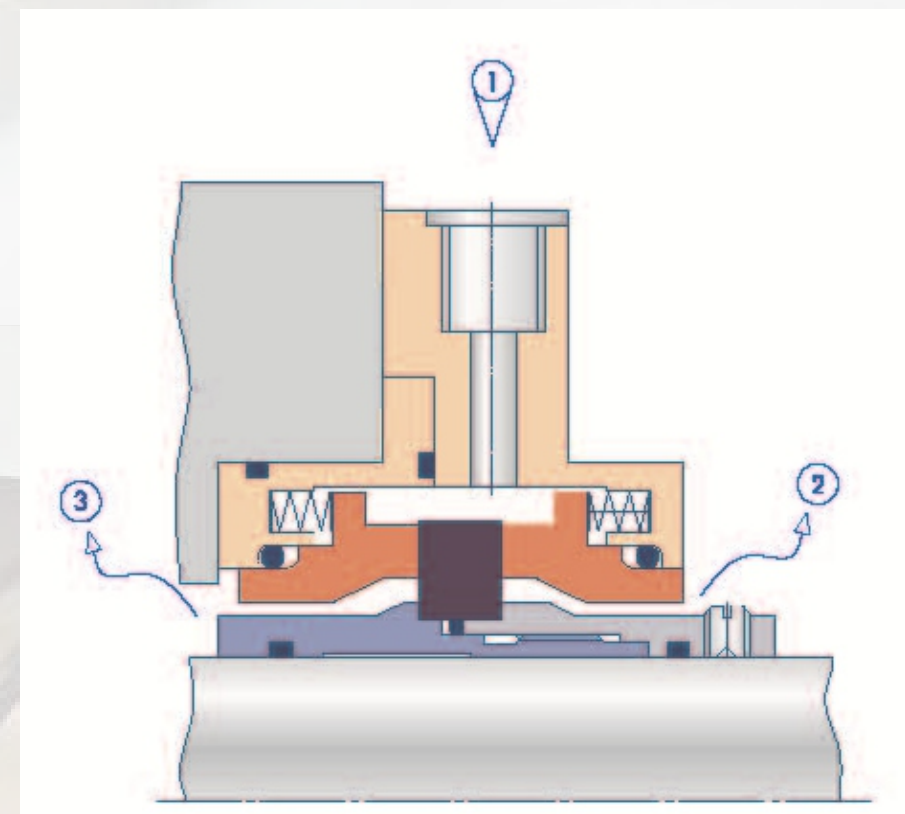
Steam is supplied into seal.

When a considerable quantity of impurities is present, steam shall be subject to preliminary cleaning.

Steam leakage through seals is very little.

This technology pays off very quickly!

DRY GAS SEALS FOR PUMPS



Instead of usual end seals in pumps, we propose to install dry gas end seals.

This technology provides 100% sealing of the pumped liquid and keeps leak-proofness when

subject to back pressure:

Usage of dry gas seals is considered to be reasonable for pumps transferring:

- explosive and high flammable liquids.
- toxic liquids.
- chemical aggressive liquids.
- volatile (ether) liquids.
- liquids containing abrasive.

Usually two types of seals are used:

2T - double seal with buffer nitrogen supply.

2T - 2E - double seal with end labyrinth. Any gas can be supplied into seal. Nitrogen is supplied into end labyrinth.

This technology is lasting and reliable!



DRY GAS SEAL INSTALLATION IN INDIA

CHEM SEALS
NAGARJUNA FERTILIZERS & CHEMICAL LIMITED. KAKINADA
INSTALLATION IN MAY 2014 ON BHEL COMPRESSOR 2BCL 300/4
HANDLING CO2

Chem Seals Engineering Private Limited.

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