Past Track Record (PTR): PTR be uploaded in “Upload Technical Requirements option”

DRY GAS SEALS: DESCRIPTION & APPLICATION:

Description:

Dry Gas Seals are typically used in turbo-compressors, turbo-expanders etc in the Petroleum, Oil & Gas, Chemical and Fertilizer Industry. Dry Gas Seals prevents leakage of the process gas (which are highly inflammable, toxic and polluting the atmosphere) from the compressor ends to atmosphere and also prevents leakage of lube oil from bearing housings into the compressor.

Salient features of the Dry Gas Seals are:

- Dry gas seal offers non-contacting seal faces and liquid-free operation, eliminating friction which contributes to excess heat and hampers system performance.
- Dry Gas Seals do not use lubricating oil & eliminate contamination, unlike wet seals (oil seals)
- Dry gas seals are provided in cartridge form and are simple to install
- Non-contacting operation in dry gas seals provides multitude of operating benefits — including zero emissions, extended mean time between repairs, lower sealing system investment and increased product purity
- Dry Gas seals come with conditioning, monitoring and control system that regulate gas flow and pressure to seals, filter barrier supply gas and monitor seal performance, contributing to better performance etc.

Typical Areas of applications:

- Process Gas turbo compressors & turbo expanders handling inflammable, toxic gas in Refinery, petrochemicals, fertilizers, pipelines etc. Examples- Recycle Gas Centrifugal Compressors in DHT, CCR etc, Wet Gas Compressors in DCU, Charge Gas Compressors in Cracker Unit, Natural Gas Compressors etc.

SUPPLIER INTENDING TO ENLIST WITH EIL SHALL FULFILL THE FOLLOWING CRITERIA:

Technical specifications:

- Types- Single seal, double seal, tandem seal, tandem seal with intermediate labyrinth
- Dry Gas Seals shall be bi-directional, interchangeable between drive end & non drive end
- Dry Gas seals shall be cartridge design
- Seal gas skid/ panel shall be supplied by Dry Gas Seal Vendor
- Dry gas seals & sealing system (Primary seal gas supply and vent) shall be designed for Compressor Casing MAWP.
- Seal gas skid shall be compact and design shall ensure that there is no condensate ingress in dry gas seals.
Following inspection & testing is required for dry gas seals: Cleanliness, Gas leak, Functional run for minimum one hour at operating pressure & speed, Tests as per Annexure 1D of API 617

Area Classification: Safe and Hazardous

Requirement for PTR:

1. Reference list of past supplies, which shall include following information as a minimum:
   - Project name
   - Client’s name
   - Type of Equipment in which seal is installed/ Equipment Manufacturer Name
   - Gas Service
   - Dry Gas Seal Type (i.e. Single/ Double/ Tandem/ Tandem with intermediate labyrinth)
   - Shaft Diameter/ Rotational speed
   - Maximum Sealing Pressure/ Seal Max. Design Pressure
   - Seal faces MOC
   - Dry Gas Skid/ Panel details
   - Date of award of job
   - Month & year of actual supply
   - Month & year of commissioning*

2. Supplied Dry Gas Seals shall have completed minimum one year in operation at any site as on date of application (Minimum 2 references for each type).

3. Supplied Dry Gas skid and panels shall have completed minimum one year in operation at any site as on date of application (Minimum 2 references for each type).

4. Performance feedbacks from reputed end users in Oil & Gas Industry (like Refinery, Petrochemicals, Offshore, Gas processing, chemical plant, Fertilizers plants etc.) for one year satisfactory operation.

5. Supply references (for PTR), financial details shall be submitted as per format A, B, C, D & E available in Annexure XVI (duly notarized/certified by statutory Auditor, strictly in line with EIL terms and condition Clause 3.0 along with relevant documents).

Other criteria

a) The Supplier shall be the manufacturer of the Dry Gas seals.

b) Documents to be submitted by Supplier:
   I. Details of reference units (minimum 2 references for each type of dry gas seals & minimum 2 references for each type of dry gas skid/ panel) including the details of the contact persons.
   II. Relevant documents as a proof of seal type, process parameters, supply (relevant work orders / PO Copy, General Arrangement Drawings, Data Sheets, details of scope/ supply and Inspection Release Notes etc.).
   III. Communication from the End User to support claim for:
      a. Date of commissioning (*)
b. Certificates from the End Users for performance of the dry gas seals/ skids/ panels for a minimum period of one year after commissioning, as on date of application for enlistment and indicating details of work order/supply.

(*) Commissioning is defined when the product(s) of desired specification is/are obtained from the unit.

IV. List of Major Deviations, if any, to governing API/other international standards
V. Organogram of the Design Dept. & CV of key design personnel
VI. List of Facilities & software available for making design calculations and performance estimation.
VII. List of Inspection & Testing carried out in the past for proposed equipment and past supplies test records/reports, duly witnessed by third party inspection agency of repute, for various tests.
VIII. Details of service network availability in India, if any, to take care off after sales support.
IX. Photographs and other details for manufacturing facilities, supplies in the recent past.
X. Work process flow diagram/schematic describing the work process from the receipt of enquiry to passing on the order to Engg./Works for execution done
XI. Details of technology tie ups/backup/upgrade resource availability either in the past or at present, if any, from any of the reputed manufacturer worldwide