Technical Requirements for Oil Mist Lubrication System *(Item Code- 04MJ)*

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

**A. Oil Mist Lubrication System: DESCRIPTION & APPLICATION:**

**Description:**

Oil-Mist is centralized lubrication system that continuously atomizes oil with air to form oil mist (200,000 parts air to one part oil) and then conveys and delivers the correct amount of the pressurized oil mist to the numerous pieces of equipment requiring lubrication such as pumps, motors, steam turbines & other rotating equipment found in a Petrochemical or Refining Unit.

Oil mist lubrication system typically consists of centralized oil mist generator that atomize lubricating oil into small particles, which are conveyed by a low-pressure distribution system to multiple machinery bearings. Once oil mist reaches the piece of equipment it intends to lubricate, it goes through a reclassifier that controls the flow of mist to each application point. Lubrication via oil mist reduces the bearing temperature and extends the rotating equipment’s life.

**Salient features of the Oil Mist Systems are:**

1. Automated system ensures the right amount of lubricant all the time
2. Reduce energy consumption (bearings operate in a thin film of oil instead of a pool of oil)
3. Bearing failures reduced
4. Positive pressure prevents ingress of contamination
5. Lower friction, no oil churning, reduced bearing temperatures
6. Rust and corrosion protection of non-running pumps (maintains an oil fog environment)
7. No oil changes
8. Reduced lubricant consumption
9. Low maintenance (no moving parts, lubes difficult areas, no need to check individual housings)

**Typical Areas of applications:**

Equipment appropriate for oil mist are pumps with roller bearings (most common application), motors with roller bearings, gear boxes, steam turbines, fans & other miscellaneous rotating equipment.

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

**Technical specifications:**

1. The design of the system shall ensure that a homogenous mixture of air and oil reaches at all lubrication points, including the most remote, with sufficient pressure.
2. Oil mist lubrication can be Open loop system & closed loop system.
3. Type of lubrication required can be pure oil mist or purge oil mist lubrication
4. Oil mist generator console with back up unit shall be provided
5. In case of power/ air failures or in case of cut off of air/ power required for the oil mist generator, all equipment being lubricated shall be able to operate without seizure for at least a period of 4 hours
6. The length of pipe run from oil mist generator to the most remote consumer shall not exceed 180m.
7. Oil reservoirs shall allow the system to operate for a minimum of 72 hours without refill.
8. Area Classification: Safe and Hazardous

**Requirement for PTR:**

1. Reference list of past supplies, which shall include following information as a minimum:
   (i) Project name
   (ii) Client’s name
   (iii) List of Equipment to which oil mist is supplied indicating equipment type, KW rating, pumping temperature, operating speed, Type of lubrication- Pure or Purge, distance of equipment from mist generator etc
   (iv) Type- Open loop or closed loop system
   (v) Model no. & quantity of mist generators
   (vi) Distance between generator & most remote mist consumer
   (vii) Material of construction of major components such as piping, reclassifiers, mist generator, oil tank etc
   (viii) Area classification
   (ix) Date of award of job
   (x) Month & year of actual supply
   (xi) Month & year of commissioning*
2. Supplied oil mist lubrication systems shall have completed minimum one year in operation at any site as on date of application (Minimum 3 references for each model series).
3. Performance feedbacks from reputed end users in Oil & Gas Industry (like Refinery, Petrochemicals, chemical plant, Fertilizers plants etc.) for one year satisfactory operation.

**Other criteria**

1. The Supplier’s scope shall include complete design, engineering, manufacturing, procurement of material & bought out components, assembly at shop, inspection and testing, packing, delivery, supervision of erection & commissioning of Oil Mist Lubrication Systems complete with oil mist generator consoles, mist distribution piping/tubing and pipe fittings (from generator up to mist distribution header/ mist reclassifiers & then to individual supply points), all accessories & auxiliaries and necessary instrumentation & controls etc.

2. Documents to be submitted by Supplier:
   (i) Details of reference units including the details of the contact persons.
   (ii) Relevant documents as a proof for type of mist lubrication, list of equipment, 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 oil mist lubrication system 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 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.