

**Duly filled Technical Pre-Qualification Requirements to be submitted along with the offer by vendor**

*For uploading along with the enquiry*

Ref No: TME/PQR/IM3004/Bearings rev.00

Dated: 24/01/2023

**Technical Pre-Qualification Requirements (PQR) for “HYBRID BEARINGS”**

**Vendor should comply with the following clauses in order to qualify for supply of HYBRID BEARINGS (duly filled PQR shall be submitted along with the offer by vendor):**

| Cl. No. | Description  | Vendor to comment       |   |
|---------|--|-------------------------|---|
|         |  | Complied / Not complied | Supporting relevant document to be submitted along with offer |
| 1       | Vendor shall supply Hybrid Roller Bearing (rollers made from electrically insulated material) type NU1014M ECMR/HC5C4S0 (SKF nomenclature or equivalent of other bearing manufacturer) and Hybrid Ball Bearing (balls made from electrically insulated material) type 6214M /HC5C4S0 (SKF nomenclature or equivalent of other bearing manufacturer).   | Yes/No                  | Not Required  |
| 2       | Vendor should be the bearing manufacturer and not trader.  | Manufacturer/ Trader    | Not Required  |
| 3       | The offered bearing shall be in the regular manufacturing range of the vendor.   | Yes/No                  | Not Required  |
| 4       | Vendor to furnish drawings of the offered bearings. The technical data sheet of the same shall also be furnished as per requirements mentioned in Annexure-A.  | Yes/No                  | Drawing & technical data sheet of offered bearing             |
| 5       | For the manufacturing of tendered item, vendor should have manufacturing facilities in India. Vendor to also confirm that the offered bearings shall be manufactured in India.   | Yes/No                  | Not Required  |
| 6       | Vendor should have experience of successfully manufacturing & supplying at least 40 nos. of same/similar* hybrid bearings for traction application to some traction motor manufacturers or Indian Railways or other Railways, in preceding 2 years from date of enquiry. The bearings should have been manufactured at vendor's manufacturing plant in India.<br><br>(* ) - Hybrid bearings (rollers/balls made from electrically insulated material) of minimum inner diameter of 70 mm with C4 clearance.<br><br>Vendor to ensure that document submitted for b) shall correlate with the submitted P.O. copy. | Yes/No                  | a. PO copies.<br>b. Supply proof i.e. copy of invoice         |

|                           |            |  |                            |                            |
|---------------------------|------------|--|----------------------------|----------------------------|
| 1286355/2023/HEP-MNX35400 | Cl.<br>No. | Description  | Vendor to comment          |                            |
|                           |            |  | Complied /<br>Not complied | Complied /<br>Not complied |
|                           | 7          | Vendor to confirm that vendor or any bearing of its make is not banned by RDSO, Lucknow or any entity of Indian Railways for supply of bearings in traction application. | Banned/<br>Not banned      | Not Required               |

**Note:**

1. Compliance of all the points in above T-PQR is mandatory. In absence of compliance of above, vendor's offer is liable to be rejected.
2. Information / compliance / documents submitted by vendor shall be authentic in all aspects. In case any deviation / false information / forged documents are observed, BHEL is free to initiate appropriate punitive proceeding against the supplier.

**Important:** This document is to be filled and submitted along with the offer. This document must be signed by authorized representative of the vendor and should contain the name of representative & seal of the company.

Date:

**Technical Specification for Rolling Contact Bearings****DRAWINGS AND TECHNICAL INFORMATION TO BE SUBMITTED WITH OFFER AGAINST TENDER**

1. Dimensional drawing of the bearing.
2. Type & Make of bearing.
3. Significance of each suffix/prefix.
4. Accuracy class : (Normal/P5/P6)
5. Suitability for application : (Traction/Industrial)
6. Number of rollers & size.
7. Radial internal clearance.
8. Axial clearance.
9. Type of cage construction : (Standard/Drop roller)
10. Type of cage guiding : (Roller/Outer race)
11. Cage Material : (Brass/Steel)
12. Material specification for rollers & races.
13. Surface finish on rollers and races.
14. Dynamic capacity of bearing.
15. Static capacity of bearing.
16. Maximum permissible speed (with Grease lubrication)
17. Bearings should be of special execution for traction application with suffix VA301 (SKF), F1 (FAG), SV1 (STEYR), MT (RHP) etc.