



No. RW/NH-34054/2/2011-S&R (B)
GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT & HIGHWAYS
 S&R (Pavements & Bridges)
 Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 14th Aug, 2018

To

1. The Chairman, National Highways Authority of India, G-5 & G-6, Sector -10, Dwarka, New Delhi - 110 045
2. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, Naraina, Delhi Cantt., New Delhi.
3. The Managing Director, NHIDCL, 3rd Floor PTI Building, Parliament Street New Delhi-110001
4. All Engineer-in-Chief/Chief Engineers of States/Union Territories, Public Works Department/Road Construction Department/Highways Departments (dealing with National Highways and other Centrally sponsored schemes).
5. All ROs and ELOs of the Ministry.

Subject: Guidelines and Standard Operating Procedure for selection of manufacturers/ Suppliers of various types of bearings and expansion joints for bridges on National highways and other centrally sponsored schemes.

Madam/Sir,

This is in supersession of Ministry's letter no. RW-NH-34054/2/2011 dated 22.05.2017 & RW-NH-34054/1/2013 dated 02.07.2018 regarding Empanelment of manufacturers/ suppliers of various types of bearings and expansion joints for bridges on National highways and other centrally sponsored schemes.

2. Most of projects are implemented by various executing agencies such as NHAI/NHIDCL/State PWDs etc mainly on corridor approaches on EPC/BOT/HAM modes where the responsibility of designing, construction / implementation etc. lies with the contractor/ concessionaire. It is also relevant to mention here that highways projects are constructed as per the standards / guidelines of the Ministry / IRC. Moreover, Engineer (Authority Engineer/Independent Engineer) are also engaged for supervision, ensuring quality of all the components of roads and bridges.

3. Since construction of the structures, including bridges, are integral part of the project stretches, the bridge components cannot be separated from the overall performance/ serviceability of the project as a whole. Therefore, at present empanelment for the bearings manufactures and supplier / manufacturers of the expansion joints may not be of much relevance. As such, the responsibility for providing bearings / expansion joints and other bridge components under any mode of implementation (including item rate tenders) lies with the Contractor/ concessionaire and also with the Engineer.

4. The relevant IRC code related to bearings and expansion joints are as under:
- a) IRC: 83-2015 (part-I) "Standard Specifications and Code of Practice for Road Bridges, Section IX Bearings, Part-I: Roller & Rocker Bearings (Second Revision)".
 - b) IRC: 83-2015 (part-II) "Standard Specifications and Code of Practice for Road Bridges, Section IX-Bearings, Part-II (First Revision)".
 - c) IRC: 83-2002 (part-III) "Standard Specifications and Code of Practice for Road Bridges, Section IX-Bearings, Part-III: POT, POT-CUM-PTFE, PIN and Metallic Guide Bearing".
 - d) IRC: 83-2014 (part-IV) "Standard Specifications and Code of Practice for Road Bridges, Section IX-Bearings (Spherical and Cylindrical)".
 - e) IRC: SP 69-2011 "Guidelines and Specification for Expansion Joints (First revision)".
5. The above stated codes/ guidelines categorically stipulate the functional requirements, specifications, properties of various materials to be used for manufacturing of the bearing/ expansion joints, dimensions, acceptance criteria, testing, installation, inspection, maintenance, replacement etc. for bearing/ expansion joints. Moreover, the manufacturer/ supplier has to furnish a complete Quality Assurance Program comprising the process of quality control, raw material testing, various stages of manufacturing, complete testing etc. in conformity with relevant codal stipulations. The said Quality Assurance Program shall be approved by the Engineer/ Accepting Authority.
6. The requirement of Supplier/ Manufacturer and their selection for Bearings and Expansion Joints, the role/ responsibilities of various stake holders shall be as detailed below:-

(A) Supplier/ Manufacturer

- a) The manufacture/ supplier shall furnish a complete quality assurance programme to the contractor/ concessionaire comprising the process of quality control, raw material testing, various stages of manufacture, testing on components as well as testing on complete bearing/ expansion joint etc. in conformity with relevant Codal stipulations.
- b) Test certificates of reputed testing laboratories for all raw material shall be submitted to the contractor/ concessionaire. If the test certificates are not available, then the manufacture shall perform the necessary confirmatory test as per relevant code of practice and shall furnish the test results.
- c) All the suitable weld data record shall be maintained and submitted.
- d) Manufacturer shall maintain a list of consumption of raw material including test records for a period of at least preceding two years.
- e) Manufacturer shall employ full time Graduate Engineer staff, qualified to manufacture bearings under Quality Control and as such have full time trained scientist for chemical and physical testing.
- f) Manufacturer shall have qualified/certified welders.



(B) Contractor/ Concessionaire

- a) The contractor/ concessionaire shall ensure that the manufacturer has its own manufacturing unit and the same has been registered under Companies Act 2013 for manufacturing of concerned Bridge components. In case of supplier, the said details of manufacturer shall be provided to the contractor/ concessionaire.
- b) The raw material procured for each and every component of bridge bearing and expansion joints shall be tested from NABL accredited laboratory / CSIR/ ISO recognized laboratory or any other reputed laboratory by the manufacturer/ supplier before supply of expansion joints/ bearing.
- c) It shall be ensured that the finished item shall be in conformity to relevant IRC/ IS codes and shall be tested from NABL accredited laboratory / IITs/CRR/CSIR/ ISO recognized laboratory or any other reputed laboratory.
- d) It shall be ensured by the contractor/ concessionaire that the full-time qualified chemist and design engineer render their services in the manufacturing unit.
- e) The Inspection Certificate/ Quality Control Certificate should be furnished by the manufacturer/ supplier.

(C) Authority Engineer/Representative of Authority Engineer

- a) Authority Engineer shall approve the Quality Assurance Programme (QAP), QAP comprising the process of quality control, raw material testing, various stages of manufacture, testing on bearing/ expansion joint components as well as testing on complete bearing/ expansion joint etc. in conformity with relevant Codal stipulations prior to the commencement of manufacture.
- b) The Authority Engineer may carry out independent tests on raw material and witness the manufacturing process.
- c) Authority Engineer shall reserved the right to witness such inspection at manufacture workshop.
- d) Authority Engineer shall check all test certificates of bearing/ expansion joint manufactured.
- e) Authority Engineers shall carried out destructive testing of any component/components of bearing supplied for conformity of test result submitted.

(D) Before procuring the bridge components, the team (comprising of Contractor, Authority Engineer and Project Director/ representative of RO/ RO) shall inspect the manufacturing unit and or testing of expansion joint/ bearing in the laboratory of manufacturer/ supplier or from NABL accredited laboratory / CSIR/ ISO recognized laboratory/ any other reputed laboratory and certify the quality of expansion joints/ bearings.



7. The empanelment of the bearing manufacturers and suppliers/ manufacturers of expansion joint is ceases to be operative with the issue of these guidelines.

The contents of this Circular may be brought to the notice of all concerned in your organization.



(Raj Kumar)

Assistant Executive Engineer S&R (P&B)

For Director General (RD) & SS

Copy to :

1. Sr. PPS to Secretary (RT&H)
2. PPS to DG (RD)&SS
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