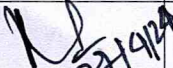

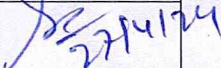


PURCHASE SPECIFICATION BANARAS LOCOMOTIVE WORKS, VARANASI		INDEX	SPEC. NO. MISC – 558 Rev.-02
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<p>REV 01 – Line “Inspection certificate of prototype sample will be issued after successful field trial of 12 months “ has been removed from Para 7a. Sd/- 06/09/2017</p> <p>REV 02 – Specification Revised <i>[Signature]</i> 27/4/24</p>	<p>1. GENERAL This specification covers the requirement of development, manufacture and supply of Center Bonded Rubber to Part no.17456010 (Drawing No. 8234958) HHP locomotives. The accuracy level on the certain geometrical/dimensional parameters should be maintained as per the drawing and specification.</p> <p>2. APPLICATION This item is a critical & intricate assembly used in power transmission & related to safety. It has to withstand torque created by drive shaft and vibration generated by the engine. Therefore, it requires specialization in rubber to metal bonded component. It is also necessary for the interested firms, to have infrastructure mentioned in para 6 of this specification.</p> <p>3. COMPLIANCE WITH STANDARDS The Joint Center Bonded Rubber shall comply with the following specification & drawing: i. EN-3 ii. ASTM D-735 iii. PL No -17456010 iv. AI-2400 (General tolerances)</p> <p>4. SUBMISSION OF TENDER QUOTATIONS The supplier shall submit clause-wise comments on this specification. i.) List of machines/Equipment available for manufacture. ii.) List of Equipment available for carrying out test. iii) Past performance. iv) Deviation in the technical specification shall be clearly mentioned during quotation.</p> <p>5. SUPPLIER'S SCOPE OF WORK:- The scope of work shall includes:- a) Submission of quality assurance plan (QAP) for Joint Center Bonded Rubber, PL no-17456010 before offering for prototype inspection.</p>			
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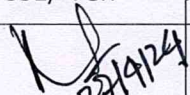
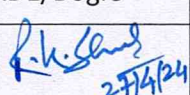
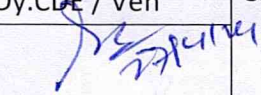
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<p>b) Manufacture and supply of Joint Center Bonded Rubber after the approval of quality assurance plan (QAP).</p> <p>c) Inspection of the prototype assembly will be carried out by representative of CDE/DL at firms' premises and balance qty as per extant rules of Railways</p> <p>d) Manufacture and supply balance quantity after approval of prototype samples.</p> <p><u>6. INFRASTRUCTURE REQUIRED:</u></p> <p>The firm seeking approval for manufacture & supply of Joint Center Bonded Rubber , PL no-17456010 to BLW/Zonal Railways shall have past experience for manufacture of metal to rubber bonded component. The firm shall provide credentials in this regards. The firm must have following infrastructural facilities:</p> <ul style="list-style-type: none"> • ISO certification for manufacturing of Rubber components. • Necessary machining facilities like : lathe , drilling (Outsourcing of this facility is permitted) • Injection /compression moulding facility • Kneeder • Open mixing mill • Oscillating Disc Rheometer • Tensile testing machine • Hardness Shore "A" Range 0-100 shore –A • Bond strength testing facility • Conical/Torsional Load testing facility • Analytical balance (least count 0.001 Kg) • Compression test fixture • Aging ovens • Muffle furnace • <u>Metrological instruments like :</u> Digital/Analogue Vernier Calipers, Micrometers, , Bore Gauges, Depth vernier, Plug gauges etc. <p><u>Note:</u> Out sourcing of testing of mechanical, chemical as well as physical properties of metal part from NABL approved lab is permitted.</p>	
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<p><u>7. INSPECTION AT MANUFACTURER WORKS:</u></p> <p>a) Inspection of the prototype sample of Joint Center Bonded Rubber will be carried out by authorized representative of CDE/DL/BLW at firm's premises. Number of pieces to be inspected by representative of CDE/DL/BLW as prototype shall be at the exclusive discretion of CDE/DL/BLW and would depend on process getting fully established leading to defect free product. Balance quantity shall be supplied by the firm after issue of inspection certificate of prototype sample. Same (Balance quantity) shall be inspected as per extant rules of Railways.</p> <p>b) Inspecting officer of BLW shall at their discretion, witness some or all the tests as stated above at any stage of the production of the Joint Center Bonded Rubber. The supplier shall provide all necessary facilities free of cost. The supplier shall make available all production records connected with the production of Joint Center Bonded Rubber.</p> <p>c) The supplier will submit following test certificates during prototype inspection.</p> <ul style="list-style-type: none"> ➤ Chemical composition test certificate. ➤ Mechanical properties test certificate. ➤ Physical Properties test certificate. ➤ Hardness check report ➤ Microstructure test certificate with photograph ➤ Dimensional check reports as per drawings. <p>d) At least two weeks clear notice will be given by the supplier to BLW while issuing call letter for prototype inspection.</p> <p>e) Product should be as per Drawing</p> <p>8. CLEANING, MARKING AND PACKING: Cleaning, Anti-rust / Surface treatment, Marking and Packing of Joint Center Bonded Rubber should be as per specification Misc-455.</p>	
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