

HOAC HO 40794

ANNEXURE B - PHASE 1 - TECHNICAL REQUIREMENTS - 90 points

Technical Scope Of Requirements	Type of Documented Evidence to be submitted	Scoring Matrix	Details of proof and page	Weighting
The bidder is expected to indicate the sleeper constituents. TFR will not disclose such composition to third parties and shall treat such as intellectual property.	Manufacturer shall provide detailed technical report on sleeper constituents	Q,4= All Evidence of the following: -Technical report indicating sleeper constituents 0 = absence of any single one of the above requirements.		0,40
The Qualifying Tests should include: <ul style="list-style-type: none"> • Static load, • Dynamic fatigue, • Porosity, • Flammability, • Screwing, • Electrical, • Static pull out, • Weatherability, • Water absorption and • Impact tests. The test characteristics and acceptance criteria shall comply to the test conditions as per paragraph 4.4.5.1 - 4.4.5.12 of the BBH 5611 specification (excl par 4.4.5.9). These qualifying test results must be for sleeper samples from where the sleepers will be sourced/manufactured.	Bidders must provide a detailed report from an independent laboratory of all the test results. The reports should not be older than 5 years and should contain results for all qualifying tests as per the BBH 5611 and/or relevant ISO or equivalent standards for both bridge and check curve sleepers .	12 = Documentation/ test reports stating competent results from all requisite qualification tests in accordance with Transnet Specification BBH 5611 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		12,00
Acknowledgement that Transnet reserves the right to conduct Due Diligence of bidder's product by testing the sleepers at its track testing laboratory with the bidder providing the samples at their expense.	Provide written statement or letter of acknowledgement as per the technical scope requirements	Q,4 = Evidence of the following: Written acknowledgement that Transnet reserves the right as the purchaser, to conduct compliance and quality assurance tests on the composite sleepers at any time and the content of the evidence should meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		0,40
Supplier should provide all necessary documentation as required in paragraph 5.2.4 of the BBH 5611 specification.	Provide Detailed documentation of the following: <ul style="list-style-type: none"> Warranty Maintenance procedures Sleeper drawings Handling procedure Technical properties Expected life span 	8,5 = Evidence of the following: <ul style="list-style-type: none"> • 1,5 = In Service Warranty: 1,5 (warranty ≥18 Months), 1 : (12 - 17 Months), 0,5 : (6 - 11 Months), 0,2 : (1 - 5 Months), 0 : (warranty < 1) • 1,5 = Detailed document demonstrating the maintenance procedures • 1,5 = Sleeper drawings (Complying to the tolerances stated in Table 1 and 2 of the BBH 5611 specification) • 1 = Detailed document demonstrating the handling procedure • 1,5 = Detailed document demonstrating the technical properties • 1,5 = Detailed document demonstrating the expected life span 0 = Submission of incorrect documents that do not meet the Technical scope Requirements .		8,50
The dynamic pull-out test characteristics and acceptance criteria shall comply to the test conditions as per paragraph 4.4.5.9 of BBH 5611. This qualifying test results must be for sleeper samples from where the sleepers will be sourced/manufactured.	Bidders must provide a detailed report from an independent laboratory of the dynamic test results. The reports should not be older than 5 years and should contain results as per the BBH 5611 and/or relevant ISO or equivalent standards for both bridge and check curve sleepers .	Q,4 = All Evidence of the following: Documentation/ test reports stating correct dynamic test results in accordance with Transnet Specification BBH 5611 and the content of the evidence should meet the minimum requirements of the technical scope 0% = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		0,40
Bidders shall demonstrate the capabilities to produce composite sleepers to accommodate 20, 26 and 30 tons/ axle and SAR 48, SAR 57 and 60E1 rails applicable for a 1065 mm track gauge on an 'as and when basis' for a period of three years	Provide written statement of acknowledgement or technical document illustrating capability as per the technical scope requirements	11 = Evidence of the following: - Proven Capability/ Statement of acknowledgement to produce composite sleepers able to accommodate the relevant tonnages, rail profiles and track gauge, the content of the evidence should meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements.		11,00
The bidder is expected to indicate the capability and capacity of their manufacturing facility by demonstrating in detail the manufacturing facility flow sheet/layout and location and also provide a product manual for the composite sleepers	Manufacturer shall provide detailed schematic/ document outlining the following: <ul style="list-style-type: none"> • Location of manufacturing facility • Primary production or manufacturing process for the sleepers • Provide a product manual for the composite sleepers 	Q,4 = All Evidence of the following: -Documentation on plant location, primary production process and product manual, the content of the evidence should meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		0,40
Composite sleeper and sleeper constituents may not pose any environmental concerns. The material requirements of the sleepers shall be in accordance to the specification	Provide Material Safety Data Sheet (MSDS) of the composite sleeper and sleeper constituents as well as written evidence declaring all other safety and environmental related issues pertaining to the sleeper.	6 = Evidence of the following: - Documentation demonstrating the environmental risks of the sleeper and sleeper constituents, (MSDS) the content of the evidence should meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		6,00
The sleeper should be able to withstand temperature change for all South African seasons (rail temperature -15 to 70 °C), must not be affected by moisture, must be UV resistant, fire resistant, abrasion resistant, resist decaying and able to withstand chemical spills like fuel, oil etc.	Provide supporting documents product manual/ written evidence/ test reports	10 = Evidence of the following: - Documentation/ report demonstrating the applicable rail temperatures - Documentation/ product manual demonstrating the effect of UV, moisture, fire and chemical spills and decay resistance, the content of the evidence should meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		10,00
Sleepers should fully comply to stated design criteria: Category A: <ul style="list-style-type: none"> • Accommodate the existing fastening system and complies to the fastening specification B8F9273 latest version. • Poses a cost effective life cycle Category B: <ul style="list-style-type: none"> • The sleeper may not have any visible surface defects in general and internal voids/ porosity more than Ø 12.5 mm is not permissible • Sleepers should have an electrical insulation more than 5 kΩ, Shearing strength more than 7 MPa, Linear expansion coefficient should be less than 5 -10-5/°C and should provide resilience to the track • All sleepers shall perform the intended duties of the conventional sleeper by accommodating the weight of the rolling stock (20, 26 and 30 tons/axle) and distributing the load accordingly. Category C: <ul style="list-style-type: none"> • Where possible the sleepers must be marked/ indented with the, Supplier name, Transnet Logo, Manufacturing date and batch number. 	Category A: Provide written evidence/ Statement of compliance Category B: Provide technical documents/ Reports demonstrating the results Category C: Provide a full description of the branding.	12 = Evidence of the following: - Documentation/ Written statement of compliance demonstrating the applicable rail fastening systems and product life cycles -Documentation demonstrating/ technical report detailing the size of pores, electrical insulation, shearing strength and linear expansion coefficient - Documentation demonstrating the branding on the sleeper, the content of the evidence should meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		12,00
All sleepers shall be within the specified dimensions and tolerances as per paragraph 4.3 in the BBH 5611 specification	Provide technical drawings for: 1. Bridge sleeper 2.1 meter in length 2. Bridge sleeper 3.8 meter in length 3. Bridge sleeper 4.2 meter in length 4. Check curve sleeper 2.4 meter in length	11 = Evidence of the following: Approved technical drawings of all the required sleeper sizes for both bridge and check curves, the evidence should meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		11,00
The sleepers shall comply to the minimum performance requirements as per paragraph 4.4.1 of the BBH 5611 specification	Written evidence/ test results stating the maximum lateral and continuous load, compatible train speeds, rail inclination and minimum applicable curve radius	11 = Evidence of the following: <ul style="list-style-type: none"> • Written evidence or reports illustrating the maximum lateral and continuous load that the sleeper can withstand • Written evidence or reports illustrating the maximum applicable train speed (in km/h), rail inclination and minimum curve radius (in meters). The content of the evidence should meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		11,00
An audited and valid quality assurance system for the manufacturing facility which meets the minimum requirements of at least ISO 9001 or equivalent, the latest at the time	Provide a valid certificates or Letter of certification from an accredited certification body	5,9 = Evidence of the following: - Letter of certification or accreditation and the content of the evidence should meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		5,90
Bidder shall provide technical support should it be required	Provide written statement or letter of acknowledgement as per the technical scope requirements	6 = Written statement of Acknowledgement which meet the minimum requirements of the technical scope 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		6,00
In the case whereby the supplier is not the direct manufacturer, a Memorandum of Understanding (MOU) shall be supplied to Transnet Freight Rail.	Provide proof of Original Equipment Manufacturer (OEM) or a Memorandum of Understanding (MOU) from original manufacturer	5 = Evidence of the following: -MOU, the MOU must be valid for the duration of the supply. If the bidder is the direct manufacturer no MOU is required and a full score will be allocated 0 = absence of any single one of the above requirements or submission of incorrect documents that do not meet the Technical scope Requirements .		5,00
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