

TRANSNET FREIGHT RAIL (RME)

Richards Bay, a division of

TRANSNET SOC LTD

Registration Number 1990/000900/30

[hereinafter referred to as Transnet]

REQUEST FOR OWNTATION [RFQ] No RME RBY 023 / 2014

FOR THE SUPPLY OF: O.HOP SWITCHING EQUIPMENT

FOR DELIVERY TO: TFR (RME) Q TE STORE AT 1 MORRIS ROAD, EMPANGENI

RAIL, OLD GOORS SHED AREA.

ISSUE DATE: 07 April 2014 TO 14 April 2014

CLOSING DATE: 15 April 2014

CLOSING TIME: 10:00

Section 1 NOTICE TO BIDDERS

Quotations which must be completed as indicated in Section 2 of this RFQ are to be submitted as follows:

METHOD: Tender Submissions by fax or e-mail only. (Complete documents,

with all supporting documents)

CLOSING VENUE: Fax/E-Mail tenders to; 011-774 9760/011-774 9129/011-774

9186 or Nomsa.maseko@transnet.net .

Transnet Freight Rail (RME), The Chairman of the Acquisition

Council, Inyanda House 1, 21 Wellington Road, Parktown,

Gauteng.

PROOF OF SUBMISSION: Please fax /e-mail your "PROOF" (Fax Report or E-Mail Proof) with

to, 086 515 9978/or TCPtendersRichardsBay@Transnet.net as first page of tender document that is stamped with company detail

proof that your submission was submitted successfully.

1 Responses to RFC

quotation or proposal. An Responses to this RF **lyotations]** must not include documents or reference relating to any other ado tional conditions must be embodied in an accompanying letter.

2 Broad-Based Black Economic Empowerment [B-BBEE]

Verification Certificate. All procurement transaction same values. Transnet will accordingly allow 🌢 Programme and it would therefore prefer to Transnet fully endorses and supports do business with local business enterprises who share these Government's Broad-Based Black Economic Empowerment ference" to companies who provide a valid B-BBEE be evaluated accordingly.

2.1 B-BBEE Scorecard and Rating

applicable to all bids: 2000 and its Regulations, Respondents are to note that the following preference point system is As prescribed in terms of the Preferential Procureme slicy Framework Act (PPPFA), Act 5 of

- the 80/20 system for requirements with a Rand value of up to R1 000 000 (all applicable taxes included).
- all Bids received exceed R1 000 00(1.00, the RFP must be cancelled. Bidders are to note that if the 80/20 preference point system is stipulated in this RFP and

therefore the **80/20** system shall be applicable. The value of this bid is estimated to be helow R1 000 000 (all applicable taxes included) and

programmes, it requires Respondents to have their B-BBEE status verified in compliance with the 53 of 2003. Codes of Good Practice issued in terms of the Broad Based Black Economic Empowerment Act No When Transnet invites prospective suppliers to submit Proposals for its various expenditure

2013 a one year transitional period starting 11 October 2013. During the transitional period, companies specific Codes will be measured in terms of those Sector Codes. terms of the Revised Codes without any discretion. Companies which are governed by Sectorthe first year of the implementation of the Revised Codes, B-BBEE compliance will be measured in may elect to be measured in terms of the Revised Codes or the 2007 version of the Codes. After Empowerment Codes of Good Practice issued on 9 February 2007. The Revised Codes provide for The Department of Trade and Industry recently revised the Codes of Good Practice on 11 October [Government Gazette No. 36928]. The Revised Codes will replace the Black Economic

certificates issued based on the Revised Codes provided it was issued before 10 October 2014. Thereafter, Transnet will only accept B-BBEE also continue to accept B-BBEE certificates issued in terms of the 2007 version of the Codes As such, Transnet will accept B-BBEE certificates issued based on the Revised Codes. Transnet will

obtain preference points for their B-BBEE status. submit it together with proof of their B-BEEE Status as stipulated in the Claim Form in order to Respondents are required to complete Annexure A [the B-BBEE Preference Point Claim Form] and

B-BBEE thereof at the Closing Date of this RF() will result in a score of zero being allocated for Note: Failure to submit a valid and original B-BBEE certificate or a certified copy

[Refer clause 2014] [Refer

3 Communication

- <u>a</u> made by a Respondent eit Respondents are warne Transnet in respect of this RA esponse will be liable for disqualification should any attempt be ctly or indirectly to canvass any officer(s) or employee of en the closing date and the date of the award of the
- <u>b</u> A Respondent may, however, before the relating to the RFQ to the following Transnet e ng date and time, direct any written enquiries

Name: Mr Eddie Quinn

Email: eddie.quinn@transnet.net

0 Regional Supply Chain Manager on any matter relating to its RFQ response: Respondents may also, at any time after the closing date of the RFQ, communicate with the

Telephone 035 – 905 4609

lizelle.smith@transne .net

Email

4 Tax Clearance

be in order no business shall be awarded to any Respondent whose tax matters have not been declared by SARS to The Respondent's original and valid Tax Clearance Certificate must accompany the Quotation. Note that

5 VAT Registration

The valid VA
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Respondent's Signature

9 Legal Compliance

and local laws and regulations. The successful Respondent shall be in full and complete compliance with any and all applicable national

7 Changes to Quotations

Changes by the Respondent to its submission will not be considered after the closing date and time.

∞

All prices must be quoted in South African Rand on a fixed price basis, excluding VAT.

9 Prices Subject to Confirmation

Prices quoted which are subject to confirmation will not be considered

10 Negotiations

number of short-listed Respondents. Transnet reserves the right to undertake post-tender negotiations with selected Respondents or any

11 Binding Offer

statement must be Any Quotation fur pursuant to this Request shall be deemed to be an offer. Any exceptions to this nd specifically indicated.

12

of a Quotation in response to it. Pleas Transnet is not committed to any of action as a result of its issuance of this RFQ and/or its receipt that Transnet reserves the right to:

- modify the RFQ's goods / service(s) and request Respondents to re-bid on any changes;
- reject any Quotation which does not contain instructions and specifications which are detailed
- disqualify Quotations submitted after the stated submission deadline; not necessarily accept the lowest priced Quotation;
- reject all Quotations, if it so decides;
- place an order in connection with this Quotation at any time after the RFQ's closing date;
- award only a portion of the proposed goods / service/s which are reflected in the scope of this RFQ;
- split the award of the order/s between more than one Supplier/Service Provider; or
- make no award at all.

justify the award to another bidder. Transnet reserves the right to award business to the highest scoring bidder/s unless objective criteria

13 Transnet's supplier integrity pact

any corrupt and fraudulent practices, anti-competitive practices; and act in bad faith towards each other. Transnet where a Respondent contravenes any provision of the Integrity Pact. The Integrity Pact also serves to communicate Transnet's Gift Policy as well as the remedies available to Transnet's Integrity Pact requires a commitment from suppliers and Transnet that they will not engage in

available on the Transnet Internet site [www.transnet.net/Tenders/Pages/default.aspx] or on request. conditions stipulated in the Transnet Supplier Integrity Pact as follows: documentation comprising the Transnet Integrity Pact and that they fully comply with all the terms and Furthermore, Respondents are required to certify that they have acquainted themselves with all the Respondents are required to familiarise themselves with the contents of the Integrity Pact which is

7	YES	
7		
	NO	

Should a Respondent need to declare previous transgressions or a serious breach of law in the preceding Respondent's bid submission. years as required by Annexure A to the Integrity Pact, such declaration must accompany the

14 Evaluation Criteria

15 Supplier/Service Provider, if so required: Transnet will utilise the following criteria [not necessarily in this order] in choosing a

Criterion/Criteria Explanation	Explanation
Administrative	Connetaness of response and returnable documents
responsiveness	
Substantive	Prequalification criteria, if any, must be met and whether the Bid materially
responsiveness	complies with the cope and/or specification given.
Final weighted	• Pricing and price basis [firm] - whilst not the sole factor for consideration,
evaluation based	competitive pricing and overall level of unconditional discounts will be critical
on 80/20	B-BBEE status of company Preference points will be awarded to a bidder for
preference point	attaining the B-BBEE status level & contribution in accordance with the table
system as	indicated in Annexure A.
indicated in	
paragraph 2	*

16 Validity Period

This RFQ is valid until Transnet desires a validity period of 90 [ninety] days from the closing date of this RFQ

17 Banking Details

Respondent's Signature

conditionally will, despite not being taken into account for evaluation purposes, be implemented when payment is Only unconditional discounts will be taken into account during evaluation. A discount which has been offered

	Original valid Tax Clearance Certificate [Consortia / Joint Ventures must	
	In the case of Joint Ventures, a copy of the Joint Venture Agreement or written confirmation of the intention to enter into a Joint Venture Agreement	
	Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the RFQ will result in an automatic score of zero being allocated for preference	
	Valid and original B-BBEE certificate/sworn affidavit or certified copy thereof from auditor, accounting officer or SANAS accredited Verification Agency [EMEs]	
	Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the RFQ will result in an automatic score of zero for preference	1 5 6 1 1
	Valid and original B-BBEE Verification Certificate or certified copy thereof [Large Enterprises and QSEs]	1
	SECTION 1 : Notice to Bidders	SECTI
Submitted [Yes or No]	Returnable Document	
	in the table below:	
d dated by the ing [Yes or No]	All Sections, as indicated in the footh of each page, must be signed, stamped and dated by the Respondent. Please confirm submission of these Returnable Documents by so indicating [Yes or No]	
	ensure that <u>all</u> these Do wents are returned with their Quotations.	
and time of this erefore urged to	Failure to provise all these Returnable Documents at the Closing Date and time of this RFQ may result in a Respondent's disqualification. Respondents are therefore urged to	
<u>ıts</u> , as detailed	a) Respondents are required to submit with their Quotations the Returnable Documents , below.	
in the tables	Returnable Documents means all the documents, Sections and Annexures, as listed below.	
	Returnable Documents	20
and conditions to	Respondents must indicate here whether Transmet may disclose their quoted prices and other Respondents: YES NO	
	Disclosure of Prices Quoted	19
	Registration number of company / C.C	
	Company Registration	18
	ACCOUNT HOLDER:ACCOUNT NUMBER:	
	BRANCH NAME / CODE:	
	BANK:	

	Returnable Documents	Submitted [Yes or No]
SECTIO	SECTION 2 : Quotation Form	
SECTIO	SECTION 3: Vendor Application Form	
•	Original cancelled cheque or bank verification of banking details	
	Certified copies of IDs of shareholder/directors/members [as applicable]	
•	Certified copies of the relevant compary registration documents from Companies and Intellectual Property Commission (CIPC)	
•	Certified copies of the company's shareholding/director's portfolio	
•	Entity's letterhead	
•	Certified copy of VAT Registration Certificate [RSA entities only]	
•	Certified copy of valid Company Registration Certificate [if applicable]	
•	A signed letter from Respondent's auditor or accountant confirming most recent annual turnover figures	
ANNEX	ANNEXURE A – B-BBEE Preference Points Claim Form	

BBEE Preference romania Constitution of the Co

QUOTATION FORM

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hereby offer to supply the goods/services at the prices quoted in the Price Schedule below, in accordance with the conditions related thereto

I/We agree to be bound by those terms and conditions in:

- the Standard Terms and Conditions for the Supply of Goods or Services to Transnet [available on request]; and
- any other standard or special conditions mentioned and/or embodied in this Request for Quotation.

any, its covering letter and any subsequent exchange of correspondence], together with Transnet's I/We accept that unless Transnet should otherwise decide and so inform me/us, this Quotation [and, if acceptance thereof shall constitute a binding contract between Transnet and me/us.

incurred by Transnet to any other legato deliver the said goods/service/s within the delivery lead-time quoted, Transnet may, without prejudice I/We further agree that if, after I/we have been notified of the acceptance of my/our Quotation, I/we fail edy which it may have, cancel the order and recover from me/us any expenses alling for Quotations afresh and/or having to accept any less favourable offer.

Price Schedule

I/We quote as follows for the goods red, cn a "delivered nominated destination" basis, excluding

ω		2		1-4	Item No
25KV AC Track Sectioning Switch.	No: CEE -TLB -36	Track Switch Handle as per Drawing	Contact Wire. Arthur Flury Type.	25KV Section Insulator for 161mm2	Description of Goods /Services
ΕA		ĒA		EA	Unit of Quantity
œ	2	Q	4	4	Quantity
					Unit Price (ZAR)
					Total Price (ZAR)

Delivery Lead-Time from date of purchase order: [days/weeks]

Notes to Pricing:

- a) All Prices must be quoted in South African Rand, exclusive of VAT
- **b** schedule and not utilise a different format. Deviation from this pricing schedule could result in a bid To facilitate like-for-like comparison bidders must submit pricing strictly in accordance with this price being disqualified.
- 0 price discount(s) in the final evaluation stage if offered on an unconditional basis Please note that should you have offered a discounted price(s), Transnet will only consider such

Respondent's Signature

Section 3 VENDOR APPLICATION FORM

Respondents are to furnish the following documentation and complete the Vendor Application Form below:

- [with bank stamp] Original cancelled cheque OR letter from the Respondent's bank verifying banking details
- 'n Certified copy of Identity Document(s) of Shareholders/Directors/Members [where
- $\dot{\omega}$ Intellectual Property Commission (CIPC) Certified copies of the relevant company registration documents from Companies and
- 4 Certified copies of the company's shareholding/director's portfolio
- ū A letter on the company's letterhead confirm physical and postal addresses
- 6. Original valid SARS Tax Clearance Certificate
- 7. Certified copy of Vol Registration Certificate
- ∞ Practice thereof meeting the requirements for B-BBEE compliance as per the B-BBEE Codes of Good A valid and origina BEE Verification Certificate / sworn affidavit **or certified copy**
- 9 Certified copy of valid Company tration Certificate [if applicable]

Vendor Application Form

Company trading name

Form of entity $[\sqrt]$ Account holder Postal address Company telephone number Bank name VAT number [if registered] Company registered name Company website address Company Registration Number or ID Number if a Sole Proprietor Company email address Company fax number Pty Lid Branch & Branch code Bank account number Limited Partnership Sole Proprietor

Physical Address Contact person Designation Telephone Email Code Code

Annual turnover range [last financial year] Does your company have a Tax Directive or IRP30 Certificate Main product or services [e.g. Stationery/Consulting] Does your company provide Is your company a public or private entity Area of delivery National Products < R5 m R5 - 35 m Provincial Services Public Yes > R35 m Private Local Both

No

Complete B-BBEE Owners!

% Black ownership How many personnel does the entity employer Does your entity have a B-BBEE What is your B-BNE status [Level 1 to 9 / Unknown] Black ownership % Disabled Permanent Yes ownership % Youth Part time No

If you are an existing Vendor with Transnet please con Ke

Transnet contact person

Contact number

Transnet Operating Division

Duly authorised to sign for and on behalf of Company / Organisation:

Signature	Name
Date	Designation
te	סח

ANNEXURE A: B-BBEE PREFERENCE POINTS CLAIM FORM

Based Black Economic Empowerment [B-BBEE] Status Level of Contribution This preference form contains general information and serves as a claim for preference points for Broad-

1. INTRODUCTION

- A total of 20 preference points shall be awarded for B-BBEE Status Level of Contribution.
- Failure on the part of a Bidder to fill in and/or to sign this form and submit a B-BBEE Verification Contribution are not claimed with the bid will be interpreted to mean that preference points for B-BBEE Status Level of [IRBA] or an Accounting Officer as contemplated in the Close Corporation Act [CCA] together **[SANAS**] or a Registered Auditor approved by the Independent Regulatory Board of Auditors Certificate from a Verification Agency accredited by the South African Accreditation System
- Transnet reserves the right to require of a Bidder, either before a Bid is adjudicated or at any time subsequently substantiate any claim in regard to preferences, in any manner required by

2. GENERAL DEFINITIONS

- 2.1 insurance fund contributions and "all applicable taxes" inclu ie-added lax, pay as you earn, income tax, unemployment velopment levies;
- 2.2 Broad-Based Black Economic Empowerment means broad-based black pric empowerment as defined in section 1 of the
- 2.3 Empowerment Act; Black Economic Empowerment, issued in terms of sect on its overall performance using the relevant scorec "B-BBEE status of contributor" means the status received by a measured entity based tained in the Codes of Good Practice on $oldsymbol{1})$ of the Broad-Based Black Economic
- 2.4 Transnet for the provision of goods, works or services; means a written offer in a prescribed or stipulated form in response to an invitation by
- 2.5 Empowerment Act, 2003 [Act No. 53 of 2003]; "Broad-Based Black Economic Empowerment Act" means the Broad-Based Black Economic
- 2.6 discounts that can utilised have been taken into consideration; "comparative price" means the price after the factors of a non-firm price and all unconditional
- 2.7 their expertise, property, capital, efforts, skills and knowledge in an activity for the execution of a "consortium or joint venture" means an association of persons for the purpose of combining
- 2.8 **"contract"** means the agreement that results from the acceptance of a bid by Transnet;
- 2.9 **"EME"** means any enterprise with an annual total revenue of R5 [five] million or less,

- 2.10 of any service, for the execution of the contract; and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the "firm price" means the price that is only subject to adjustments in accordance with the actual contractor and demonstrably has an influence on the price of any supplies, or the rendering costs increase or decrease resulting from the change, imposition, or abolition of customs and excise duty
- 2.11 "functionality" means the measurement according to predetermined norms, as set out in the bid of a service and the technical capacity and ability of a bidder; operating, taking into account, among other factors, the quality, reliability, viability and durability documents, of a service or commodity that is designed to be practical and useful, working or
- 2.12 "non-firm prices" means all prices other than "firm" prices;
- 2.13 "person" includes reference to a juristic person;
- 2.14 "rand value" means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;
- 2.15 in terms of the contract; "subcontract" means the primary contractor's assigning or leasing or making out work to, or employing another person to support such primary contractor in the execution of part of a project
- 2.16 "total revenue" bea Black Empowerment Act Practice on Black Ed s the same meaning assigned to this expression in the Codes of Good and promulgated in the Government Gazette on 9 February 2007; Empowerment, issued in terms of section 9(1) of the Broad-Based
- 2.17 bequeathed to a trustee to administ "trust" means the arrangement through which the property of one person is made over fer sich property for the benefit of another person; and
- 2.18 order for such property to be administered "trustee" means any person, including the e founder of a trust, to whom property is bequeathed in benefit of another person.

ADJUDICATION USING A POINT SYSTEM

- 3.1 another bidder The Bidder obtaining the highest number of total points in Section 2 of the RFP will be awarded the contract, unles the evaluation criteria as enumerated bjective criteria justifies the award to
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts
- 3.3 Points scored will be rounded off to 2 [two] decimal places.
- 3.4 In the event of equal points scored, the Bid will be awarded to the Bidder scoring the highest number of preference points for B-BBEE.
- 3.5 scoring the highest score for functionality. equal points including equal preference points for B-BBEE, the successful Bid will be the one However, when functionality is part of the evaluation process and two or more Bids have scored
- 3.6 Should two or more Bids be equal in all respect, the award shall be decided by the drawing of lots

4 POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

In terms preference points shall be awarded to a Bidder for attaining the B-BBEE status level of contribution in accordance with the table below: Regulation 5(2) and 6(2) of the Preferential Procurement Regulations,

Non-compliant contributor	8	7	6	5	4	ω	2	<u> </u>	B-BBEE Status Level of Contributor
0	2	4	6	8	12	16	18	20	Number of points (80/20 system)

Note: Refer to Section 1 of the RFP document for further information in terms of B-BBEE ratings

- 4.2 for the purpose of conducting respection and issuing EME's with B-BBEE Status Level Certificates. Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA's approval Bidders who quali Accounting Officer ont implated in the CCA or a Verification Agency accredited by SANAS or a EMEs in terms of the B-BBEE Act must submit a certificate issued by an
- 4.3 Auditor approved by IRBA or a Verification Bidders other than certificate or a certified copy there EMEs must sub substantiating their B-BBEE rating issued by a Registered their original and valid B-BBEE status level verification ncy accredited by SANAS
- 4.4 entity, provided that the entity submits its B-BEE A trust, consortium or joint venture will quality 🔭 points for its B-BBEE status level as a legal level certificate.
- 4.5 separate bid they were a group structure and that such a consolidated B4BEE scorecard is prepared for every unincorporated entity, provided that the entity submits A trust, consortium or joint venture will qualify for its for their B-BBEE status level as an consolidated B-BBEE scorecard as if
- 4.6 certificates in terms of the specialised scorecard contained in the B-BBEE Codes of Good Practice. Tertiary institutions and public entities will be required to submit their B-BBEE status level
- 4.7 and ability to execute the subcontract. that such a Bidder qualifies for, unless the intended subcontractor is an EME that has the capability that such a Bidder intends subcontracting more than 25% [twenty-five per cent] of the value of A person will not be awarded points for B-BBEE status level if it is indicated in the Bid documents the contract to any other enterprise that does not qualify for at least the same number of points
- 4.8 A person awarded a contract may not subcoritract more than 25% [twenty-five per cent] of the level than the person concerned, unless the contract is subcontracted to an EME that has the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status

capability and ability to execute the subcontract.

Ņ **B-BBEE STATUS AND SUBCONTRACTING**

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	points in respect of B-BBEE
	Status Level of (
	Level
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	Contribution mus
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issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or reflected in paragraph 4.1 above and must be substantiated by means of a B-BBEE certificate Note: Points claimed in respect of this paragraph 5.1 must be in accordance with the table **B-BBEE Status Level of Contributor** [maximum of 20 points]

5.2 Subcontracting:

an Accounting Officer as contemplated in the Close Corporation Act.

<u> </u>
any
portion
n of the
contract
ct be su
bcontracted
? YES/NO
[delete
which
15.
헍
YES/NO [delete which is not applicable]

3	(i	(III)	(ii)	9	Declara:	(¥) (III)	≘ ≘	If YES,
Describe Principal Business Activities	Type of Company / Firm Partnership/Joint Venture/Consortium One person business/sole propriety Close Corporations Company (Pty) Ltd [TICK APPLICABLE BOX]	Company registration number	VAT registration number	Name of Company/Firm	Declaration with regard to Company/Firm		What percentage of the contract will be subcontracted? The name of the subcontractor	If YES, indicate:
						YES/NO	%	

5.3

(Viii)						(<u>v</u> i)		
(vii) Total number of years the company/firm has been in business	[TICK APPLICABLE BOX]	□Other Service Providers, e.g Transporter, etc	□Professional Service Provider	□Supplier	□Manufacturer	Company Classification		

SPREVIEW COPY ONLY

BID DECLARATION

indicated in paragraph 4 above, qualifies the company/firm for the preference(s) shown and ${\rm I\,I}$ company/firm, certify that points claimed, based on the B-BBEE status level of contribution I/we, the undersigned, who warrants that he/she is duly authorised to do so on behalf of the we acknowledge that:

- (i) The information furnished is true and correct
- \equiv In the event of a contract being awarded as a result of points claimed as shown in satisfaction of Transnet that the claims are correct. paragraph 6 above, the contractor may be required to furnish documentary proof to the
- \equiv If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent addition to any other remedy it may have: basis or any of the conditions of contract have not been fulfilled, Transnet may, in
- (a) disqualify the person from the bidding process;
- 6 recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
- 0 cance the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
- <u>a</u> restrict the Bidd the audi alteram partem from obtaining busines entities, or only the shareholders and directors who acted in a fraudulent manner, contractor, its shareholders and directors, and/or associated from Transnet for a period not exceeding 10 years, after he other side] rule has been applied; and/or
- (e) forward the matter for criminal prosecution

H

WITNESSES:	
	"OBE
	SIGNATURE OF BIDDER
	DATE:
COMPANY NAME:	

2

ANNEXURE B: SPECIFICATION OF GOODS

SCOPE - SUPPLY AND DELIVER 25kV TRACK SWITCH HANDLE

Freight Rail (RME) in Richards Bay. Tenders are invited for the supply and delivery of Track Switch Handle as per drawing no: CEE-TLB-36 for Transnet

1.1 SPECIFICATIONS

The specification is as per the attached drawing no: CEE-TLB-36, APPENDIX (i)

Ņ SCOPE SUPPLY AND DELIVER SECION INSULTOR FOR 161mm² COMYACT WIRE

Transnet Freight Rail (RME) in Richards Bay. Tenders are invited for the supply and delivery of Section Insulator as per Specification no: CEE-0056_2010 for

2.1 SPECIFICATIONS

The specification is as p attached Specification no: CEE-0056_2010, APPENDIX (ii).

ယ SCOPE - SUPPLY AND DELIVER 25Kv TRACK SECTIONING SWITCH

below, for Transnet Freight Rail (RME) in R Tenders are invited for the supply and den of Track Sectioning Switch as per the Specification (3.1) mentioned

3.1 SPECIFICATIONS

- 3.1.a Tenders are invited for the supply and delivery or an area of the supply and delivery or area of the supply and delivery or area. (RME) in Richards Bay. track sectioning switch, for Transnet Freight Rail
- Transnet Freight rail 25kV AC 50 Hz electrification systems. This specification covers the requirements of manually c r operated outdoor type, track switches for
- 3.1.c The principal application of the track sectioning switches call for: 4
- overhead traction network and the sectioning of the network. 3.1.d Normal operation, namely on and off on heavy traction substation and tie station feeder circuits to an
- 3.1.e The switch shall be rated as defined in clause 5.2

3.2 STANDARD SPECIFICATIONS

The following specifications are referred to herein:

SABS 936

SABS 121

SAR CEE-M5-1

SABS 62

BS 170

SAR SCLA-10

- English of the standards/specifications shall be submitted. manufactured complying with recognised standards/specifications of the country origin. In such instances copies in 3.2.a Alternatively the track sectioning switches and equipment offered in terms of this specification may be
- 3.2.b All the concerned shall ensure that they are in possession of the latest issues of the above mentioned

3.3 ATMOSPHERIC CONDITIONS

3.3.a The track sectioning switches shall be suitable for operation under the following atmospheric conditions:

Air pollution Lightning conditions Relative humidity Ambient temperature Severe, Flash density 5, 75/km²/year 0 to 1800m above sea level Locomotive fumes -5° C to +40 °C

3.4. SERVICE CONDITIONS

under normal operation may be between 19 and 27,5kV 3.4.a The track-section switches are required to operate on a nominal 25kV Ac 50Hz system, the voltage of which

3.5 CONSTRUCTION AND PERFORMANCE

3.5.1 Genera

- which must comply with clause 5.2.2 of the 3.5.1.a The track switch shall be suite normal live but off-load operation and provided with arcing horns specification.
- the track sectioning switches used by the Transnet Reight rail. .1.b The track switches specified herein shall perated by an up and down movement of the rod similar to
- 3.5.1.c An adequate means of adjusting the position of the ryving contacts related to the fixed contacts shall be
- 3.5.1.d The switch shall "open" with the downward stroke and " vith the upward stroke
- turn will be attached to the track switch structure. 3.5.1.e The switch and the operating mechanism will be mounted on saparate galvanised steel frames, which in
- operation mechanism unless otherwise stated in the Contract documents. .5.1.f The Transnet freight Rail will provide the platform and bolts or clamps for mounting the switch and the
- devices, used in conjunction with the operating rods shall be supplied to the same standards and by the tenderer. as the operating rod between the switch and the operating mechanism. The sockets, connectors, 3.5.1.g Standard water pipes according to SABS 62(metric units) and to a size specified by the tender shall be used rod adjusting
- non-ferrous metal and shall be of self-lubricating type. 3.5.1.h All parts functioning as bearings or guide (except motor bearings and rod guides) shall be constructed of
- .5.1.i The necessary mounting holes shall be drilled in the support frame of the switch.

3.5.2 Contacts of track-sectioning switch

10 000A for one second without harmful effects. .5.2.a The track switches shall be capable of carrying 100%A continuously and shall conduct currents up to

- being set in vibration, or welding together under the operating conditions specified Good contact of the moving parts shall be maintained until the horns part. There shall be no possibility of the horns 3.5.2.b Normally the switch will operate under no-load conditions. However, copper arcing horns shall be provided
- clearance in the open position between the fixed and moving contacts shall be at least 320mm. 3.5.2.c The distance between any live portion of the switch and any metal portion normally earthed as well as the
- required by the design for ensuring good contact. The tenderer shall give details of the type of copper alloy used corrosion resistant, high conductivity copper alloy, with exception of such springs, clips or other components 3.5.2.d The main contacts and the other current carrying components of the track switch shall be of a suitable,
- with all bolts, nuts, lugs, clamps etc. required to make these connections i.e. each pole to be provided with two diameter (area 2x160mm²) to be both stationary terminals of the switch and the switch shall be supplied complete 3.5.2.e Provision shall be made for connecting two bare stranded hard-drawn copper conductors each 16,5mm in
- facilities as asked for under clause 5.2.5. 3.5.2.f The stand-off insulator will be taken as being one stationary terminal of the switch with the connecting
- 3.5.2.g The insulating qualities of the stand-off insulator shall not be less than that specified under clause 5.3.6 and the insulator shall be of the same height as the switch insulator.
- switch blade and the stationary stand-off insulator. 3.5.2.h Provision shall be made for bolting a suitable number of flexible connections in parallel between the moving
- lug on either end, complete with all t shall be made of a suitable nun 3.5.2.i The flexible connection hall be supplied with the switch whether a stand-off insulator is required or not and ${f q}$ stranded annealed copper conductors with an approved type of compression he necessary phosphor bronze or copper-nickel-silicon bolts and nuts

3.5.3 Insulators

- 3.5.3.a The insulator shall be silicon rubber
- obtained during various types of tests carried out to be 3.5.3.b The size and design shall provide adequate chanical strength for the purpose required and actual figures his, shall be given
- be very much in excess of the actual requirements and not less operated a danger can arise to staff that have to work on or n 3.5.3.c In this connection it must be borne in mind that if ulator breaks and the switch does not open when 😽 line. The mechanical strength shall therefore that giving a factor of safety of 3
- 3.5.3.d The insulators shall comply with class A insulators in accordance applicable and for the purpose of this type applicable the type may be taken as rigid line post insulators with specification SABS 177, where
- 3.5.3.e The insulating qualities shall be as follows:

Impulse withstand

: 250kV

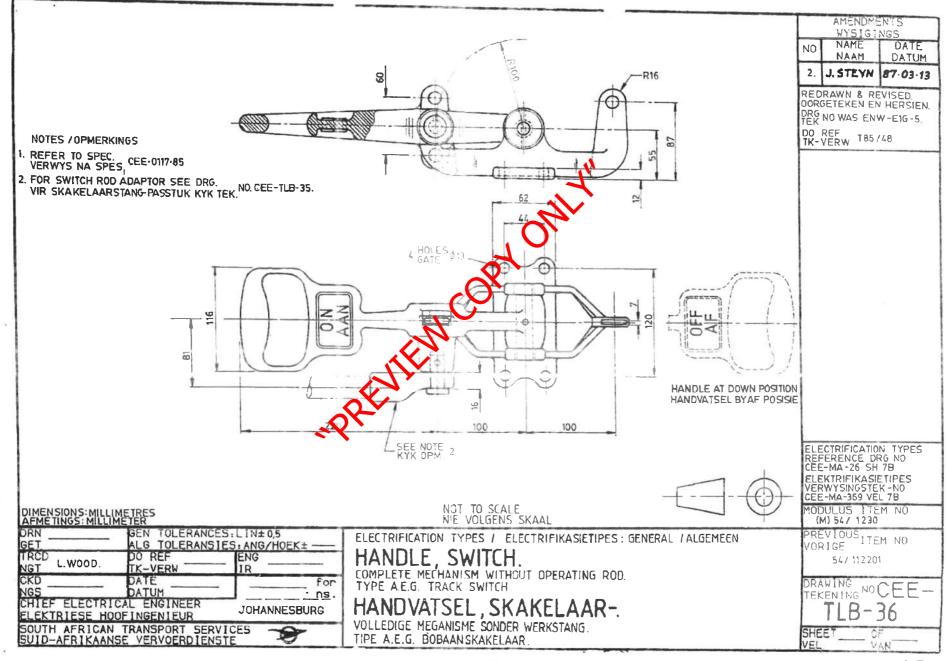
Wet withstand

: 95 at 50Hz

The creepage distance shall not be less than 1475mm except in polluted areas where it shall be 1475mm

3.5.4 Hardware

with tests described therein. iron will be acceptable. All ferrous parts shall be galvanized in accordance with specification SABS 121 and comply 3.5.4.a All ferrous parts shall be spheroidal graphite iron complying with SABS 936(see clause 4.7.3).Ordinary cast SPREVIEW COPY ONLY



REVIEW COPY ONLY



TRANSNET freight rail

A Division of Transnet Limited

TECHNOLOGY MANAGEMENT

SPECIFICATION

COMBINED 3 KV DC AND 25 KV AC OVERHEAD TRACK EQUIPMENT FOR CHANGE-OVER YARDS SPECIFICATION FOR SECTION INSULATORS FOR

	24	J .		
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Circulation Restricted To:

Transnet and Relevant Third Parties

Transnet Freight Rail

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1.0 SCOPE

-This specification covers the Transnet Freight Rail requirements insulators, excluding catenary insulation, for changeover yards. ſ bidirectional 3/25 \geq section

2.0 STANDARDS

- 2.1 Unless otherwise specified, all materials, equipment and testing methods shall comply with the edition of the relevant IEC, SANS or Transnet Freight Rail publications where applicable. current
- 2.2 The following specifications (latest edition) are referred to herein:

2.2.1 SOUTH AFRICAN NATIONAL STANDARDS (SANS)

SANS 60383-2: Insulators for overhead lines with a nominal voltage above 1 000 V Part 2

2.2.2 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 2303 Standard Test Methods for Liquid contaminant, inclined-plane tracking and

erosion of insulating materials

3.0 METHOD OF TENDERING

- <u>ω</u> Tenderers shall indicate chause-by-clause compliance with this specification. This shall take the form of a separate document list in the specifications clause numbers indicating the individual statement of compliance or non-compliance. This document can be used by tenderers to elaborate on their response to a clause
- 3.2 A statement of non-compliance snall be motivated by the tenderer.
- $^{\omega}_{\omega}$ constructional details and principal dimensi Tenderers shall submit descriptive literature consisting of a detailed technical specifications, general
- 3.4 Failure to comply with clauses 3.1, 3.2 and 3.3 cod clude a tender from consideration

4.0 SERVICE CONDITIONS

4.1 ENVIRONMENTAL CONDITIONS

Altitude: 0 - 1800 m above sea level

Relative humidity: 10% to 90%

Ambient temperature: -10° C to +50° C

Wind pressure: 750 Pa

Lightning conditions: 12 ground flashes/km² per annum

Heavily salt laden with industrial pollutants including diesel-

Pollution:

electric locomptive emissions

4.2 MECHANICAL CONDITIONS

Contact wire tension (new wire): 5.5 kN(min) to 22.5 kN(max.)

Required safety factor (overall):

2

Contact wire size: 161 mm²

4.3 ELECTRICAL CONDITIONS

Highest voltage of system: 30 kV AC

3.9 kV DC

Lowest voltage of system: 19.9 kV AC

2.2 kV DC

Maximum commutated current: 2.7 kA

Maximum short circuit current: 35 kA

Note: The circuit breakers opening time on the occurrence of a fault is 60-150 milliseconds for 25 kV AC systems and 30-100 milliseconds for 3 kV DC systems.

5.0 DRAWINGS AND INSTRUCTIONS

- 5.1 Tenderers shall provide the following information at time of tendering to enable a proper adjudication to be made. Failure to do so chall be indicated in the "Statement of Compliance" and may lead to rejection of the tender. Where feasible the information may be provided on the drawing:
- 5.1.1 A detailed drawing showing insulation inserts, runners, arcing horns and suspension arrangements with all relevant dimensions and in particular deviation, if any, from a plane surface after installation. (See clause 6 for design requirements.) clause 6 for design requirements.)
- 5.1.2 Details of insulating materials used. Resistan be to Ultra-violet radiation shall be stated
- 5.1.3 Detail and composition of metallic components 45
- 5.1.4 Minimum distance to be allowed between section in and catenary
- 5.1.5 Details of adjusting height and level at rights angles as wall longitudinal, to the track
- 5.1.6 Gross mass
- 5.1.7 Details of adjustment of arcing horns
- 5.1.8 Comprehensive instructions for installation and details of any special tools or equipment required
- 5.1.9 List of railways and service conditions where the section insulator offered is in successful use
- 5.1.10 Test certificates for tests called for in clause 7.2
- Ω Ŋ Photocopies of original documentation shall be clearly legible

6.0 DESIGN REQUIREMENTS

6.1 ne section insulators shall be of durable design and shall be capable of carrying out their functions reliably under the service conditions stated. They shall be suitable for bi-directional traffic at speeds of up to 50 km/h.

- 0 N fittings excluded.) The gross mass of the section insulator shall not exceed 21 kg. (The mass of support droppers and
- თ ယ 330 mm The overall width of that part of the section insulator in contact with the pantograph shall not exceed
- 6.4 that a smooth continuous running surface is present for the passage of a pantograph, The section insulator shall be provided with suitable runners of either metal or insulating material such
- 0 Ġ incorporating a The design shall be such that electrical contact between pantograph and the overhead system will circumstances be completely broken whilst being traversed by the pantograph. gap longitudinally across the section insulator (i.e. with in-line runners) shall not be Designs
- g ö Allowance shall be made in the design to ensure that no obstruction shall be formed to the passing pantograph should the section insulator fail to be set perfectly level in all planes with respect to the pantograph should
- 6.7 The section insulator shall preferably present a perfectly plane running surface to the pantograph, when installed at the normal tension of 14.5 kN. If not perfectly plane, or if variations in tension can result in deviations from a perfect plane, the maximum allowable deviation shall be 6 mm at any point on the running surface, within the range of operating tensions quoted in clause 4.2.
- 6 ò of up to 90 N. All runners or parts in contact with the pantograph shall be of rigid design such that no part shall deflect by more than that specified in clause 6.7 whilst being subjected to the upward force of the pantograph
- 6 9 Arcing horns shall be provided and designed such to assist in extinguishing any arc. They shall also be placed such that the insolution used will not be damaged by the arcs drawn during operation and shall be of rigid design. The arciap between arcing horns at different potential shall not be less than 150 mm. Each horn shall have estraight length above this air gap between 120 mm to 350 mm.
- 6.10 pantographs (if applicable) as well as elso The main insulating material forming the insulation between the two circuits shall have a creepage length greater that 750 mm. It shall have be able to withstand abrasion resulting from the passage of be able to withstand abrasion resulting from the passage ricarcing and ultra-violet radiation rcing and ultra-violet radiation
- P.T.F.E. (Teflon) shall not be used if in direct contact with the pantograph
- 0 Where composite insulators are used as main insulator, the protective coating on the outside shall be bonded to the core such that no cavities are formed to be coating and the core. The protective coating shall be sealed at the ends to prevent the possibility of tracking along the insulator underneath Where composite insulators are used as main insulators
- Each insulator of this type shall be subjected to the v/ater immercyn test described in clause 7.3
- 6.12 arcing/flashover. Clause 6.11 also applies to any other protection material provided to protect the insulation against
- 6.13 similar means to prevent wear taking place at sharp edges Supporting droppers shall (if provided) be insulated to prevent any arcing between the catenary wire and the droppers. The supporting droppers shall be adjustable either by means of turnbuckles or some other means of providing fine adjustments to its length. Droppers shall be protected by thimbles 으
- 6.14 width is in excess of 75 mm. Supporting droppers must be provided if the mass of the section insulator exceeds 5 kg or if its overall
- 6.15 Only non-corrosive materials shall be used in the construction of the section insulator. Brass may not be
- O Means of locking all bolts and screws shall be provided. All screw threads shall be of metal

7.0 TESTS

- 7.1 GENERAL
- 7.1.1 The first section insulator shall be subjected to type tests as specified in clauses 7.2
- 7.1.2 All main insulators of the composite type shall be subjected to the routine test as specified in clause 7.3
- 7.1.3 clause 7.2.1. A further five samples of the main insulator material shall be subjected to the type test as specified in
- 7.1.4 The responsibility for arranging these tests shall rest with the tenderer although the Transnet Freight Rail reserves the right to perform such tests independently.
- 7.1.5 Transnet Freight Rail reserves the right to call for further type tests
- 7.1.6 Transnet Freight Rail reserves the right to be present at all tests
- 7.2 TYPE TESTS
- 7.2.1 that will not give false results. The flow rate of the contaminant should be accomplished by a gravity feed from a large reservoir mounted at a sufficient height to obtain the desired flow rate. The insulating material (if of synthetic type) shall be tested for resistance to tracking in accordance with the test method described in ASTM D 2303. The average time to track 13 mm for five samples shall not be less than 24 hours at a constant test voltage of 2 kV with a constant contaminating flow rate as in order to create sufficient ventilation, thus limiting the relative humidity inside the chamber to a value prescribed in ASTM D 2303. The cabinet in which the tracking test is performed shall be open at the top
- 7.2.2 Impulse and power frequency tests shall be carried out on a complete section insulator in accordance with SANS 60383-2. with SANS 60383-2.
- N maximum tension called for in claus Mechanical load tests shall be ca ed out to establish whether the section insulator can withstand the
- \neg ယ် Water immersion tests shall be carried & as ollows : (Routine test)
- 7.3.1 Immerse the sample in hot tap water (50 °C) at 20 °C. allow water to cool over 8 hours to approximately
- 7.3.2 Repeat 7.3.1 nine times.
- 7.3.3 After the 10th cycle, remove the sample from the water, Mapply a DC test voltage of 25 kV/m length of insulator within minute on a DC ammeter with a resolution of 1 nA. the surface dry with a paper towel and vizutes. Measure the current after one
- 7.3.4 Insulators conducting more than 100 nA have failed the test and must be rejected
- 8.0 SPARES
- 8.1 Tenderers shall quote separately for the following spares:
- 8.1.1 Arcing horns
- 8.1.2 Main insulators
- 8.1.3 Metal runners (if not integrated with arcing horns)
- 8.2 The following information shall be made available for spares:
- 8.2.1 Complete ordering description

- 8.2.2 Name of manufacturer
- 8.2.3 Catalogue description number
- 8.2.4 Type and ordering number
- 9.0 TOOLS
- 9.1 Special tools for installation of the section insulators shall be quoted for separately,
- 10.0 PACKING
- 10.1 Each section insulator shall he packaged individually complete with arcing homs, suspension fittings,

END

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