



FREIGHT RAIL, a division of

TRANSNET SOC LTD

Registration Number 1990/000900/30

[hereinafter referred to as **Transnet**]

REQUEST FOR QUOTATION [RFQ] No ERACKT 1879 - 15067

FOR THE INSTALLATION OF NEW POWER EQUIPMENT AT VARIOUS RELAY ROOMS.

FOR DELIVERY TO: KOEDOESPOORT (PRETORIA).

ISSUE DATE:	31 JULY 2014
CLOSING DATE:	14 AUGUST 2014
CLOSING TIME:	10:00
BID VALIDITY PERIOD:	28 NOVEMBER 2014

SECTION 1
NOTICE TO BIDDERS

On or after 31 July 2014, the RFQ documents may be inspected at, and are obtainable from the office of the Transnet Freight Rail Advice Centre, Inyanda House 1, Ground Floor, 21 Wellington road, Parkton, Johannesburg.

RFQ documents will only be available for collection between 09:00 and 15:00 from **31 July 2013 until 15H00 on Wednesday 13 August 2014.**

Any additional information or clarification will be faxed or emailed to all Respondents, if necessary.

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

METHOD: Hand delivered
The envelope is to be deposited in the tender box which is located in the foyer on the ground floor and should be addressed as below.

CLOSING DATE AND TIME: 14 August 2014, 10h00

CLOSING VENUE: The Secretary
Transnet Acquisition council
Ground floor
Tender box
Inyanda House 1
21 Wellington road
Parktown
Johannesburg
2001

It should be noted that the tender box is located at the main entrance and is accessible to the public 24 hours a day, 7 days a week

1 Responses to RFQ

Responses to this RFQ [**Quotations**] must not include documents or reference relating to any other quotation or proposal. Any additional conditions must be embodied in an accompanying letter.

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

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

2.1 B-BBEE Scorecard and Rating

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

- the 80/20 system for requirements with a Rand value of up to R1 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R1 000 000 (all applicable taxes included).
- Bidders are to note that if the 90/10 preference point system is stipulated in this RFQ and if all Bids received exceed R1 000 000.00, the RFQ must be cancelled.
- The value of this bid is estimated to be above R1 000 000 (all applicable taxes included); and therefore the **90/10** system shall be applicable.

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

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

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

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

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

[Refer clause 19 below for Returnable Documents required]

3 Communication

Respondents are warned that a response will be liable for disqualification should any attempt be made by a Respondent either directly or indirectly to canvass any officer(s) or employee of Transnet in respect of this RFQ between the closing date and the date of the award of the business.

A Respondent may, however, **before the closing date and time**, direct any written enquiries relating to the RFQ to the following Transnet employee:

Name: Kgalalelo Tlhabanelo Email: Kgalalelo.Tlhabanelo@transnet.net

Respondents may also, at any time **after the closing date** of the RFQ, communicate with the Secretariat of the Transnet Acquisition Council on any matter relating to its RFQ response:

Name: Prudence Nkabinde

Telephone: 011 544 9486

Email: prudence.nkabinde@transnet.net

4 Tax Clearance

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

5 VAT Registration

The valid VAT registration number must be stated here: _____ *[if applicable]*.

6 Legal Compliance

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

7 Changes to Quotations

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

8 Pricing

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

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

11 Binding Offer

Any Quotation furnished pursuant to this Request shall be deemed to be an offer. Any exceptions to this statement must be clearly and specifically indicated.

12 Disclaimers

Transnet is not committed to any course of action as a result of its issuance of this RFQ and/or its receipt of a Quotation in response to it. Please note 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 conform to instructions and specifications which are detailed herein;
- 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.

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

Transnet reserves the right to lower the threshold for Technical by **10%** [ten percent] if no Bidders pass the predetermined minimum threshold.

13 Transnet's supplier integrity pact

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

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

YES	NO
------------	-----------

Should a Respondent need to declare previous transgressions or a serious breach of law in the preceding 5 years as required by Annexure A to the Integrity Pact, such declaration must accompany the Respondent's bid submission.

14 Evaluation Criteria

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

Criterion/Criteria	Explanation
Administrative responsiveness	Completeness of response and mandatory returnable documents
Substantive responsiveness	Prequalification criteria, if any, must be met and whether the Bid materially complies with the scope and/or specification given. <ul style="list-style-type: none"> A fully completed clause by clause statement of compliance to the project specification Whether the bid contains a priced offer
Functionality Threshold	As prescribed in terms of the Preferential Procurement Policy Framework Act (PPPFA), Act 5 of 2000 and its Regulations, Respondents are to note that functionality is included as threshold with a prescribed percentage threshold of 60 %. Compliance to specification and delivery schedule (time frame) will be considered as part of the technical evaluation
Final weighted evaluation based on 90/10 preference point system as indicated in paragraph 2	<ul style="list-style-type: none"> Pricing and price basis [firm] - whilst not the sole factor for consideration, competitive pricing and overall level of unconditional discounts¹ will be critical B-BBEE status of company - Preference points will be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table indicated in Annexure A.

15 Validity Period

Transnet desires a validity period up to 28 November 2014.
This RFQ is valid until _____.

16 Banking Details

BANK: _____
BRANCH NAME / CODE: _____
ACCOUNT HOLDER: _____
ACCOUNT NUMBER: _____

17 Company Registration

Registration number of company / C.C. _____
Registered name of company / C.C. _____

¹ Only unconditional discounts will be taken into account during evaluation. A discount which has been offered conditionally will, despite not being taken into account for evaluation purposes, be implemented when payment is effected.

18 Disclosure of Prices Quoted

Respondents must indicate here whether Transnet may disclose their quoted prices and conditions to other Respondents:

YES NO

19 Returnable Documents

Returnable Documents means all the documents, Sections and Annexures, as listed in the tables below.

a) Respondents are required to submit with their Quotations the **mandatory Returnable Documents**, as detailed below.

Failure to provide all these Returnable Documents at the Closing Date and time of this RFQ will result in a Respondent's disqualification. Respondents are therefore urged to ensure that all these Documents are returned with their Quotations.

All Sections, as indicated in the footer of each page, must be signed, stamped and dated by the Respondent. Please confirm submission of these mandatory Returnable Documents by so indicating [Yes or No] in the table below:

Mandatory Returnable Documents	Submitted [Yes or No]
SECTION 2 : Quotation Form	
Schedule of completed clause by clause statement of compliance to the project specification: <ul style="list-style-type: none"> ○ Project Specification ○ BBG1027 – Valve regulated lead acid batteries for use in signal installations. ○ BBG1023, BBG1499, BBG1500, BBG1501, BBG1502 – Battery stand drawings. ○ BBC 5666 – 3 Phase static uninterruptible power supply 10 to 125 kVA. ○ BBF 3861 – Low voltage power supply devices, ac to dc converter with 60v output ○ BBF 7820 – Power distribution cubicles for signal installations. ○ Relay room power plans. 	

b) In addition to the requirements of section (a) above, Respondents are further required to submit with their Quotations the following **essential Returnable Documents** as detailed below.

Failure to provide all these Returnable Documents may result in a Respondent's disqualification. Respondents are therefore urged to ensure that all these documents are returned with their Quotations.

All Sections, as indicated in the footer of each page, must be signed, stamped and dated by the Respondent. Please confirm submission of these essential Returnable Documents by so indicating [Yes or No] in the table below:

Essential Returnable Documents	Submitted [Yes or No]
SECTION 1 : Notice to Bidders	
- Valid and original B-BBEE Verification Certificate or certified copy thereof [Large Enterprises and QSEs] 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	
- 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 being allocated for preference	
- 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	
- Original valid Tax Clearance Certificate [Consortia / Joint Ventures must submit a separate Tax Clearance Certificate for each party]	
SECTION 3 : Standard Terms and Conditions of Contract for the Supply of Services to Transnet	
SECTION 4 : 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 company 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	
SECTION 5 : B-BBB Preference Points Claim Form	
SECTION 6 : Non-disclosure agreement (NDA)	

SECTION 2 QUOTATION FORM

I/We _____
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 [Section 3 hereof]; and
- any other standard or special conditions mentioned and/or embodied in this Request for Quotation.

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

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

Price Schedule

MATERIAL AND LABOUR TO BE SUPPLIED BY CONTRACTOR

I/We quote as follows for the following services, excluding VAT:

ITEM NO.	DESCRIPTION	QTY.	PRICE PER UNIT	TOTAL PRICE
1	NORTHSTAR NSB170FT "RED" 12V VRLA BATTERY (32 OFF) WITH LINKS TRANSNET APPROVED	6		
2	STEEL STANDS (SET OF 4) AS PER ATTACHED DRAWING TRANSNET APPROVED	6		
3	TRANSFORMER ISOLATION SINGLE PHASE CLASS "F" 4 KVA PRI. 0-220-230 SEC. 0-110-115-120 WITH TRANSPARENT COVER	1		
4	TRANSFORMER ISOLATION SINGLE PHASE CLASS "F" 10 KVA PRI. 0-220-230 SEC. 0-460-480 WITH TRANSPARENT COVER	2		
5	TRANSFORMER ISOLATION THREE PHASE CLASS "F" 10 KVA DELTA/WYE PRI. 0-380-400 SEC. 0-380-400 WITH TRANSPARENT COVER	2		
6	MP3000 30KVA UPS 400/400 TRANSNET APPROVED	2		

ITEM NO.	DESCRIPTION	QTY.	PRICE PER UNIT	TOTAL PRICE
7	ELTEK FP2 POWER SHELVE WITH BRACKETS (268035 HC HV DC)	6		
8	ELTEK FP2 MODULAR 60VDC POWER SUPPLY (241115.705C)	24		
9	ELTEK SIMPLIFIED CONTROLLER (820763)	6		
10	POWER DISTRIBUTION CUBICLE PDC1 AS PER DRAWING	2		
11	POWER DISTRIBUTION CUBICLE PDC_PYD AS PER DRAWING	1		
12	CABLE PERMOTRAIL 4/c 16mm ORANGE SABS 1507 100m DRUM	1		
13	CABLE PERMOTRAIL 4/c 6mm ORANGE SABS 1507 100m DRUM	1		
14	CABLE PERMOPOWER 25mm RED SABS 1507 100m ROLL	2		
15	CABLE PERMOPOWER 25mm BLACK SABS 1507 100m ROLL	2		
16	CABLE CABTYRE 2/c BLACK 1,5mm SABS 1574 100m ROLL	1		
17	CABLE CABTYRE 7/c BLACK 0.75mm SABS 1574 100m ROLL	1		
18	TRUNKING SOLID GREY 50 X 50 X 3m LENGTH	10		
19	TRUNKING SOLID GREY 80 X 80 X 3m LENGTH	5		
20	ALLOWANCE FOR LUGS AND ACCESSORIES	1		
21	LABOUR	1		
22	TRANSPORT	1		
23	ACCOMMODATION	1		
TOTAL AMOUNT			R	

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

Notes to Pricing:

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

SECTION 3**STANDARD TERMS AND CONDITIONS FOR THE SUPPLY OF GOODS OR SERVICES TO TRANSNET**

A Supplier/Service Provider shall be obliged to adhere to the Standard Terms and Conditions for the Supply of Goods and Services to Transnet as expressed hereunder. Should the Respondent find any condition(s) unacceptable, it should indicate which condition(s) is/are unacceptable and offer an alternative(s). A Quotation submitted by a Respondent will be subjected to review and acceptance or rejection of its proposed contractual terms and conditions by Transnet's Legal Counsel, prior to consideration for an award of business.

1 SOLE AGREEMENT

Unless otherwise agreed in writing, these terms [**Terms** and each **Term**] and Transnet's purchase order(s) [**Order** or **Orders**] represent the only conditions upon which Transnet SOC Ltd [**Transnet**] procures goods [**the Goods**] or services [**the Services**] specified in the Order from the person to whom the Order is addressed [**the Supplier/Service Provider**]. Transnet does not accept any other conditions which the Supplier/Service Provider may specify, unless otherwise agreed to by Transnet in writing. In the event of any inconsistency between these Terms and any Order, these Terms shall take precedence.

2 CONFORMITY WITH ORDER

Goods/Services shall conform strictly with the Order. The Supplier/Service Provider shall not vary the quantities specified and/or the specification, if any, stipulated in the Order, without the prior written consent of Transnet. The Supplier/Service Provider warrants that the Goods/Services shall be fit for their purpose and of satisfactory quality.

3 DELIVERY AND TITLE

- 3.1 The delivery dates and addresses are those in the Order. Time shall be of the essence in respect of the Supplier's/Service Provider's obligations under the Order.
- 3.2 The Supplier/Service Provider will not be excused for delay in delivery or performance except due to circumstances outside its control and then only subject to the Supplier/Service Provider having notified Transnet in writing on becoming aware of such circumstances. Transnet may terminate an Order, in whole or in part, without incurring any liability to the Supplier/Service Provider if such a delay becomes, in Transnet's absolute opinion, significant.
- 3.3 If on delivery, the Goods/Services do not conform to the Order, Transnet may reject the Goods/Services and the Supplier/Service Provider shall promptly rectify any defects or in Transnet's opinion, supply appropriate replacement Goods/Services at the Supplier's/Service Provider's expense within the specified delivery times, without any liability due by Transnet.

4 PRICE AND PAYMENT

- 4.1 Prices specified in an Order cannot be increased. Payment for the Goods/Services shall be made by Transnet against an original undisputed invoice(s) [a Tax Invoice], supporting documentation and month-end statement from the Supplier/Service Provider. Tax Invoices plus supporting documentation shall be posted to the address shown in the Order.

4.2 Payment of the Supplier's/Service Provider's valid Tax Invoice(s) will be made by Transnet in the South African currency and on the terms stated in the Order, the standard payment terms being 30 [thirty] days from date of receipt by Transnet of a month-end statement, unless otherwise agreed to in writing. Transnet shall arrange for payment of such Tax Invoices and any pre-authorized additional expenses incurred, provided that the authorised expenses are supported by acceptable documentary proof of expenditure incurred [where this is available]. Any amounts due in terms of these Terms shall be paid to the Supplier/Service Provider, taking into account any deduction or set-off and bank charges.

5 PROPRIETARY RIGHTS LIABILITY

If any allegations should be made or any claim asserted against Transnet that ownership of, or any act or omission by Transnet in relation to Goods/Services or any written material provided to Transnet relating to any Goods/Services or pursuant to an Order being a violation or infringement of any third party's contractual, industrial, commercial or intellectual property rights including but not limited to any patent, registered design, design right, trade mark, copyright or service mark on any application thereof, the Supplier/Service Provider hereby indemnifies Transnet against and hold it harmless from any and all losses, liabilities, costs, claims, damages and expenses [including any legal fees] arising directly or indirectly from such allegation or claim provided that this indemnity shall not apply where the allegation or claim arises solely as a result of the Supplier/Service Provider following a design or process originated and furnished by Transnet. The Supplier/Service Provider shall either

- a) procure for Transnet the right to continue using the infringing Goods; or
- b) modify or replace the Goods/Services so that they become non-infringing,

provided that in both cases the Goods/Services shall continue to meet Transnet's requirements and any specifications stipulated in the Order. Should neither option be possible, the Supplier/Service Provider may remove, with Transnet's prior written consent, such Goods/Services and will pay to Transnet a sum equivalent to the purchase price. If Transnet refuses to give such consent, the Supplier/Service Provider shall have no liability in respect of any continued use of the infringing Goods/Services after Supplier's/Service Provider's prior written request to remove the same.

6 PROPRIETARY INFORMATION

All information which Transnet has divulged or may divulge to the Supplier/Service Provider and any information relating to Transnet's business which may have come into the Supplier's/Service Provider's possession whilst carrying out an Order, and the existence of the Order, shall be treated by the Supplier/Service Provider as confidential information and shall not, without Transnet's prior written consent, be disclosed to any third party, or be used or copied for any purposes other than to perform the Order. This clause does not apply to information which is public knowledge or available from other sources other than by breach of this Term. Upon request by Transnet, the Supplier/Service Provider shall return all materials issued pursuant to the Order and, pending this, shall protect Transnet's rights in any such materials. Such confidential information shall at all material times be the property of Transnet.

7 PUBLICITY

The Supplier/Service Provider shall not name Transnet or use its trademarks, service marks [whether registered or not] or Goods in connection with any publicity without Transnet's prior written consent.

8 TERMINATION OF ORDER

- 8.1 Transnet may cancel an Order in whole or in part at any time upon at least 7 [seven] days' written notice to the Supplier/Service Provider, or when there is a change in control of the Supplier/Service Provider or the Supplier/Service Provider commits any serious breach or any repeated or continued material breach of its obligations under these Terms and/or Order or shall have been guilty of conduct tending to bring itself into disrepute, on written notice to the Supplier/Service Provider when such work on the Order shall stop.
- 8.2 Transnet shall pay the Supplier/Service Provider a fair and reasonable price for justified work in progress, where such price reflects only those costs not otherwise recoverable by the Supplier/Service Provider, at the time of termination, and the Supplier/Service Provider shall give Transnet full assistance to check the extent of such work in progress. Payment of such price shall be in full and final satisfaction of any claims arising out of such termination and upon such payment the Supplier/Service Provider shall deliver to Transnet all work, including any materials, completed or in progress. The sum payable to the Supplier/Service Provider under this clause will not in any event exceed the total amount that would have been payable to the Supplier/Service Provider had the Order not been terminated.
- 8.3 In the event of termination the Supplier/Service Provider must submit all claims within 2 [two] months of termination after which time claims will only be met in what Transnet considers exceptional circumstances.
- 8.4 If the Goods or Services are not provided in accordance with an Order, the Order shall be deemed terminated and the Supplier/Service Provider shall compensate Transnet for any costs incurred in obtaining substitute Goods or any damage caused due to the failure or delay in the delivery.

9 ACCESS

The Supplier/Service Provider shall be liable for the acts, omissions and defaults of its personnel or agents who, for the purposes of the Order, shall be treated as if they are the Supplier's/Service Provider's employees. The Supplier/Service Provider shall ensure that any such personnel or agents, whilst on Transnet's premises, shall comply with Transnet's health and safety, security and system security rules and procedures as and where required.

10 WARRANTY

The Supplier/Service Provider warrants that it is competent to supply the Goods/Services in accordance with these Terms to the reasonable satisfaction of Transnet and that all Goods/Services delivered under the Order: (a) conform and comply in all relevant legislation, standards, directives and orders related to [inter alia] the Goods/Services in force at the time of delivery, and to any specifications referred to in the Order; (b) will not cause any deterioration in the functionality of any Transnet equipment; and (c) do not infringe any third party rights of any kind. The Supplier/Service Provider hereby indemnifies Transnet against all losses, liabilities, costs, claims, damages, expenses and awards of any kinds incurred or made against Transnet in connection with any breach of this warranty.

11 INSOLVENCY

If the Supplier/Service Provider shall have a receiver, manager, administrator, liquidator or like person appointed over all or any part of its assets or if the Supplier/Service Provider compounds with its creditors or passes a resolution for the winding up or administration of the Supplier/Service Provider, Transnet is at liberty to terminate the Order or Orders forthwith, or at its option, to seek performance by any such appointed person.

12 ASSIGNMENT

The Supplier/Service Provider shall not assign its obligations under an Order without Transnet's prior written consent, which consent shall not be unreasonably withheld or delayed.

13 NOTICES

Notices under these Terms shall be delivered by hand to the relevant addresses of the parties in the Order or may be served by facsimile or by email, in which event notice shall be deemed served on acknowledgement of receipt by the recipient.

14 LAW

Orders shall be governed by and interpreted in accordance with South African law and any disputes arising herein shall be subject to South African arbitration under the rules of the Arbitration Foundation of South Africa, which rules are deemed incorporated by reference in this clause. The reference to arbitration shall not prevent Transnet referring the matter to any South African courts, having jurisdiction, to which the Supplier/Service Provider hereby irrevocably submits but without prejudice to Transnet's right to take proceedings against the Supplier/Service Provider in other jurisdictions and/or obtaining interim relief on an urgent basis from a court of competent jurisdiction pending the decision in other courts or from instituting in any court of competent jurisdiction any proceedings for an interdict or any other injunctive relief. If the Supplier/Service Provider does not have a registered office in the South Africa it will at all times maintain an agent for service of process in South Africa and shall give Transnet the name and address of such agent as such may be amended, in writing, from time to time.

15 GENERAL

Completion or termination of an Order shall be without prejudice to any Term herein which by its nature would be deemed to continue after completion or termination, including but not limited to clauses **Error! Reference source not found., Error! Reference source not found., 7 and Error! Reference source not found.** Headings are included herein for convenience only. If any Term herein be held illegal or unenforceable, the validity or enforceability of the remaining Terms shall not be affected. No failure or delay by Transnet to enforce any rights under these Terms will operate as a waiver thereof by Transnet. All rights and remedies available to either party under these Terms shall be in addition to, not to the exclusion of, rights otherwise available at law.

16 COUNTERPARTS

These Terms and conditions may be signed in any number of counterparts, all of which taken together shall constitute one and the same instrument. Any party may enter into this agreement by signing any such counterpart.

By signing this RFQ document, the Respondent is deemed to acknowledge that he/she has made himself/herself thoroughly familiar with all the conditions governing this RFQ, including those contained in any printed form stated to form part hereof and Transnet SOC Ltd will recognise no claim for relief based on an allegation that the Respondent overlooked any such condition or failed to properly take it into account for the purpose of calculating quoted prices or otherwise.

SIGNED at _____ on this ____ day of _____ 20__

.....
SIGNATURE OF RESPONDENT'S AUTHORISED REPRESENTATIVE

NAME: _____

DESIGNATION: _____

REGISTERED NAME OF COMPANY: _____

PHYSICAL ADDRESS:

Respondent's contact person: *[Please complete]*

Name	:	
Designation	:	
Telephone	:	
Cell Phone	:	
Facsimile	:	
Email	:	
Website	:	



Transnet urges its clients, suppliers and the general public to report any fraud or corruption to TIP-OFFS ANONYMOUS : 0800 003 056

SECTION 4
VENDOR APPLICATION FORM

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

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

Vendor Application Form

Note: No contract shall be awarded to any South African Respondent whose tax matters have not been declared by SARS to be in order.

Company Trading Name						
Company Registered Name						
Company Registration Number Or ID Number If A Sole Proprietor						
Form of entity	CC	Trust	Pty Ltd	Limited	Partnership	Sole Proprietor
VAT number (if registered)						
Company Telephone Number						
Company Fax Number						
Company E-Mail Address						
Company Website Address						
Bank Name				Bank Account Number		

Respondent's Signature

Date & Company Stamp

Postal Address				Code	
Physical Address				Code	
Contact Person					
Designation					
Telephone					
Email					
Annual Turnover Range (Last Financial Year)	< R5 Million		R5-35 million		> R35 million
Does Your Company Provide	Products		Services		Both
Area Of Delivery	National		Provincial		Local
Is Your Company A Public Or Private Entity	Public		Private		
Does Your Company Have A Tax Directive Or IRP30 Certificate	Yes		No		
Main Product Or Service Supplied (E.G.: Stationery/Consulting)					

BEE Ownership Details					
% Black Ownership		% Black women ownership		% Disabled person/s ownership	
Does your company have a BEE certificate	Yes		No		
What is your broad based BEE status (Level 1 to 9 / Unknown)					
How many personnel does the firm employ	Permanent		Part time		

Transnet Contact Person	
Contact number	
Transnet operating division	

Duly Authorised To Sign For And On Behalf Of Firm / Organisation			
Name		Designation	
Signature		Date	

Stamp And Signature Of Commissioner Of Oath			
Name		Date	
Signature		Telephone No.	

Respondent's Signature

Date & Company Stamp

SECTION 5

B-BBEE PREFERENCE POINTS CLAIM FORM

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

1. INTRODUCTION

- 1.1.1 A total of 10 preference points shall be awarded for B-BBEE Status Level of Contribution.
- 1.1.2 Failure on the part of a Bidder to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System [**SANAS**] or a Registered Auditor approved by the Independent Regulatory Board of Auditors [**IRBA**] or an Accounting Officer as contemplated in the Close Corporation Act [**CCA**] together with the bid will be interpreted to mean that preference points for B-BBEE Status Level of Contribution are not claimed.
- 1.1.3 Transnet reserves the right to require of a Bidder, either before a Bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by Transnet.

2. GENERAL DEFINITIONS

- 2.1.1 "**all applicable taxes**" include value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- 2.1.2 "**B-BBEE**" means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- 2.1.3 "**B-BBEE status of contributor**" means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- 2.1.4 "**Bid**" means a written offer in a prescribed or stipulated form in response to an invitation by Transnet for the provision of goods, works or services;
- 2.1.5 "**Broad-Based Black Economic Empowerment Act**" means the Broad-Based Black Economic Empowerment Act, 2003 [Act No. 53 of 2003];
- 2.1.6 "**comparative price**" means the price after the factors of a non-firm price and all unconditional discounts that can be utilised have been taken into consideration;
- 2.1.7 "**consortium or joint venture**" means an association of persons for the purpose of combining their expertise, property, capital, efforts, skills and knowledge in an activity for the execution of a contract;
- 2.1.8 "**contract**" means the agreement that results from the acceptance of a bid by Transnet;
- 2.1.9 "**EME**" means any enterprise with an annual total revenue of R5 [five] million or less as per the 2007 version of the B-BBEE Codes of Good Practice and means any enterprise with an annual total revenue of R10 [ten] million or less as per the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928;
- 2.1.10 "**firm price**" means the price that is only subject to adjustments in accordance with the actual

increase or decrease resulting from the change, imposition, or abolition of customs and excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;

- 2.1.11 **"functionality"** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;
- 2.1.12 **"non-firm prices"** means all prices other than "firm" prices;
- 2.1.13 **"QSE"** means any enterprise with an annual total revenue between R5 [five] million and R35 [thirty five] million as per the 2007 version of the B-BBEE Codes of Good Practice and means any enterprise with an annual total revenue of between R10 [ten] million and R50 [fifty] million as per the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928;
- 2.1.14 **"person"** includes reference to a juristic person;
- 2.1.15 **"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;
- 2.1.16 **"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 in terms of the contract;
- 2.1.17 **"total revenue"** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Empowerment Act and promulgated in the Government Gazette on 9 February 2007;
- 2.1.18 **"trust"** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- 2.1.19 **"trustee"** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

- 3.1.1 The Bidder obtaining the highest number of total points for the evaluation criteria as enumerated in Section 2 of the RFQ will be awarded the contract, unless objective criteria justifies the award to another bidder.
- 3.1.2 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.
- 3.1.3 Points scored will be rounded off to 2 [two] decimal places.
- 3.1.4 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.
- 3.1.5 However, when functionality is part of the evaluation process and two or more Bids have scored equal points including equal preference points for B-BBEE, the successful Bid will be the one scoring the highest score for functionality.
- 3.1.6 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

- 4.1.1 In terms of the Preferential Procurement Regulations, 2011, preference points shall be awarded to a Bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of Points
[Maximum 10]	
1	10
2	9
3	8
4	6
5	4
6	3
7	2
8	1
Non-compliant contributor	0

- 4.1.2 Bidders who qualify as EMEs in terms of the 2007 version of the Codes of Good Practice must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EME's with B-BBEE Status Level Certificates.
- 4.1.3 Bidders who qualify as EMEs in terms of the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928 are only required to obtain a sworn affidavit on an annual basis confirming that the entity has an Annual Total Revenue of R10 million or less and the entity's Level of Black ownership.
- 4.1.4 In terms of the 2007 version of the Codes of Good Practice, Bidders other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.
- 4.1.5 In terms of the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928, Bidders who qualify as QSEs are only required to obtain a sworn affidavit on an annual basis confirming that the entity has an Annual Total Revenue of R50 million or less and the entity's Level of Black ownership. Large enterprises must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.
- 4.1.6 A trust, consortium or joint venture will qualify for points for its B-BBEE status level as a legal entity, provided that the entity submits its B-BBEE status level certificate.
- 4.1.7 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate

bid.

- 4.1.8 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialised scorecard contained in the B-BBEE Codes of Good Practice.
- 4.1.9 A person will not be awarded points for B-BBEE status level if it is indicated in the Bid documents that such a Bidder intends subcontracting more than 25% [twenty-five per cent] of the value of the contract to any other enterprise that does not qualify for at least the same number of points that such a Bidder qualifies for, unless the intended subcontractor is an EME that has the capability and ability to execute the subcontract.
- 4.1.10 A person awarded a contract may not subcontract more than 25% [twenty-five per cent] of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is subcontracted to an EME that has the capability and ability to execute the subcontract.
- 4.1.11 Bidders are to note that in terms of paragraph 2.6 of Statement 000 of the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928, any representation made by an entity about its B-BBEE compliance must be supported by suitable evidence or documentation. As such, Transnet reserves the right to request such evidence or documentation from Bidders in order to verify any B-BBEE recognition claimed.

5. B-BBEE STATUS AND SUBCONTRACTING

5.1.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

B-BBEE Status Level of Contributor _____ = _____ [maximum of 20 points]

Note: Points claimed in respect of this paragraph 5.1 must be in accordance with the table reflected in paragraph 4.1 above and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or sworn affidavit in the case of an EME or QSE.

5.1.2 Subcontracting:

Will any portion of the contract be subcontracted? YES/NO [delete which is not applicable]

If YES, indicate:

- (i) What percentage of the contract will be subcontracted?
- (ii) The name of the subcontractor
- (iii) The B-BBEE status level of the subcontractor
- (iv) Is the subcontractor an EME? YES/NO

5.1.3 Declaration with regard to Company/Firm

- (i) Name of Company/Firm.....

(ii) VAT registration number.....

(iii) Company registration number.....

(iv) Type of Company / Firm

Partnership/Joint Venture/Consortium

One person business/sole propriety

Close Corporations

Company (Pty) Ltd

[TICK APPLICABLE BOX]

(v) Describe Principal Business Activities

.....
.....
.....
.....

(vi) Company Classification

Manufacturer

Supplier

Professional Service Provider

Other Service Providers, e.g Transporter, etc

[TICK APPLICABLE BOX]

(vii) Total number of years the company/firm has been in business.....

"PREVIEW COPY ONLY"

BID DECLARATION

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

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

WITNESSES:

1.

2.

SIGNATURE OF BIDDER

DATE:

COMPANY NAME:

ADDRESS:
.....
.....

SECTION 6
NON-DISCLOSURE AGREEMENT (NDA)

Entered into by and between

TRANSNET SOC LTD

Registration Number 1990/000900/30

and

Registration Number _____

RFQ Number ERACKT 1879 - 15067

"PREVIEW COPY ONLY"

Respondent's Signature

Date & Company Stamp

THIS AGREEMENT is made between**Transnet SOC Ltd [Transnet]** [Registration No. 1990/000900/30]whose registered office is at 49th Floor, Carlton Centre, 150 Commissioner Street, Johannesburg 2001,**and**

_____ **[the Company]** [Registration No. _____] whose
 registered office is at _____

WHEREAS

Transnet and the Company wish to exchange Information [as defined below] and it is envisaged that each party may from time to time receive Information relating to the other in respect thereof. In consideration of each party making available to the other such Information, the parties jointly agree that any dealings between them shall be subject to the terms and conditions of this Agreement which themselves will be subject to the parameters of the Bid Document.

IT IS HEREBY AGREED**1. INTERPRETATION**

In this Agreement:

- 1.1 **Agents** mean directors, officers, employees, agents, professional advisers, contractors or sub-contractors, or any Group member;
- 1.2 **Bid or Bid Document** means Transnet's Request for Information [RFI] Request for Quotation [RFQ] or Request for Quotation [RFQ], as the case may be;
- 1.3 **Confidential Information** means any information or other data relating to one party [the Disclosing Party] and/or the business carried on or proposed or intended to be carried on by that party and which is made available for the purposes of the Bid to the other party [the Receiving Party] or its Agents by the Disclosing Party or its Agents or recorded in agreed minutes following oral disclosure and any other information otherwise made available by the Disclosing Party or its Agents to the Receiving Party or its Agents, whether before, on or after the date of this Agreement, and whether in writing or otherwise, including any information, analysis or specifications derived from, containing or reflecting such information but excluding information which:
- a) is publicly available at the time of its disclosure or becomes publicly available [other than as a result of disclosure by the Receiving Party or any of its Agents contrary to the terms of this Agreement]; or
 - b) was lawfully in the possession of the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] free of any restriction as to its use or disclosure prior to its being so disclosed; or
 - c) following such disclosure, becomes available to the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] from a source other

than the Disclosing Party or its Agents, which source is not bound by any duty of confidentiality owed, directly or indirectly, to the Disclosing Party in relation to such information;

- 1.4 **Group** means any subsidiary, any holding company and any subsidiary of any holding company of either party; and
- 1.5 **Information** means all information in whatever form including, without limitation, any information relating to systems, operations, plans, intentions, market opportunities, know-how, trade secrets and business affairs whether in writing, conveyed orally or by machine-readable medium.

2. CONFIDENTIAL INFORMATION

- 2.1 All Confidential Information given by one party to this Agreement [the Disclosing Party] to the other party [the Receiving Party] will be treated by the Receiving Party as secret and confidential and will not, without the Disclosing Party's written consent, directly or indirectly communicate or disclose [whether in writing or orally or in any other manner] Confidential Information to any other person other than in accordance with the terms of this Agreement.
- 2.2 The Receiving Party will only use the Confidential Information for the sole purpose of technical and commercial discussions between the parties in relation to the Bid or for the subsequent performance of any contract between the parties in relation to the Bid.
- 2.3 Notwithstanding clause 2.1 above, the Receiving Party may disclose Confidential Information:
- a) to those of its Agents who strictly need to know the Confidential Information for the sole purpose set out in clause 2.2 above, provided that the Receiving Party shall ensure that such Agents are made aware prior to the disclosure of any part of the Confidential Information that the same is confidential and that they owe a duty of confidence to the Disclosing Party. The Receiving Party shall at all times remain liable for any actions of such Agents that would constitute a breach of this Agreement; or
 - b) to the extent required by law or the rules of any applicable regulatory authority, subject to clause 2.4 below.
- 2.4 In the event that the Receiving Party is required to disclose any Confidential Information in accordance with clause 2.3 b) above, it shall promptly notify the Disclosing Party and cooperate with the Disclosing Party regarding the form, nature, content and purpose of such disclosure or any action which the Disclosing Party may reasonably take to challenge the validity of such requirement.
- 2.5 In the event that any Confidential Information shall be copied, disclosed or used otherwise than as permitted under this Agreement then, upon becoming aware of the same, without prejudice to any rights or remedies of the Disclosing Party, the Receiving Party shall as soon as practicable notify the Disclosing Party of such event and if requested take such steps [including the institution of legal proceedings] as shall be necessary to remedy [if capable of remedy] the default and/or to prevent further unauthorised copying, disclosure or use.

- 2.6 All Confidential Information shall remain the property of the Disclosing Party and its disclosure shall not confer on the Receiving Party any rights, including intellectual property rights over the Confidential Information whatsoever, beyond those contained in this Agreement.

3. RECORDS AND RETURN OF INFORMATION

- 3.1 The Receiving Party agrees to ensure proper and secure storage of all Information and any copies thereof.
- 3.2 The Receiving Party shall keep a written record, to be supplied to the Disclosing Party upon request, of the Confidential Information provided and any copies made thereof and, so far as is reasonably practicable, of the location of such Confidential Information and any copies thereof.
- 3.3 The Company shall, within 7 [seven] days of receipt of a written demand from Transnet:
- a) return all written Confidential Information [including all copies]; and
 - i. expunge or destroy any Confidential Information from any computer, word processor or other device whatsoever into which it was copied, read or programmed by the Company or on its behalf.
- 3.4 The Company shall on request supply a certificate signed by a director as to its full compliance with the requirements of clause 3.3 b) above.

4. ANNOUNCEMENTS

- 4.1 Neither party will make or permit to be made any announcement or disclosure of its prospective interest in the Bid without the prior written consent of the other party.
- 4.2 Neither party shall make use of the other party's name or any information acquired through its dealings with the other party for publicity or marketing purposes without the prior written consent of the other party.

5. DURATION

The obligations of each party and its Agents under this Agreement shall survive the termination of any discussions or negotiations between the parties regarding the Bid and continue thereafter for a period of 5 [five] years.

6. PRINCIPAL

Each party confirms that it is acting as principal and not as nominee, agent or broker for any other person and that it will be responsible for any costs incurred by it or its advisers in considering or pursuing the Bid and in complying with the terms of this Agreement.

7. ADEQUACY OF DAMAGES

Nothing contained in this Agreement shall be construed as prohibiting the Disclosing Party from pursuing any other remedies available to it, either at law or in equity, for any such threatened or actual breach of this Agreement, including specific performance, recovery of damages or otherwise.

8. PRIVACY AND DATA PROTECTION

- 8.1 The Receiving Party undertakes to comply with South Africa's general privacy protection in terms Section 14 of the Bill of Rights in connection with this Bid and shall procure that its personnel shall

observe the provisions of such Act [as applicable] or any amendments and re-enactments thereof and any regulations made pursuant thereto.

- 8.2 The Receiving Party warrants that it and its Agents have the appropriate technical and organisational measures in place against unauthorised or unlawful processing of data relating to the Bid and against accidental loss or destruction of, or damage to such data held or processed by them.

9. GENERAL

- 9.1 Neither party may assign the benefit of this Agreement, or any interest hereunder, except with the prior written consent of the other, save that Transnet may assign this Agreement at any time to any member of the Transnet Group.
- 9.2 No failure or delay in exercising any right, power or privilege under this Agreement will operate as a waiver of it, nor will any single or partial exercise of it preclude any further exercise or the exercise of any right, power or privilege under this Agreement or otherwise.
- 9.3 The provisions of this Agreement shall be severable in the event that any of its provisions are held by a court of competent jurisdiction or other applicable authority to be invalid, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law.
- 9.4 This Agreement may only be modified by a written agreement duly signed by persons authorised on behalf of each party.
- 9.5 Nothing in this Agreement shall constitute the creation of a partnership, joint venture or agency between the parties.
- 9.6 This Agreement will be governed by and construed in accordance with South African law and the parties irrevocably submit to the exclusive jurisdiction of the South African courts.



TRANSNET
freight rail

A Division of Transnet Limited

**RAIL NETWORK
TECHNICAL
TRAIN AUTHORISATION SYSTEMS
PROJECT SPECIFICATION**

**KOEDOESPOORT (SIGNALS)
INSTALL NEW POWER EQUIPMENT AT VARIOUS RELAY
ROOMS**

Date

June 2014

"PREVIEW COPY ONLY"

1. SCOPE

The scope of work required by Koedoespoort depot is for the supply, delivery and installation of new power equipment at various signal relay rooms and removal of obsolete equipment as indicated in this document.

2. SPECIFICATIONS, DRAWINGS AND STANDARDS

The Transnet Freight Rail Project Supervisor or his appointed deputy will oversee all the work to ensure compliance to specifications and standards. Planning and design will be done by Transnet Freight Rail.

3. APPLICABLE DOCUMENTATION

BBG1027 – Valve regulated lead acid batteries for use in signal installations.

BBG1023, BBG1499, BBG1500, BBG1501, BBG1502 – Battery stand drawings.

BBC 5666 – 3 Phase static uninterruptible power supply 10 to 125 kVA.

BBF 3861 - Low voltage power supply devices, ac to dc converter with 60v output

BBF 7820 – Power distribution cubicles for signal installations.

Relay room power plans. (See the attachment)

4. ON SITE AND LABOUR REQUIREMENTS

4.1 The Contractor shall have previous experience with the installation of power equipment in signal relay rooms. A list of projects where the tenderer have been contracted to do similar work must be submitted.

4.2 All personnel shall have the required safety clothing for the type of work to be done.

4.3 The contractor and his personnel shall attend an induction training session and be in possession of a site access certificate issued by the depot engineer before any work may start. The installation team shall have the certificates with them at all times when on site.

5. INSTALLATION REQUIREMENTS

5.1 Installation shall take place as per table below:

STATION	ALL REQUIRED CABLING & NEW TRANSFO RMERS	POWER DISTRIB. CUBICLE	VRLA 12V BATTERIES (SET OF 32)	UPS 30 KVA	UPS 40 KVA (X2)	REMOVE EXISTING POWER EQUIPMENT	REMOVE EXISTING VLA 2V CELLS
DE WILDT B	YES	YES	YES	YES	NO	YES	YES
WILDEBEEST HOEK	YES	YES	YES	YES	NO	YES	YES
PYRAMID	YES	YES	YES (4)	NO	YES	YES	YES

- 5.2 The obsolete power equipment must be delivered to a site as indicated by the TFR depot representative.
- 5.3 The VLA batteries must be disposed of as per environmental law.
- 5.4 Installation work per station must be completed in one working day.
- 5.5 Hours of work will be from 07:30 to 16:30 Monday to Friday. Hours may be exceeded in case the installation is not yet completed.
- 5.6 Occupation time will be between 10:00 and 15:00 or as allowed by operations. Transnet cannot guarantee the available occupation time. The Transnet representative shall be responsible to arrange the occupations.

6. **MATERIAL AND LABOUR TO BE SUPPLIED BY CONTRACTOR**

All other material required shall be supplied by Transnet Freight Rail.

7.0 **SAFETY REQUIREMENTS**

The contractor shall submit a safety file covering safe working procedures as well as the following:

7.1 Appointment letters

Crane operator
Supervisor
First aider

7.2 Inspection reports

Vehicle inspection sheets
Vehicle registration

7.3 Certification and training

Crane operator
Basic rigging
First aid
Medical fitness certificates

8. **COMPLETION OF WORK**

The work must be completed before 15 March 2015.

9. **COMPLIANCE TO SPECIFICATION**

The tenderer shall submit a clause by clause statement of compliance to this specification.

END OF SPECIFICATION



TRANSNET
freight rail

A Division of Transnet SOC Limited

TECHNOLOGY MANAGEMENT

SPECIFICATION

VALVE REGULATED LEAD ACID BATTERIES FOR USE IN SIGNAL INSTALLATIONS

Author: Chief Engineering Technician
Rail Network P Doorewaard

Approved: Senior Engineer
Technology Management RA Langley

Authorised: Principal Engineer
Technology Management J kannemeyer

Date: September 2013

Circulation Restricted To:

Transnet and Relevant Third Parties

© This document as a whole is protected by copyright. The information herein is the sole property of Transnet SOC Ltd. It may not be used, disclosed or reproduced in part or in whole in any manner whatsoever, except with the written permission of and in a manner permitted by the proprietors.

1. **SCOPE**

1.1 **Identification.**

12V Valve regulated lead acid (AGM) front terminal 10 year + design life batteries.

1.2 **Item overview.**

The valve regulated lead acid (VRLA) batteries are required to provide standby power to Signal relay rooms for a minimum of 10 hours. Size of battery shall be specified by Transnet Freight Rail.

1.3 **Document overview.**

The VRLA batteries within Transnet Freight Rail (Train Authorisation Systems) shall comply with the requirements as set out in this document. This document may therefore be used for item purchasing and approval.

2. **REQUIREMENTS**

The requirements as set out below must be complied with. It is required that a statement be issued stating compliance per clause as well as the actual guaranteed technical data of the equipment offered. Failure to submit a statement of compliance shall automatically disqualify the tenderer.

Offers which include deviations of a minor nature from the terms of this specification will be considered at the discretion of Transnet Freight Rail (Train Authorisation systems).

3. **BATTERY FEATURES**

3.1 The battery shall be of the Absorbent Glass Mat (AGM) type technology for efficient gas recombination and freedom from electrolyte maintenance or water adding.

3.2 The battery shall be of the front terminal type.

3.3 Minimum 10 year design life guaranteed under float conditions at a constant 25 deg. Celsius.

3.4 The battery must be suitable for long discharge periods, typically 10 hours and recharge of C/8.

3.5 Batteries shall have internationally recognised certification.

3.6 The battery shall have a UL 94 VO rated flame retardant casing.

3.7 The battery manufacturer shall be registered to ISO9001 and ISO14001.

3.8 The battery must be compliant with SANS 60896.

4. **DOCUMENTATION**

4.1 Complete documentation including detailed Material safety data sheet shall be submitted

4.2 Documents to record regular test measurements shall be provided.

5. **PRE DELIVERY PREPARATION**

5.1 Batteries shall undergo a refresher charge upon arrival at the premises of the distributor. Thereafter the batteries shall be discharged to 1.8vpc over a period of 2 - 3 hours to eliminate any potential bad battery. Regular voltage measurements per block shall be taken when discharging.

5.2 Batteries shall be recharged at 10% of AH rating at voltage 2.4vpc. The batteries shall be connected in parallel (Battery string of 32 blocks may be split into 2 x 16 blocks) to ensure proper equalisation.

5.3 Pallets shall be marked to ensure that battery strings as charged are not mixed.

5.4 Transnet Freight Rail reserves the right to witness the preparation process.

6. **Warranty**

6.1 Transnet Freight Rail requires a 3 year warranty period against faulty workmanship.

END OF SPECIFICATION



TRANSNET
freight rail

A Division of Transnet SOC Limited

**TECHNOLOGY MANAGEMENT
SPECIFICATION**

**3 PHASE STATIC UNINTERRUPTIBLE POWER SUPPLY
10 TO 125kVA**

Author: Chief Engineering Technician
Rail Network P Doorewaard

Approved: Senior Engineer
Technology Management R.A. Langley

Authorised: Principal Engineer
Technology Management J.G. Kannemeyer

Date: July 2013

Circulation Restricted To:

Transnet and Relevant Third Parties

© This document as a whole is protected by copyright. The information herein is the sole property of Transnet SOC Ltd. It may not be used, disclosed or reproduced in part or in whole in any manner whatsoever, except with the written permission of and in a manner permitted by the proprietors.

1.0 SCOPE

This specification describes a three phase continuous duty, on line double conversion solid state transistorised uninterruptible power system hereafter referred to as the UPS. The UPS shall operate with the existing electrical system to provide power conditioning, backup and distribution for critical electrical loads.

2.0 STANDARDS AND PUBLICATIONS

2.1 SOUTH AFRICAN NATIONAL STANDARDS

SABS 1474	Uninterruptible power systems
SABS EN 50091-1	Uninterruptible power systems. General safety requirements
SABS IEC 146 1-5	Semiconductor converters.
SANS 10142-1	Installation specification.

3.0 DEFINITIONS

For purpose of the specification the following definitions shall apply

3.1 Uninterruptable power supply (UPS)

The uninterruptable power supply shall denote all the complete power converter modules with associated controls, remote alarm panels, communication and batteries required by the design.

3.2 Rectifier

Shall denote that portion of the power converter module containing the equipment and controls to convert the incoming power to regulated DC power required by the inverter.

3.3 Battery charger

Shall denote that portion of the power converter module containing the equipment and controls to float charge the battery and in the event of a power failure to recharge the battery when the main power supply becomes available.

The battery charger shall allow an adjustable or pre-configured continuous battery charging rate calculated from 10% up to 67% of the nominal VA rating of the UPS. This is required to allow faster recharging of large battery banks where a longer standby time is a requirement

3.4 Inverter

Shall denote that portion of the power converter module, which converts the DC power to precisely regulated AC power required by the critical load.

3.3 Static Transfer Switch.

Is defined as a switch, which can perform an automatic transfer of the critical load from the UPS to the bypass circuit, or from the bypass circuit to the UPS.

3.4 Critical load bus.

Denotes the load as presented to the UPS by computers, controllers or other critical load and associated circuits.

3.5 Successful Transfer

Is defined as an automatic and uninterrupted transfer of the critical load from, or to the UPS without causing degradation of the critical bus voltage beyond the specified limits.

3.6 Maintenance bypass switching

Shall denote the capability of manually bypassing the total UPS and powering the critical load from the bypass source. The bypass switching shall not cause any interruption of the power to the critical load.

3.7 Online topology operation

Is defined as the isolation of critical loads from the irregularities of the mains supply, without interruption and supplied from the UPS.

3.8 UPS COLD START

The UPS shall start under normal conditions from the AC main supply. In case the AC main supply is not available the UPS shall be capable of starting from the batteries.

4.0 SERVICE CONDITIONS**4.1 ATMOSPHERIC CONDITIONS**

Altitude	:	0 to 1800m above sea level.
Ambient temperature	:	-5 to +40 °C Without derating UPS.
Relative humidity	:	As high as 90 percent.
Lightning Conditions	:	12 ground flashes per square kilometre per annum. [10/350us 5kA surge]

4.2 ELECTRICAL CONDITIONS

Input Voltage Range	:	400V AC, 3phase plus15%and minus 20%
Quality of supply	:	See Appendix B
Frequency	:	48 to 52 Hz

5.0 SYSTEM OPERATION DESCRIPTION

5.1 The UPS shall provide high quality AC power for electronic equipment loads and shall offer the following features: -

- Increased Power Quality.
- Improved Noise Rejection.
- Compatibility with all types of loads.
- Power blackout protection.
- Full battery care.

5.2 The UPS shall consist of the following main components:-

- Transformer, choke, impulse protection input stage.
- Controlled rectifier.
- Three phase inverter with filtering to produce a sine wave output.
- Static transfer switch and manual maintenance bypass switch.
- Matching battery cubicle (Optional).
- Microprocessor control and diagnostics.
- Double wound Inverter output isolation transformer for galvanic isolation.

5.3 The operation and control shall be provided through use of microprocessor logic. Indications, measurements and alarms, together with power indications and battery status shall be shown on a clearly illuminated display. Light emitting displays for battery status are also acceptable.

5.4 Normal mode

5.4.1 In the normal mode the critical load is continuously supplied by the UPS. The rectifier converts the AC source into DC power while the battery charger maintains the battery in a fully charged operational condition. The inverter converts the DC power into clean and related AC power, which is supplied to the critical load through a static switch.

5.4.2 In the event of a transfer to the reserve supply, the static switch shall monitor and ensure that the inverter tracks the reserve supply frequency to ensure synchronisation.

5.4.3 The synchronisation shall ensure that any automatic transfer to the reserve supply due to an overload or voltage deviation etc. is frequency synchronised and does not cause an interruption to the critical load.

5.4.4 The UPS shall be provided with a soft start ramp to reduce inrush current on switch on.

5.5 Overload.

In the event of an inverter overload, manual stop or failure, the static switch shall automatically transfer the critical load to the reserve supply without interruption. The transfer time when synchronised shall be not more than 500 microseconds. The transfer time without synchronisation shall be not more than 30 milliseconds.

5.6 Emergency conditions

If the AC main supply fails or reduces to a value outside the limits of the input voltage to the UPS, the critical load shall be supplied without any switching, by the inverter drawing its power from the battery supply. There shall be no interruption to the critical load upon failure, reduction or restoration of the AC main supply.

5.7 Recharge

When the AC main source is restored, the battery charger shall automatically restart and recharge the battery and shall cause no interruption to the critical load.

5.8 Maintenance bypass switch

The UPS shall be fitted with a manual service bypass switch with which the power section can be disconnected and bypassed for servicing purposes on the UPS. The bypass switch shall be overrated by a minimum of 10% of the rated UPS rating. The UPS shall have clear indication when in manual service bypass mode.

5.9 Operation without battery

If the battery is taken out of service for maintenance it shall be disconnected from the battery charger by means of a circuit breaker or fused isolator. The UPS shall continue to operate and meet the performance criteria specified except for the standby period. The UPS shall be capable of starting up without any battery connected.

5.10 Monitoring

The UPS shall have the capability to be monitored from a remote location. Even during a complete shutdown of the UPS the information relating to the operating parameters shall not be lost and stored for a minimum period of 6 months. RS 232 using D type connectors shall be employed but other communication such as RS 485 and Ethernet may also be used in addition to the RS 232.

5.11 Redundant functions

To ensure maximum reliability the key operating electrical parameters shall be controlled to ensure the safety of the load and the UPS batteries.

The parameters controlled on the load side for protection purposes shall be:

- Voltage Amplitude
- Frequency

The parameters controlled on the battery side shall be:

- Voltage Regulation
- AC current ripple
- AC Voltage ripple

6.0 **ELECTRONIC MODULES AND COMPONENTS**

All active electronic devices shall be of solid-state construction and shall not exceed the manufacturers recommended operating parameters for maximum reliability.

7.0 **NEUTRAL CONNECTION AND EARTHING**

The UPS output AC neutral, shall be isolated, except for RFI filters, from the UPS chassis.

8.0 **EMC AND SURGE PROTECTION**

8.2.1 Electromagnetic effects shall be minimised to ensure computer and other electronic systems shall not be affected by the UPS.

8.2.2 The UPS shall be fully protected against transients and surges.

8.2.3 The UPS shall meet the requirements SABS en 50091-1.

9.0 **BATTERY CHARGER**

9.1 The battery shall be protected by a fused isolator.

9.2 The battery charger shall be able to operate with the following types of batteries, dependant on system requirements.

- Sealed Lead Acid
- Lead Acid (Tubular or Flat plate)

The UPS shall manage the selection of the charging method.

9.3 The battery charger output voltage shall not deviate more than + 2,5% under the following conditions.

- No load to 100% load variation
- Primary input voltage and frequency variations with the stated limits voltage $\pm 5\%$.
- The steady state regulation shall not exceed 1% nor shall the voltage ripple exceed 2% peak to peak.

9.4 The maximum peak-to-peak ripple current to the battery shall not exceed 10% of the battery A/H rating when charging and 5% when in float charge. The peak-to-peak ripple voltage shall be less than 0.5% of the float voltage.

9.5 The UPS battery shall be sized by the client. The battery charger shall be rated to charge this battery as described in clause 3.3.

10.0 POWER FACTOR

The UPS shall have an input power factor of 0,85 or higher with nominal load, nominal input voltage and in the automatic float charge state.

11.0 OVER VOLTAGE PROTECTION

The rectifier and battery charger shall be automatically switched off if the DC voltage exceeds a maximum preset value.

12.0 PWM, IGBT INVERTER**12.1 Steady state output**

The inverter steady-state output voltage shall not deviate by more than 1% in a steady state condition for input voltage and load variation within the quoted limits.

12.2 Transient voltage recovery response

The output voltage shall return within $\pm 2\%$ of nominal voltage within 5 milliseconds after a load step of 100%.

12.3 Output frequency.

The inverter output frequency shall be controlled at $50\text{Hz} \pm 1\%$.

12.4 Total output voltage harmonic distortion. (Linear and non-linear loads)

The inverter shall provide harmonic filtering and neutralising to limit the total harmonic distortion on the voltage to less than 3% with a linear load. For a non-linear load with a crest factor (V_p/V_{rms}) of 3:1 the total harmonic distortion shall be limited to less than 5%.

12.5 Phase displacement

The phase angle displacements between the 3 phase voltages shall not be worse than:

- Balanced linear loads ± 1 degree from nominal 120 Degrees.
- Unbalanced linear loads ± 3 degrees from average phase voltage for 100% load unbalanced.

12.6 Output voltage symmetry

The inverter shall guarantee the symmetry of the output voltages at $\pm 2\%$ for balanced loads and $\pm 3\%$ for 100% unbalanced loads.

12.7 Neutral conductor dimensioning.

The sizing of the inverter neutral shall be minimum of 1,7 times that of the line cable in order to be able to cope with harmonics when driving linear loads.

12.8 Overload

The inverter shall be capable of supplying:

- Up to 60 seconds $1,25 \times I$ nominal
- Up to 30 seconds $1,50 \times I$ nominal

12.9 Inverter shut down

The inverter output shall be protected by electronic circuitry and fast acting fuses in the inverter circuit. If an internal failure occurs in the inverter, the electronic control shall instantaneously remove the critical load and transfer to the stand by reserve supply if the supply is within limits.

12.10 Output isolation transformer.

A dry type double wound isolation transformer shall be provided for the inverter AC output. The insulation shall be class H and the temperature limit of the insulation class shall not be exceeded when operated at full load within ambient temperature limits. The transformer shall be continuously rated and shall have the same or larger rating than the UPS. The transformer shall withstand a minimum test voltage of 2000V AC between windings, and windings to core without damage.

13.0 ELECTRONIC STATIC BYPASS SWITCH

13.1 The electronic static switch shall be rated for continuous duty operation and protected by either a suitably rated circuit breaker or high speed fuses.

13.2 The peak inverse voltage rating of the static bypass switch components shall be at least 3 times the peak value of the reserve supply voltage. (400 Volts, 3 phase, 50 Hz)

13.3 An uninterrupted transfer to bypass shall automatically take place under the following conditions:

- Output overload
- DC voltage out of limits
- Inverter failure
- Equipment Over temperature

13.4 An uninterrupted transfer from bypass shall automatically take place whenever the inverter is capable of assuming the load.

13.5 The automatic transfer/retransfer under uninterrupted conditions shall be inhibited under the following conditions:

- UPS overload
- Failure of the inverter static switch
- Manual transfer to bypass via the maintenance switch.

13.6 No break transfers and retransfer shall be inhibited by the following:

- Voltage of inverter or reserve supply out of limits.
- Frequency synchronisation out of limits.

13.7 The no break transfer time to bypass and visa versa shall be less than 500 microseconds when synchronised. The system shall be stable and operating normally before permitting of transfer of the load back to the inverter. The transfer time when out of synchronisation shall be 20 milliseconds to prevent damage to the load by phase reversal.

13.8 The static switch shall be rated to 10% higher than the KVA rating of the machine.

13.9 The switch shall have an overload capability of 150% continuous 1000% for 10 Milliseconds

14.0 MAINTENANCE BYPASS SWITCH

14.1 If the UPS has to undergo maintenance or repairs it shall be provided with a maintenance bypass switch, which will enable no interruption in power to the critical load when switched to bypass.

14.2 Provisions for testing the UPS operation without affecting or disconnecting the critical load shall be provided.

15.0 CONTROL AND INDICATOR PANEL

- 15.1 A clearly laid out control and indicator panel shall be provided. The panel shall incorporate the necessary control instruments and indicators to allow for the monitoring of the system status and performance.
- 15.2 The UPS shall have a mimic panel with indication to indicate the condition of the sub assemblies, modules and supplies.
- The state of the mains supply.
 - The state of the UPS unit and battery, as well as the rectifier and charger.
 - The UPS load.
- 15.3 Warnings and alarms shall be enunciated by red for fault, orange for warning, and green for normal operation.

16.0 ALARMS AND CONTROLS

- 16.1 The UPS shall be equipped with a minimum of two 9-pin D-type RS232 connectors. The first connector shall be used to connect a computer in order to monitor settings. The second connector shall provide interfacing by means of potential free contacts between the UPS and remote control equipment.
- 16.2 The following signals should be monitored.
- Mains on/available/fail
 - Load on inverter.
 - Load on bypass
 - Battery low
 - Charger fail
 - Sync fail

17.0 INPUT HARMONIC MITIGATION (INDUSTRIAL APPLICATION)

The power equipment shall not be adversely affected by odd voltage harmonics between the 3rd and 13th harmonics of which can reach the amplitudes as shown in Appendix A. The power equipment shall not be subject to degradation when exposed to the voltage dips with deviations of the magnitude of -50% on all phases.

18.0 MECHANICAL REQUIREMENTS.

- 18.1 The UPS shall be housed in a freestanding modular enclosure with removable panels and protection rating IP20 as standard. The enclosures shall be designed for industrial room applications in accordance with environmental requirements.
- 18.2 Redundant forced cooling shall be provided to ensure that all components are operated within specification with air entry in the base and exit at the top.
- 18.3 Cable entry shall be from the bottom or side of cabinet. Top cable entry shall be available as an option.
- 18.4 The UPS module shall require not more than 1 metre access space.

APPENDIX A: VOLTAGE WAVEFORM.

The total harmonic distortion (THD), which can be expected in most Railway applications. See paragraph 17

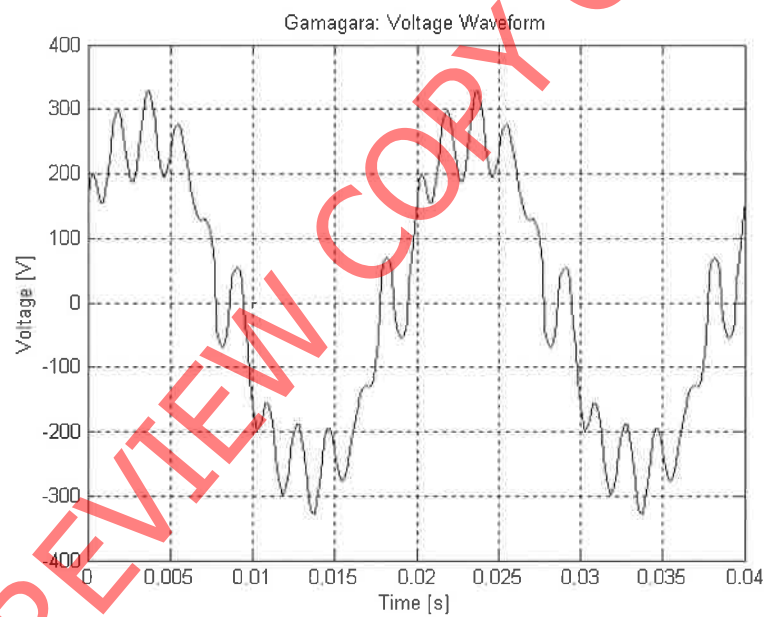


Fig 1: Voltage waveform

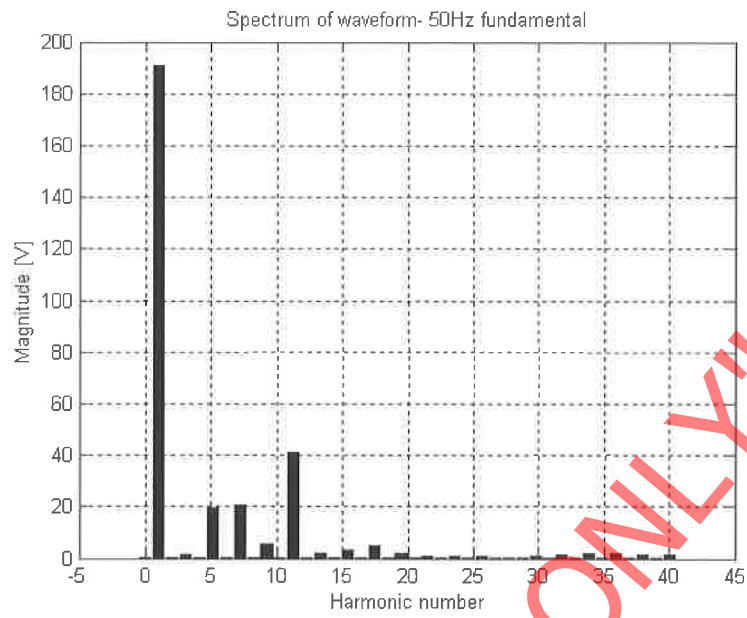


Fig 2: Frequency spectrum of Supply Voltage.

"PREVIEW COPY ONLY"



A Division of Transnet SOC Limited

TECHNOLOGY MANAGEMENT

SPECIFICATION

Low-voltage power supply devices, ac to dc converter with 60V output, for use in Railway Signalling Applications

Author: Senior Engineer
Technology Management
RA Langley

Approved: Chief Engineering Technician
Infrastructure Technical
P Doorewaard

Approved: Chief Engineering Technician
Technology Management
R Prinsloo

Authorised: Principal Engineer
Technology Management
J Kannemeyer

Date: June 2012

Circulation Restricted To:
Transnet and Relevant Third Parties

© This document as a whole is protected by copyright. The information herein is the sole property of Transnet SOC Ltd. It may not be used, disclosed or reproduced in part or in whole in any manner whatsoever, except with the written permission of and in a manner permitted by the proprietors.

1. SCOPE

1.1 Identification

Single phase AC input per module, DC output, 60V, sub rack mounted modular power supply.

1.2 Item overview

The power supply is intended to be used as a stable highly available 60V DC supply for Transnet signalling equipment. It will form part of the general standby power configuration found in signaling systems and will be fed by UPS or raw mains. The supply may also be required to charge a deep cycle 60V lead acid battery to full capacity. Although power module wattage may differ, the optimum building block for most applications is 2000W continuous output power at 68V output voltage.

1.3 Document overview

This document lays down the requirements for a 60V DC output power supply for use in Transnet signaling applications.

2. APPLICABLE DOCUMENTS

2.1 Integrated documents

2.1.1 Transnet documents

- | | | |
|-----|---------------|---|
| (1) | CSE 1154-001: | Environmental specification for Spoornet railway signalling systems |
| (2) | BBC 5665: | Single Phase Static Uninterruptable Power Supply 3 to 10kVA |
| (3) | BBC 5666: | Three Phase Static Uninterruptable Power Supply 10 to 125kVA |

2.1.2 Standards

- | | | |
|-----|-----------------|---|
| (1) | SANS 61204: | Low-voltage power supply devices, d.c. output – Performance characteristics |
| (2) | SANS 61000-6-1: | Electromagnetic compatibility (EMC) Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments |
| (3) | SANS 61000-6-2: | Electromagnetic compatibility (EMC) Part 6-2: Generic standards - Immunity for industrial environments |
| (4) | SANS 61000-6-3: | Electromagnetic compatibility (EMC) Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments |
| (5) | SANS 61000-6-4: | Electromagnetic compatibility (EMC) Part 6-4: Generic standards - Emission standard for industrial environments |
| (6) | EN 50121-4: | Railway applications – Electromagnetic compatibility – Part4: Emission and immunity of signalling and telecommunications apparatus. |
| (7) | EN 60950-1: | Information technology equipment - Safety Part 1: General requirements |

3. REQUIREMENTS

3.1 Definition

3.1.1 Item definition

The power supply is intended for use as a stable highly available 60V DC supply for signalling equipment. It will form part of the general standby power configuration found in signaling systems.

3.1.2 Interface definition

The power supply modules shall be fed by single phase 230VAC from an industrial type UPS or raw mains, should the UPS revert to static bypass mode. During operation from raw mains, large voltage fluctuations and large harmonic content will be present on the supply input as per 2.1.1(2) appendix B.

The power supply output shall form the basis of a constant stable 60VDC and higher output voltage to allow the charging of a 60V deep cycle sealed lead acid battery if required. The power supply may be used on its own or may be required to share load with similar modules for increased availability through redundancy or for higher wattage loads. Where more than one module is used, modules may be connected to different phases of a three phase supply to allow a better balanced three phase load. The module output shall be monitored and availability of the output shall be provided in a voltage free contact as interface to the signal remote control system.

3.2 Characteristics

3.2.1 Performance characteristics as per 2.1.2 (1) except where otherwise stated

- | | |
|-----------------------------------|--|
| (1) Rated outputs: | Single isolated 60V output
Total module output power – optimum value for this application is 2000W |
| (2) Ambient operating temp range: | Grades A, B and C as per 2.1.1 (1) with full output still available at 60° |
| (3) Ambient storage temperature: | -25°C to 70°C |
| (4) Source voltage and frequency: | |
| AC input range: | High range D 187V - 264V |
| Frequency range: | range B 48Hz to 63Hz |
| (5) Source current: | Manufacturer shall specify the full load true rms input current at the lowest and highest input voltages as per 3.2.1 (4). These values shall confirm the efficiency, power factor and power losses at the specific operating point. |
| Inrush current: | Limited to below 15A _{peak} with inrush 'energy' below 1A ² s. |
| Power factor: | >0.95 for output power > half the maximum specified continuous output rating. |
| Efficiency: | >90% for output power > half the maximum specified continuous output rating. |
| (6) Source regulation: | Criterion (A) 0.1% over full input voltage and frequency range. |
| (7) Load regulation: | Criterion (B) 0.5% for load change (B) 10 to 100% |
| (8) N/A | |

- (9) Adjustability of output voltage: Span 100% to 125% continuous adjustment
- (10) Periodic and random deviation: Ripple and noise voltage – criterion (A) <0.5%
- (11) N/A
- (12) Temperature coefficient: Criterion (A) 0.01%/°C
- (13) Hold-up time: Criterion (A) more than 20ms from the next zero crossing following the source voltage outage.
- (14) Start-up time: This value is not critical in this application – criterion (C) 500ms
- (15) Turn-on (off) overshoot: Criterion (B) 1%, no voltage reversal of output ever.
- (16) Transient response to load current changes: Criterion (B) 5% for Criterion (D) 50ms duration for criterion (B) load change 100% to 10% and 10% to 100%
- (17) Output overvoltage protection: Criterion (C) 110% to 130% of the maximum of the adjustable output voltage. Overvoltage protection shall be by means of independent redundant electronic circuitry on an inhibit and retry system or by crowbar protection across the output. In the case of a crow bar circuit the maximum continuous external supply current that can be absorbed by the power supply shall be stated, as well as the required protection circuitry if the supply is used to charge a battery or if module outputs are run in parallel.
- (18) Output overcurrent protection: The manufacturer shall confirm the type of overcurrent protection used and shall illustrate the functioning thereof in a graph as per the relevant annexure of 2.1.2 (1). In this application fold back current limiting is not an option as this will prevent the power supply from charging a discharged battery.
- (19) Mean time between failures: MTBF MIL-HDBK-217E, 25°C calculation GB 300000h

3.2.2 Protective devices

- (1) Thermal Protection: Continuous full output power shall be available for ambient temperatures up to 60°C, derating to no lower than 50% output power available at 70°C at altitudes up to 2000m above sea level. Thermal shut down shall reset automatically after the module has cooled off to an acceptable level.
- (2) Input overcurrent protection: The manufacturer shall confirm that the unit is protected by fuses, or interrupting devices such as circuit breakers, thermal switches or other design providing input current limitation.

3.2.3 Isolation

- (1) The output voltage shall be floating with no ohmic connection to ground.
- (2) The output shall be isolated from the input up to a test voltage of 1kV dc. applied as per 2.1.2 (7).

3.2.4 Additional Requirements

- (1) Remote control: No remote control of the power supply is required. The output voltage shall be set on the module during installation.
- (2) Remote sensing: The power module shall provide a voltage free contact to be used for remote sensing. The contact shall be closed while the module functions within specified limits. The contact shall be rated for at least 60VDC at 300mA with a resistive load.

3.2.5 Interchangeability

Future modules of the supply shall be backward compatible to the currently offered product and shall allow the paralleling of the outputs of future models with the current models for a period of 10 years.

3.2.6 Mechanical Characteristics

- (1) Modules shall be 19 inch sub rack mounted.
- (2) Modules shall weigh less than 4kg per 2000W module.
- (3) The modules shall be constructed so that no additional covers are required for use in the prescribed locations.
- (4) All electrical connections shall be done in the sub rack to allow easy unplugging and changing of faulty modules.

3.2.7 Parallel operation

The power modules shall allow the parallel connection of the respective module outputs of up to four similar modules with or without a controller module to share the output load.

3.2.8 EMC

The power modules will be mounted in the vicinity of other sensitive electronic equipment and the output will form the supply of sensitive electronic equipment. EMI generated by the power module shall be limited to not interfere with the above equipment.

The power module may be mounted in the close vicinity of and fed from other sources of EMI such as the switch mode UPS. This interference shall cause no degradation of performance or loss of function due to this interference.

Standard 2.1.2 (6) tables the various environmental phenomena, basic standard and test setup.

3.3 Documentation

Full product documentation shall be supplied. Documentation shall include detailed performance characteristics as required by 2.1.2, installation and operation instructions and application notes.

3.4 Approval requirements

The power supply forms part of Transnet's safety equipment and therefore needs to be approved by Transnet before it can be considered for implementation. Approval of new power supplies include laboratory testing against this specification and a sample installation of at least two units for a period of at least 6 months in a typical working environment.

3.5 Logistics.

3.5.1 Supply

Modules shall be readily available from a local South African supplier with a lead time for smaller orders (less than 10 modules) of two weeks from order to delivery. Larger orders (> 10 modules) shall be available within two months from ordering.

3.5.2 Support

The equipment shall carry a full guarantee for at least one year after installation.

3.5.3 Transportability

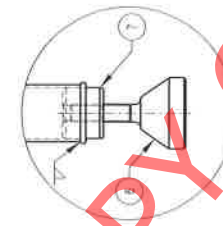
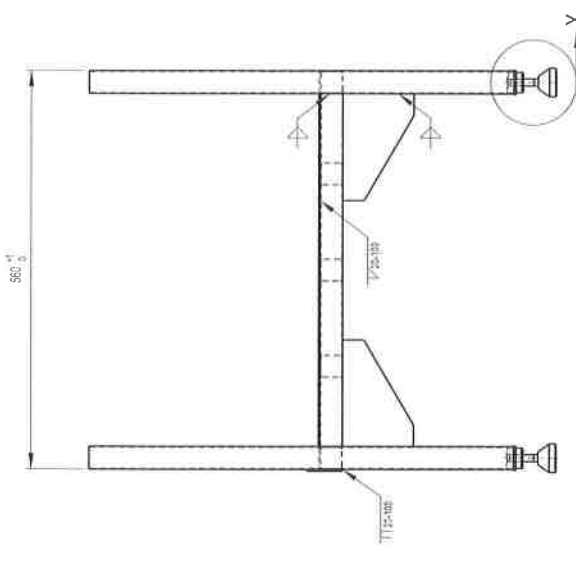
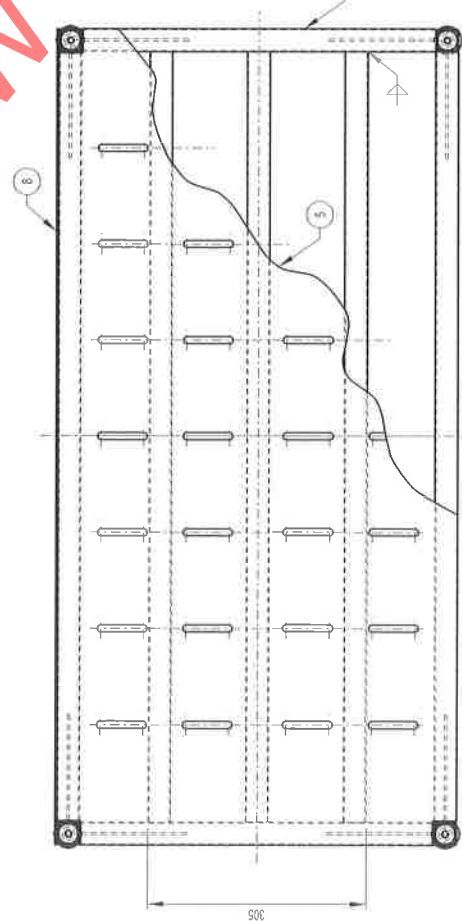
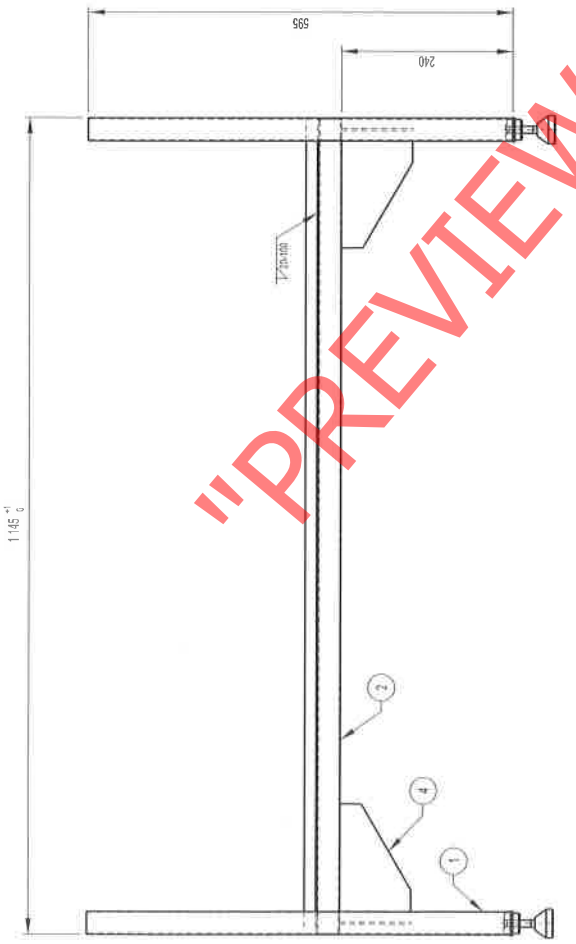
Power supply modules shall be suitably packaged to allow transport in light delivery vehicles without physical or functional damage over Transnet service roads.

4. **QUALITY ASSURANCE PROVISIONS**

4.1 Responsibility for inspection

Transnet accredited agents shall be responsible for inspection and testing of all delivered products and services.

END



FINISH:
 1. POWDER COAT TO SANS 1274 AFTER WELDING.
 2. FIT 32mm SQ PLASTIC FERRULES ON ALL OPEN ENDS

VIEW X
 SCALE 1:2

ITEM NO	DESCRIPTION	QTY	STORES ITEM NO	DRAWING NO
8	FLAT STRIP STEEL 1 145 x 50 x 3 THICK	1	-	-
7	BATTERY STAND FOOT BUSH	4	-	BBG1500
6	BATTERY STAND FOOT	4	-	BBG1489
5	BATTERY SURFACE	1	-	BBG1502
4	GUSSET	8	-	BBG1501
3	STEEL SQUARE TUBING 32 x 32 x 1.6 x 526 LONG	2	-	-
2	STEEL SQUARE TUBING 32 x 32 x 1.6 x 1 081 LONG	5	-	-
1	STEEL SQUARE TUBING 32 x 32 x 1.6 x 595 LONG	4	-	-

© COPYRIGHT PROTECTED, PREPARED BY CENTRAL DRAWING OFFICE

DIMENSIONS : mm
 TOLERANCE : LIN ±0.5 ANG ±0.2
 MATERIAL :
 VERSION INFO :

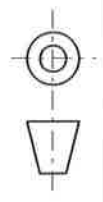
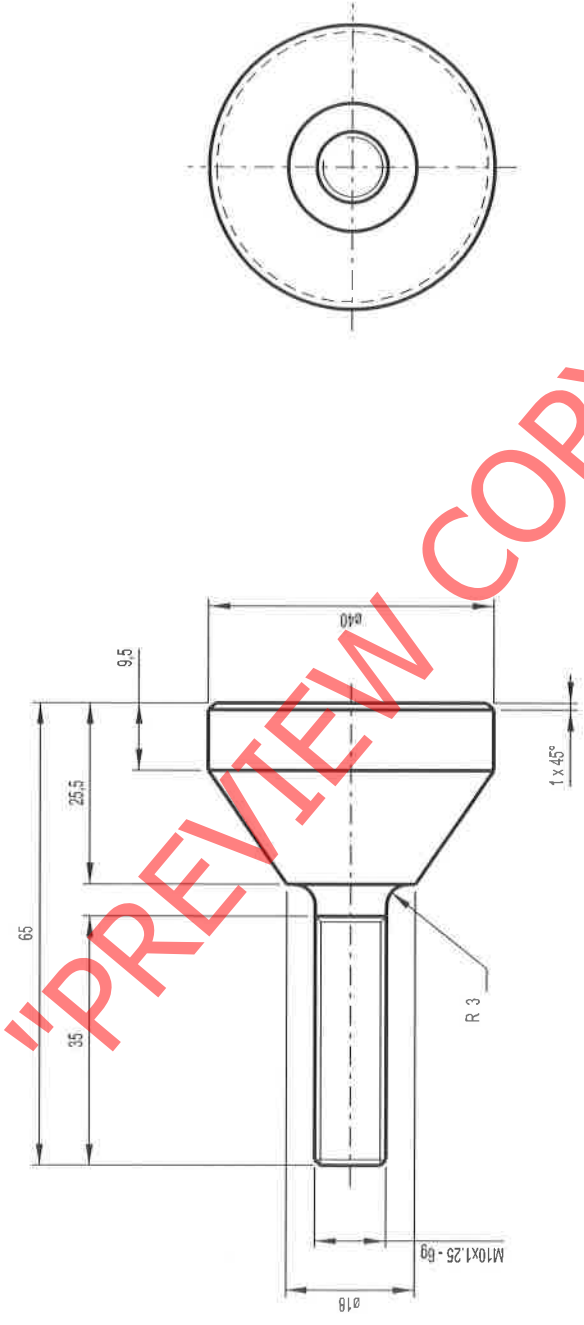
DO REF : CDO/ 8023
 ECP REF :
 DRAWN : CJ Miralis
 DESIGNED :
 CHECKED : H v Vuuren

SCALE : 1:5
 ITEM NO :

APPROVED :
 AUTHORISED :

STEEL BATTERY STAND FOR VRLA BATTERIES
 IN RELAY ROOMS
 8 x FRONT TERMINAL

"PREVIEW COPY ONLY"



© COPYRIGHT PROTECTED, PREPARED BY CENTRAL DRAWING OFFICE

DIMENSIONS : mm SCALE : 1 : 1
 TOLERANCE : LIN ± 0.5 ANG ± 2° ITEM NO : -
 MATERIAL : ROUND BAR, STEEL Ø40 x 65 LONG
 VERSION INFO

APPROVED

DRAWN: CJ Marais

AUTHORISED

DESIGNED: H v Vuuren

FOOT FOR STEEL BATTERY
 STAND IN RELAY ROOMS
 (8 x FRONT AND TOP TERMINAL)

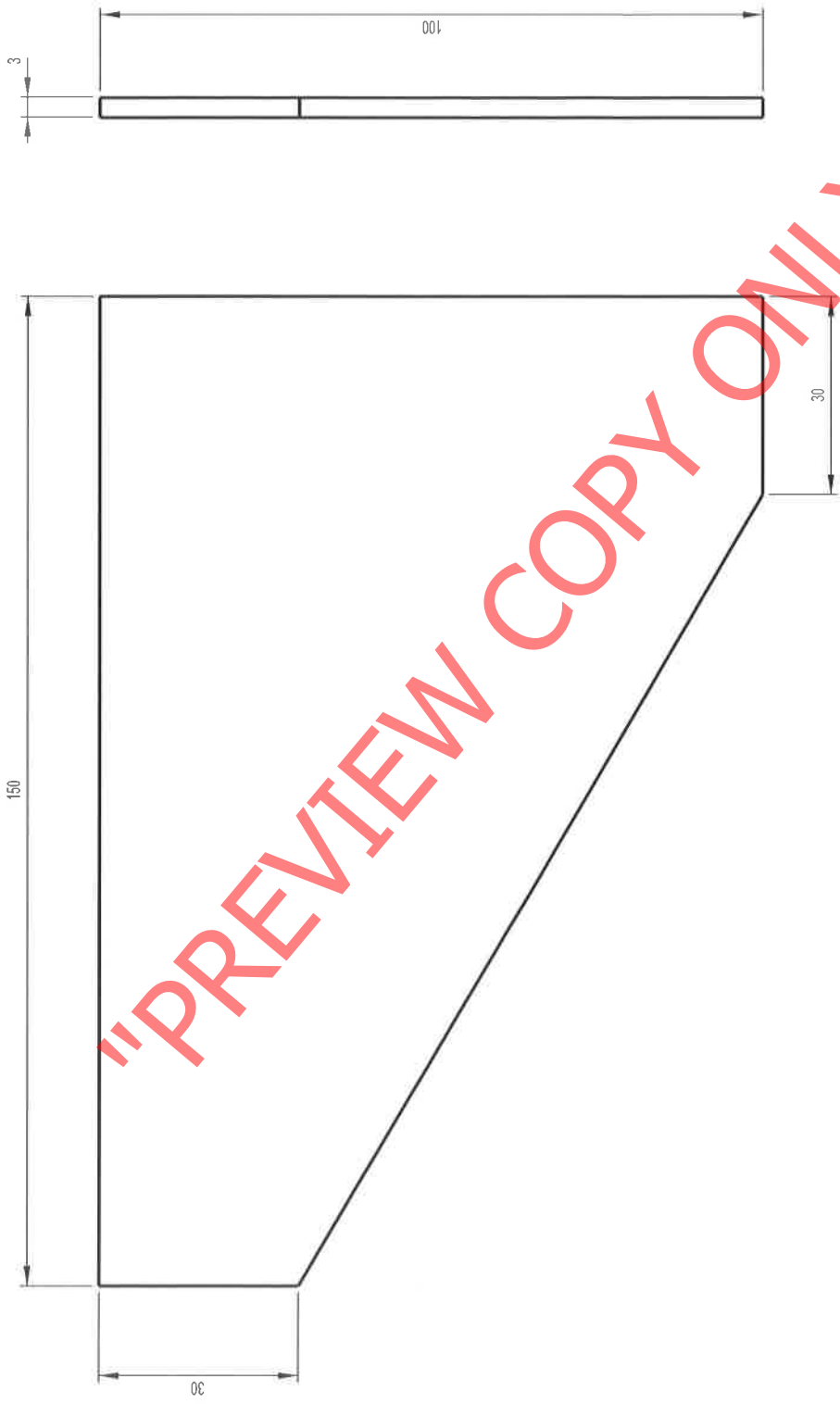


BBG1499
 VERSION 1

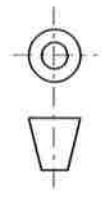
A4

DO REF: CDD/8023 ECP REF:

CHECKED: H v Vuuren



"PREVIEW COPY ONLY"



© COPYRIGHT PROTECTED. PREPARED BY CENTRAL DRAWING OFFICE

DIMENSIONS : mm SCALE : 1 : 1
 TOLERANCE : LIN±1 ANG± - ITEM NO. : -
 MATERIAL : STEEL SHEET 150 x 100 x 3 THICK
 VERSION INFO : -

APPROVED

AUTHORISED

GUSSET FOR STEEL BATTERY
 STAND IN RELAY ROOMS
 (8 X FRONT TERMINAL)

TRANSNET
Freight rail
BBG1501
 VERSION 1

A4

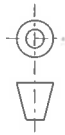
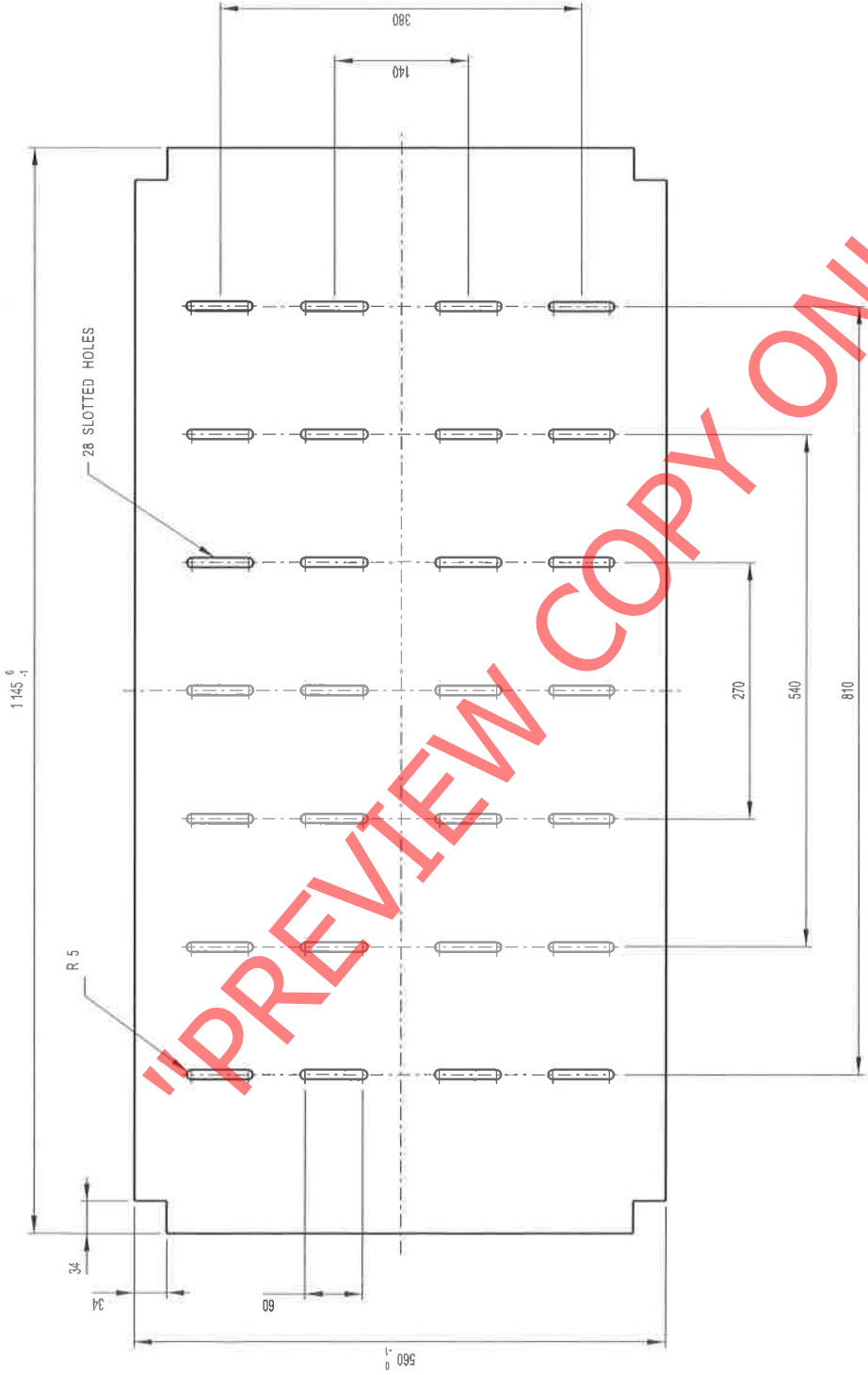
DO REF: CDOJ/8023

ECP REF: -

DRAWN: CJ Marais

DESIGNED: -

CHECKED: H v Vuuren



© COPYRIGHT PROTECTED, PREPARED BY CENTRAL DRAWING OFFICE

DIMENSIONS : mm
 TOLERANCE : ± 0.5 ANG ± -
 MATERIAL : STEEL SHEET 1 145 x 560 x 1.6 THICK
 VERSION INFO : *

SCALE : 1 : 5
 ITEM NO : -

APPROVED

AUTHORISED

BATTERY SURFACE FOR STEEL BATTERY STAND
 IN RELAY ROOMS
 (8 x FRONT TERMINAL)

TRANSNET
 freight rail
 BBG1502
 VERSION 1

A3

DO REF: CDO/4023 ECP REF: *

DRAWN: C.J. Morris

DESIGNED: *

AUTHORISED

CHECKED: H. v. Vuren

CLAUSE BY CLAUSE STATEMENT OF COMPLIANCE TO THE SPECIFICATION.

INSTALL NEW POWER EQUIPMENT AT VARIOUS RELAY ROOMS

TENDER NO: ERACKT 1879 - 15067

Item	Comply	Doesn't Comply	Comment
1.0 PROJECT SPECIFICATION: INSTALL NEW POWER EQUIPMENT AT VARIOUS RELAY ROOMS			
1. Scope			
2. Specifications, Drawings and Standards			
3. Applicable Documentation			
4. On Site and Labour Requirements			
5. Installation Requirements			
6. Material and Labour to be supplied by Contractor			
7. Safety Requirements			
8. Completion of Work			
9. Compliance to Specification			
2.0 SPECIFICATION: POWER DISTRIBUTION CUBICLES FOR SIGNAL INSTALLATIONS			
1. Scope			
2. Applicable Documents			
3. Requirements (3.1 - 3.9)			
4. Documentation (4.1)			
5. Quality Assurance (5.1 - 5.2)			
3.0 SPECIFICATION: VALVE REGULATED LEAD ACID BATTERIES FOR USE IN SIGNAL INTALLATION			
1. Scope (1.1 - 1.3)			
2. Requirements			
3. Battery Features (3.1 - 3.8)			
4. Documentation (4.1 - 4.2)			
5. Pre Delivery Prepararion (5.1 - 5.4)			
6. Warranty (6.1)			
4.0 SPECIFICATION: 3 PHASE STATIC UNINTERRUPTIBLE POWER SUPPLY 10 TO 125KVA			
1. Scope			
2. Standards and Publications (2.1)			
3. Definitions (3.1 - 3.8)			
4. Service Conditions (4.1 - 4.2)			
5. System Operation Description (5.1 - 5.11)			
6. Electronic Modules and Components			
7. Neutral Connection and Earthing			
8. EMC and Surge Protection (8.1 - 8.3)			
9. Battery Charger (9.1 - 9.5)			
10. Power Factor			
11. Over Voltage Protection			
12. PWM, IGBT Inverter (12.1 - 12.10)			
13. Electronic Static Bypass Switch (13.1 - 13.9)			
14. Maintenance Bypass Switch (14.1 - 14.2)			
15. Control and Indicator Panel (15.1 - 15.3)			
16. Alarms and Controls (16.1 - 16.2)			
17. Input Harmonic Mitigation			
18. Mechanical Requirements (18.1 - 18.4)			

DUPLICATE COPY ONLY

5.0 SPECIFICATION: LOW-VOLTAGE POWER SUPPLY DEVICES, AC TO DC CONVERTER WITH 60V OUTPUT, FOR USE IN RAILWAYS SIGNALLING APPLICATIONS			
1. Scope (1.1 - 1.3)			
2. Application Documents (2.1)			
3. Requirements (3.1 - 3.5)			
4. Quality Assurance Provisions (4.1)			
6.0 DRAWINGS FOR THE RELAY ROOMS (8 X FRONT TERMINAL)			
1. Steel Battery Stand for VRLA Batteries			
2. Foot for Steel Battery stand			
3. Foot Bush for Steel Battery			
4. Gusset for Steel Battery Stand			
5. Battery Surface for Steel Battery Stand			

"PREVIEW COPY ONLY"