

**TRANSNET**



***freight rail***

A Division of Transnet SOC Limited Registration number 1990/00900/30

# **REQUEST FOR QUOTATION**

**KBY/53317**

Senior Buyer  
Supply Chain Services  
TRANSNET FREIGHT RAIL  
Austen Street  
KIMBERLEY  
8301



**Transnet Freight Rail**, a division of

**TRANSNET SOC LTD**

Registration Number 1990/000900/30

[Hereinafter referred to as **Transnet**]

**REQUEST FOR QUOTATION [RFQ] No KBY/53317**

**FOR THE PURIFICATION AND REGENERATIVE OF OIL TRANSFORMER FOR A PERIOD OF ONE (1) MONTH.**

**FOR DELIVERY TO : TRANSNET FREIGHT RAIL,  
INFRA KIMBERLEY NORTH.**

**ISSUE DATE : 16 OCTOBER 2014**

**CLOSING DATE : 04 NOVEMBER 2014**

**CLOSING TIME : 10:00**

**COMPULSORY INFORMATION MEETING DETAILS:**

**DATE : 24 OCTOBER 2014**

**TIME : 11:00**

**VENUE : TRANSNET FREIGHT RAIL, REAL ESTATE BUILDING  
(FORMERLEY CALLED PROPERTY MANAGEMENT-  
BUILDING), GROUND FLOOR BOARDROOM,  
AUSTEN STREET, BEACONSFIELD, KIMBERLEY.**

**N.B! Failure to attend a COMPULSORY information meeting will result in your bid being overlooked during the award process, and regarded as a Non-Responsive**

**TENDER QUIRIES : Ms Refilwe Ramothwala Tel: 053 838 3309**

**DOCUMENT COLLECTION : Ms Leonie Visagie Tel: 053 838 3364**

E-mail [Leonie.Visagie@transnet.net](mailto:Leonie.Visagie@transnet.net)



## Section 1 NOTICE TO BIDDERS

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

**METHOD:** [Tender box or courier]  
**CLOSING VENUE:** [Tender box at physical address for hand delivery and courier:  
 Transnet Freight Rail, Real Estate Management Building, Supply Chain  
 Services, Office no. 2, Austen Street, Beaconsfield]

### 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 TECHNICAL EVALUATION

FOR OFFICE USE			
ITEM	REQUIREMENT	A  MAXIMUM WEIGHT	B  BIDDER'S TOTAL SCORE
1.	VALID CALIBRATION CERTIFICATE FOR TEST INSTRUMENT, PURIFICATION MACHINE AND REGENERATIVE	25%	
2.	VALID LETTER OF COMPLIANCE(GOOD STANDING)	25%	
3.	NATIONAL DIPLOMA IN ELECTRICAL ENGINEERING OR QUALIFIED ELECTRICIAN	25%	
4.	MINIMUM OF 2 YEARS EXPERIENCE IN TRANSFORMER MAINTENANCE <i>(DOCUMENTARY PROOF TO BE ATTACHED TO THIS RFQ, THUS COMPANY PROFILE CONTAINING PREVIOUS WORK HISTORY WITH CONTACTABLE REFERENCES).</i>	25%	
<b>TOTALS (A &amp; B)</b>		<b>100%</b>	
<b>MINIMUM REQUIRED</b>			<b>80 %</b>



***Bidders are required to meet the minimum threshold of 80% prequalifying criteria as reflected on the table above in order to proceed to the next stage, thus Section 3.1 below.***

### **3 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.

#### **3.1 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 system is applicable to all bids:

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

The value of this bid is estimated to be below R1000 000.00 (all applicable taxes included) and therefore the **80/20** 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 20 below for Returnable Documents required]*

### 3.2 B-BBEE Improvement Plan

Transnet encourages its Suppliers/Service Providers to constantly strive to improve their B-BBEE rating. Whereas Respondents will be allocated points in terms of a preference point system based on its B-BBEE scorecard to be assessed as detailed in paragraph 2.1 above, in addition to such scoring, Transnet also requests that Respondents submit a B-BBEE improvement plan. Respondents are therefore requested to indicate the extent to which they will maintain or improve their B-BBEE status over the contract period.

Respondents are requested to submit their B-BBEE Improvement Plan as an additional document with their Proposals by completion of Annexure A appended hereto. *[Refer to Annexure A for further instructions]*

#### Guidance Notes

- Note that for low value transactions, opportunities for B-BBEE Improvement are limited. Focus should be placed on longer term contracts.

### 4 Communication

- a) 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.
- b) A Respondent may, however, before the closing date and time, direct any written enquiries relating to the RFQ to the following Transnet employee:

Name: Refilwe Ramothwala Email: [Refilwe.Ramothwala@transnet.net](mailto:Refilwe.Ramothwala@transnet.net)

- c) Respondents may also, at any time after the closing date of the RFQ, communicate with Maggie Pain on any matter relating to its RFQ response:

Telephone 053 838 3341 Email [Maggie.Pain@transnet.net](mailto:Maggie.Pain@transnet.net)

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 short-listed 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.

## 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](http://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:



<b>YES</b>		<b>NO</b>	
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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 Respondent's Samples**

Respondents are required to submit samples of the Goods tendered for by it **only in cases where Transnet has specifically requested samples**. The sample(s) must be endorsed with the RFQ number and description and forwarded on or before the deadline date to the following addressee:

N/A

**15 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
<b>Administrative responsiveness</b>	Completeness of response and returnable documents
<b>Substantive responsiveness</b>	Prequalification criteria, if any, must be met and whether the Bid materially complies with the scope and/or specification given
<b>Final weighted evaluation based on 80/20 preference point system as indicated in paragraph 2.1</b>	<ul style="list-style-type: none"><li>• Pricing and price basis [firm] - whilst not the sole factor for consideration, competitive pricing and overall level of unconditional discounts<sup>1</sup> will be critical</li><li>• 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.</li></ul>

**16 Validity Period**

Transnet desires a validity period of 30 [thirty] days from the closing date of this RFQ.

This RFQ is valid until \_\_\_\_\_.

**17 Banking Details**

BANK: \_\_\_\_\_  
BRANCH NAME / CODE: \_\_\_\_\_  
ACCOUNT HOLDER: \_\_\_\_\_  
ACCOUNT NUMBER: \_\_\_\_\_

<sup>1</sup> 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 Company Registration**

Registration number of company / C.C. \_\_\_\_\_

Registered name of company / C.C. \_\_\_\_\_

**19 Disclosure of Prices Quoted**

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

YES ☐ NO ☐**20 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 **Returnable Documents**, as detailed below.

***Failure to provide all these Returnable Documents at the Closing Date and time of this RFQ may result in a Respondent's disqualification. Respondents are therefore urged to 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 Returnable Documents by so indicating [Yes or No] in the table below:





Returnable Documents	Submitted [Yes or No]
SECTION 1 : Notice to Bidders	
<ul style="list-style-type: none"> <li>- 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</li> </ul>	
<ul style="list-style-type: none"> <li>- 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</li> </ul>	
<ul style="list-style-type: none"> <li>- 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</li> </ul>	
<ul style="list-style-type: none"> <li>- Original valid Tax Clearance Certificate [Consortia / Joint Ventures must submit a separate Tax Clearance Certificate for each party]</li> </ul>	
SECTION 2 : Quotation Form	
SECTION 3: Vendor Application Form	
<ul style="list-style-type: none"> <li>• Original cancelled cheque or bank verification of banking details</li> </ul>	
<ul style="list-style-type: none"> <li>• Certified copies of IDs of shareholder/directors/members [as applicable]</li> </ul>	
<ul style="list-style-type: none"> <li>• Certified copies of the relevant company registration documents from Companies and Intellectual Property Commission (CIPC)</li> </ul>	
<ul style="list-style-type: none"> <li>• Certified copies of the company's shareholding/director's portfolio</li> </ul>	
<ul style="list-style-type: none"> <li>• Entity's letterhead</li> </ul>	
<ul style="list-style-type: none"> <li>• Certified copy of VAT Registration Certificate [RSA entities only]</li> </ul>	
<ul style="list-style-type: none"> <li>• Certified copy of valid Company Registration Certificate [if applicable]</li> </ul>	
Financial Statements signed by your Accounting Officer or Audited Financial Statements for previous 3 years	
ANNEXURE A – B-BBEE Preference Points Claim Form	

- b) In addition to the requirements of paragraph a) above, Respondents are further requested to submit with their Proposals the following **additional documents** as detailed below.

Please confirm submission of these additional documents by so indicating [Yes or No] in the table below:

Additional Documents	SUBMITTED [Yes or No]
ANNEXURE B: B-BBEE Improvement Plan	
COMPANY PROFILE WITH PREVIOUS WORK HISTOTY AND REFERENCES	



## 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 [available on request]; 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

I/We quote as follows for the goods required, on a "delivered nominated destination" basis, excluding VAT:

**KINDLY REFER TO THE ATTACHED PRICING SCHEDULE BELOW:**

**Delivery Lead-Time from date of purchase order: \_\_\_\_\_ [week]**

- 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  
**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 C
10. Company Registration Certificate [if applicable]



## Supplier Declaration Form

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					
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)							
<b>BEE Ownership Details</b>							
% 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							
<b>Duly Authorised To Sign For And On Behalf Of Firm / Organisation</b>							
Name		Designation					
Signature		Date					
<b>Stamp And Signature Of Commissioner Of Oath</b>							
Name		Date					
Signature		Telephone No.					

**FOR THE PURIFICATION AND REGENERATIVE OF OIL TRANSFORMER FOR A PERIOD OF ONE (1) MONTH.**

**ANNEXURE A: 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 A total/maximum of 20 preference points shall be awarded for B-BBEE Status Level of Contribution.
- 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.
- 1.3 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 "all applicable taxes" include value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- 2.2 "B-BBEE" means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- 2.3 "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;
- 2.4 "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;
- 2.5 "Broad-Based Black Economic Empowerment Act" means the Broad-Based Black Economic Empowerment Act, 2003 [Act No. 53 of 2003];
- 2.6 "comparative price" means the price after the factors of a non-firm price and all unconditional discounts that can utilised have been taken into consideration;
- 2.7 "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;
- 2.8 **"contract"** means the agreement that results from the acceptance of a bid by Transnet;
- 2.9 **"EME"** means any enterprise with an annual total revenue of R5 [five] million or less 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;
- 2.10 **"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;
- 2.11 **"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;
- 2.12 **"non-firm prices"** means all prices other than "firm" prices;
- 2.13 **"person"** includes reference to a juristic person;
- 2.14 **"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
- 2.15 **"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;
- 2.16 **"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;
- 2.17 **"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;
- 2.18 **"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
- 2.19 **"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 The Bidder obtaining the highest number of total points for the evaluation criteria as enumerated in Section 2 of the RFP will be awarded the contract, unless objective criteria justifies the award to another bidder.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking

into account all factors of non-firm prices and all unconditional discounts.

- 3.3 Points scored will be rounded off to 2 [two] decimal places.
- 3.4 In the event of equal points scored, the Bid will be awarded to the Bidder scoring the highest number of preference points for B-BBEE.
- 3.5 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.
- 3.6 Should two or more Bids be equal in all respect, the award shall be decided by the drawing of lots.

"PREVIEW COPY ONLY"

#### 4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

- 4.1 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 20]
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

- 4.2 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.
- 4.3 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.
- 4.4 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.
- 4.5 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.
- 4.6 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.
- 4.7 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.



- 4.8 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.
- 4.9 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.
- 4.10 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.
- 4.11 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 **Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:**

B-BBEE Status Level of Contribution \_\_\_\_\_ 1 \_\_\_\_\_ = \_\_\_\_\_ [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 a sworn affidavit in the case of an EME or QSE.

- 5.2 **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

- 5.3 Declaration with regard to Company/Firm

- (i) Name of Company/Firm.....
- (ii) VAT registration number.....
- (iii) Company registration number.....
- (iv) Type of Company / Firm [TICK APPLICABLE BOX]

☐ Partnership/Joint Venture/Consortium

☐ One person business/sole propriety

☐ Close Corporations

☐ Company (Pty) Ltd

(v) Describe Principal Business Activities

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

(vi) Company Classification [TICK APPLICABLE BOX]

☐ Manufacturer

☐ Supplier

☐ Professional Service Provider

☐ Other Service Providers, e.g. Transporter, etc.

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

#### 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:.....



## ANNEXURE B: B-BBEE IMPROVEMENT PLAN

Transnet encourages its Suppliers/Service Providers to constantly strive to improve their B-BBEE rating. Whereas Respondents will be allocated points in terms of a preference point system based on its B-BBEE scorecard, in addition to such scoring, Transnet also requests that Respondents submit a B-BBEE improvement plan. Respondents are therefore requested to indicate the extent to which their ownership, management control, Supplier Development, Preferential Procurement and Enterprise Development will be maintained or improved over the contract period.

Respondents are requested to submit their B-BBEE Improvement Plan as an additional document with their Proposals.

*Respondents are to insert their current status (%) and future targets (%) for the B-BBEE Improvement Plan [i.e. not the % change but the end-state quantum expressed as a percentage] in the table below. This will indicate how you intend to sustain or improve your B-BBEE rating over the contract period. On agreement, this will represent a binding commitment to the successful Respondent.*

*Transnet reserves the right to request supporting evidence to substantiate the commitments made in the B-BBEE Improvement Plan.*

OWNERSHIP INDICATOR	Required Responses	Current Status(%)	Future Target (%)
1. The percentage of the business owned by Black <sup>1</sup> persons.	<i>Provide a commitment based on the extent to which ownership in the hands of Black persons as a percentage of total ownership of the organisation would be sustained or increased over the contract period.</i>		
2. The percentage of your business owned by Black women.	<i>Provide a commitment based on the extent to which ownership in the hands of Black women as a percentage of total ownership of the organisation would be sustained or increased over the contract period.</i>		
3. The percentage of the business owned by Black youth. <sup>2</sup>	<i>Provide a commitment based on the extent to which ownership in the hands of Black youth as a percentage of total ownership of the organisation would be sustained or increased over the contract period.</i>		
4. The percentage of the business owned by Black persons living with disabilities	<i>Provide a commitment based on the extent to which ownership in the hands of Black disabled persons as a percentage of total ownership of the organisation would be sustained or increased over the contract period.</i>		
5. New Entrants <sup>3</sup> (Early stage business)	<i>Provide a commitment based on the extent to which new entrants will be supported over the contract period.</i>		

<sup>1</sup> "Black" means South African Blacks, Coloureds and Indians, as defined in the B-BBEE Act, 53 of 2003

<sup>2</sup> "Black youth" means Black persons from the age of 16 to 35

<sup>3</sup> "New Entrants" means an early stage business which is similar to a start-up. However, an early stage business is typically 3 years old or less.

MANAGEMENT CONTROL INDICATOR	Required Responses	Current Status (%)	Future Targets (%)
6. The percentage of Black Board members in relation to the total number of Board members	<i>Provide a commitment based on the extent to which the number of Black Board members, as a percentage of the total Board, would be sustained or increased over the contract period.</i>		
7. The percentage of Black female Board members in relation to the total number of Board members	<i>Provide a commitment based on the extent to which the number of Black female Board members, as a percentage of the total Board, would be sustained or increased over the contract period.</i>		
8. Black Executives directors as a percentage of all executive directors	<i>Provide a commitment based on the extent to which the number of Black executive Directors as a percentage of all Executive Directors would be sustained or increased over the contract period.</i>		
9. Black female Executives directors as a percentage of all executive directors	<i>Provide a commitment based on the extent to which the number of Black female executive Directors as a percentage of all Executive Directors would be sustained or increased over the contract period.</i>		
<b>Other Executive Management</b>	<b>Required Response</b>	<b>Current Status (%)</b>	<b>Future Targets (%)</b>
10. Black Executive Management as a percentage of all executive directors	<i>Provide a commitment based on the extent to which the number of Black executive Managers as a percentage of all Executive Directors would be sustained or increased over the contract period.</i>		
11. Black Female Executive Management as a percentage of all executive directors	<i>Provide a commitment based on the extent to which the number of Black female executive Managers as a percentage of all Executive Directors would be sustained or increased over the contract period.</i>		
<b>Senior Management</b>	<b>Required Response</b>	<b>Current Status (%)</b>	<b>Future Targets (%)</b>
12. Black employees in Senior Management as a percentage of all senior management	<i>Provide the percentage of Blacks that would be appointed or retained by the Board and would be operationally involved in the day to day <b>senior management</b> of the business, with individual responsibility for overall and/or financial management of the business and actively involved in the development and implementation of <b>overall strategy</b>, over the contract period.</i>		
13. Black female employees in Senior Management as a percentage of all senior management	<i>Provide the percentage of Black females that would be appointed or retained by the Board and would be operationally involved in the day to day <b>senior management</b> of the business, with individual responsibility for overall and/or financial management of the business and actively involved in the development and implementation of <b>overall strategy</b>, over the contract period.</i>		
<b>Middle Management</b>	<b>Required Response</b>	<b>Current</b>	<b>Future</b>

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Respondent's Signature

Date & Company Stamp

		Status (%)	Targets (%)
14. Black employees in Middle Management as a percentage of all middle management	<i>Provide the percentage of Blacks that would be retained or appointed by the organisation in the <b>middle management</b> cadre and would be operationally involved in the day to day management of the business, with individual responsibility for a particular area within the business and actively involved in the <b>day to day management</b> of the organisation, over the contract period.</i>		
15. Black female employees in Middle Management as a percentage of all middle management	<i>Provide the percentage of Blacks females that would be retained or appointed by the organisation in the <b>middle management</b> cadre and would be operationally involved in the day to day management of the business, with individual responsibility for a particular area within the business and actively involved in the <b>day to day management</b> of the organisation, over the contract period.</i>		
<b>Junior Management</b>	<b>Required Response</b>	<b>Current Status (%)</b>	<b>Future Targets (%)</b>
16. Black employees in Junior management as a percentage of all junior management	<i>Provide a commitment based on the extent to which the number of Black Junior Managers as a percentage of the total junior Managers, would be sustained or increased over the contract period.</i>		
17. Black female employees in Junior management as a percentage of all junior management	<i>Provide a commitment based on the extent to which the number of Black female Junior Managers as a percentage of the total junior Managers, would be sustained or increased over the contract period.</i>		
<b>Employees with disabilities</b>	<b>Required Response</b>	<b>Current Status (%)</b>	<b>Future Targets (%)</b>
18. Black employees with disabilities as a percentage of all employees	<i>Provide a commitment based on the extent to which the percentage of Black disabled employees, in relation to the total of all employees in the organisation, would be sustained or increased over the contract period.</i>		
<b>PREFERENTIAL PROCUREMENT INDICATOR</b>	<b>Required Responses</b>	<b>Current Status (%)</b>	<b>Future Targets (%)</b>
19. B-BBEE procurement spend from all Empowering Suppliers <sup>4</sup> based on the B-BBEE procurement	<i>Provide a commitment based on the extent to which B-BBEE spend from all Empowering Suppliers would be sustained or increased over the contract period.</i>		

<sup>4</sup> "Empowering Suppliers" means a B-BBEE compliant entity, which should meet at least three of the following criteria if it is a Large Enterprise or one if it is a QSE:

(a) At least 25% of cost of sales excluding labour cost and depreciation must be procured from local producers or local supplier in SA, for service industry labour cost are included but capped to 15%.

(b) Job creation - 50% of jobs created are for Black people provided that the number of Black employees since the immediate prior verified B-BBEE Measurement is maintained.

(c) At least 25% transformation of raw material/beneficiation which include local manufacturing, production and/or assembly, and/or packaging.

(d) Skills transfer - at least spend 12 days per annum of productivity deployed in assisting Black EMEs and QSEs beneficiaries to increase their operation or financial capacity.

	recognition level as a percentage of total measured procurement spend		
20.	20 B-BBEE procurement spend from all Empowering Suppliers QSEs based on the applicable B-BBEE Procurement Recognition Levels as a percentage of Total Measured Procurement Spend	<i>Provide a commitment based on the extent to which B-BBEE spend from Empowering Supplier QSEs would be sustained or increased over the contract period</i>	
21.	B-BBEE procurement spend from Exempted Micro-Enterprise based on the applicable B-BBEE procurement recognition Levels as a percentage of Total Measured Procurement Spend	<i>Provide a commitment based on the extent to which B-BBEE spend from EMEs would be sustained or increased over the contract period</i>	
22.	B-BBEE procurement spend from Empowering Suppliers that are at least 51% black owned based on the applicable B-BBEE Procurement Recognition Levels as a percentage of Total Measured Procurement Spend	<i>Provide a commitment based on the extent to which spend from Empowering Suppliers who are more than 51% Black-owned would be maintained or increased over the contract period.</i>	
23.	B-BBEE procurement spend from Empowering Suppliers that are at least 30% black women owned based on the applicable B-BBEE Procurement Recognition Levels as a percentage of Total Measured Procurement Spend	<i>Provide a commitment based on the extent to which spend from Empowering Suppliers who are more than 30% Black women-owned would be maintained or increased over the contract period.</i>	
24.	B-BBEE procurement Spent from Designated Group <sup>5</sup> suppliers that are at least 51% Black owned	<i>Provide a commitment based on the extent to which spend from suppliers from Designated Group Suppliers that are at least 51% Black owned would be maintained or increased over the contract period.</i>	

<sup>5</sup> "Designated Groups" means:

- unemployed black people not attending and required by law to attend an educational institution and not awaiting admission to an educational institution;
- black people who are youth as defined in the National Youth Commission Act of 1996;
- black people who are persons with disabilities as defined in the Codes of Good Practice on employment of people with disabilities issued under the Employment Equity Act;
- black people living in rural and under developed areas; and
- black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011.

Respondent's Signature

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Date & Company Stamp



SUPPLIER DEVELOPMENT INDICATOR	Required Response	Current Status (%)	Future Target (%)
25. Annual value of all Supplier Development <sup>6</sup> Contributions made by the Measured entity as a percentage of the target	<i>Provide a commitment based on the percentage in your organisation's annual spend on Supplier Development initiatives, will be maintained or improved over the contract period.</i>		
ENTERPRISE DEVELOPMENT INDICATOR	Required Response	Current Status (%)	Future Target (%)
26. The organisation's annual spend on Enterprise Development <sup>7</sup> as a percentage of Net Profit after Tax [NPAT]	<i>Provide a commitment based on the retention or increase in your organisation's annual spend on Enterprise Development initiatives, as a percentage of its Net Profit after Tax, over the contract period.</i>		

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<sup>6</sup> **"Supplier Development"** means monetary or non-monetary contributions carried out for the benefit of value-adding suppliers to the Measured Entity, with the objective of contributing to the development, sustainability and financial and operational independence of those beneficiaries:

(a) Supplier Development Contributions to suppliers that are Exempted Micro-Enterprises or Qualifying Small Enterprises which are at least 51% black owned or at least 51% black women owned.

Supplier Development within the contest of the B-BBEE scorecard must be differentiated from Transnet's Supplier Development Initiatives. Whereas the former relates to the definition above, the latter relates to improving the socio-economic environment through initiatives that are committed to as part of a contract award that contribute to the development of a competitive supplier base in relation to a particular industry.

<sup>7</sup> **"Enterprise Development"** means monetary and non-monetary contributions carried out for the following beneficiaries, with the objective of contributing to the development, sustainability and financial and operational independence of those beneficiaries:

(a) Enterprise Development Contributions to Exempted Micro-Enterprises or Qualifying Small Enterprises which are at least 51% Black owned or at least 51% Black women owned;

**Project Specification for purification and**  
**Testing of oil analysis from 3kv dc**  
**Traction Substation**

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### Transnet Freight Rail

*Purification and regenerative of insulation oil from 9 x 3 Kv DC Traction Transformer from Traction 3 Kv substation under the control of the Depot Manager Kimberley North.*

#### 1. Scope of work

*Purification and regenerative of insulation oil from 9 x 3 Kv DC Traction Transformer as per Engineering Instruction GI.012 issue 2 and CEE0229.95.*

#### Work to be done by contractor:

- *The contractor shall take oil sample before and after and oil analysis shall include Full Dissolve gas analysis, moisture content, and Acidity and Dielectric strength by only laboratories accredited by SANAS.*
- 
- *Oil sample shall not be taken within 2 hours after energizing/ de-energizing.*
- *The contractor shall restore/purify oil Dielectric strength to specification not less than 70kv according to engineering instruction GI.012, Moisture content to specification <10 ppm.*
- 
- *The shall regenerate the transformer oil to comply to Engineering instruction GI.012, Acidity to shall not be more than 0.03 mg KOH/g, moisture content < 10ppm and Dielectric Strength > 70kv.*
- *The contractor shall take precaution durring filtration /purification according environmental precautions clause 15.0 on the Engineering instruction GI.012.*

#### 3. Special conditions:

- *Samples shall be tested for following:*
- *The contractor shall submit certificate of compliance and valid calibration certificate of instrument to use before any work is commenced.*
- *Contractor to supply all necessary plant, material, tools equipment and auxiliary Power Supply (Generators).*
- *A TFR representative will be available on site for the full duration of the Project.*
- *Work must be done as soon as an order has been issued.*
- *Oil analysis shall be tested by SANAS accredited laboratories only if not result will not acceptable.*
- *The Contractor to take oil sample temperature from a tin by using shooting Thermometer shall be display on sample result per susbsation*

- *Failure of compliance may result termination of contract/ disqualified.*
- *Contractor's safe working procedure regard to risk analysis for the work to be approved by the technical officer before any work shall start.*
- *The contractor shall submit all test sheets result for each substation before energizing.*
- *The contractor will assist and advise on fault finding and repairs as far possible.*

**General:**

*Substations are situated on the section:*

*Kamfersdam to Hotazel*

*Beaconsfield to Fourteen Stream*

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### SERVICE AND COST

#### Project specification for regeneration and purification of transformer oil from 9x 3kv DC Traction Substations.

KM	Substations	Work description	Qty	Total Cost
5.000	Kamferda mm	<p>Sampling before and after for Dielectric strength, Dissolve gas analysis, Acidity and Moisture content.</p> <p>The contractor shall restore/purify (26000L) oil Dielectric strength to specification not less than 70kv according to engineering instruction GI.012, Moisture content to specification &lt;10 ppm</p> <p>Contractor to supply 1x drum Virgin oil and oil test certificate.</p>	sum	
	P&G's		each	
49,831	Gong- Gong	<p>Sampling before and after for Dielectric strength, Dissolve gas analysis, Acidity and Moisture content</p> <p>Regenerating the transformer (26000 L) oil to comply to Engineering instruction GI.012, Acidity to shall not be more than 0.03 mg KOH/g, moisture content &lt; 10ppm and Dielectric Strength &gt; 70 kv.</p> <p>Contractor to supply 1x drum Virgin oil and oil test certificate.</p>	sum	
	P&G's		each	
95,108	Nailos	<p>Sampling before and after for Dielectric strength, Dissolve gas analysis, Acidity and Moisture content</p> <p>The contractor shall restore/purify oil(26000L) Dielectric strength to specification not less than 70kv according to engineering instruction GI.012, Moisture content to specification &lt;10 ppm</p> <p>Contractor to supply 1x drum Virgin oil and oil test certificate.</p>	sum	

117,659	Plateau	<p>Sampling before and after for Dielectric strength, Dissolve gas analysis Acidity and Moisture content</p> <p>Regenerating the transformer (20600l) oil to comply to Engineering instruction GI.012, Acidity to shall not be more than 0.03 mg KOH/g, moisture content &lt; 10ppm and Dielectric Strength &gt; 70 kv.</p> <p>Contractor to supply 1x drum Virgin oil and oil test certificate.</p>	sum	
	P&G's		each	
140,213	Trewil	<p>Sampling before and after for Dielectric strength, Acidity and Moisture content.</p> <p>Regenerating the transformer (20600 L) oil to comply to Engineering instruction GI.012, Acidity to shall not be more than 0.03 mg KOH/g, moisture content &lt; 10ppm and Dielectric Strength &gt; 70 kv.</p> <p>Contractor to supply 1x drum Virgin oil and oil test certificate.</p>	sum	
	P&G's		each	
162,596	Clifton	<p>Sampling before and after for Dielectric strength, Dissolve gas analysis, Acidity and Moisture content.</p> <p>Regenerating the transformer (20600 L) oil to comply to Engineering instruction GI.012, Acidity to shall not be more than 0.03 mg KOH/g, moisture content &lt; 10ppm and Dielectric Strength &gt; 70 kv.</p> <p>Contractor to supply 1x drum Virgin oil and oil test certificate.</p>	sum	
	P&G's		each	
186,058	Linklip	<p>Sampling before and after for Dielectric strength, Acidity and Moisture content.</p> <p>Regenerating the transformer(20600 L) oil to comply to Engineering instruction GI.012, Acidity to shall not be more than 0.03 mg KOH/g, moisture content &lt; 10ppm and Dielectric Strength &gt; 70 kv.</p> <p>Contractor to supply 1x drum Virgin oil and oil test certificate.</p>	sum	
	P&G's		each	

238,158	Glosam	<p>Sampling before and after for Dielectric strength, Acidity and Moisture content.</p> <p>The contractor shall restore/purify (26000l)oil Dielectric strength to specification not less than 70kv according to engineering instruction GI.012, Moisture content to specification &lt;10 ppm.</p> <p>Contractor to supply and refill 1x drum Virgin oil and oil test certificate.</p>	sum	
	P&G's		each	
Item B	Subtotal	R		
	VAT 14%	R		
	Total include VAT	R		

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**SPOORNET  
(INFRASTRUCTURE) (ELECTRICAL)**

**SPECIFICATION No. CEE.0229.95**

**DRY-OUT AND REGENERATION OF INSULATING OIL AND RECLAIMING AND  
DE-SLUDGING OF TRANSFORMERS**

This specification covers Spoornet's requirements for in situ dry-out and de-sludging of power transformer and reclaiming insulating oil by means of regeneration

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**SPECIFICATION No. CEE.0229.95**

**1.0 SCOPE**

This specification covers Spoornet's requirements for the dry-out and de-sludging of power transformers and reclaiming of insulating oil by means of regeneration.

**2.0 REFERENCE AND STANDARDS**

The following publication is referred to herein.

South African Bureau of Standards

SABS 555 : Mineral Insulating Oil for Transformers and Switch gear.

**3.0 METHOD OF TENDERING**

**3.1 Tendering shall be in accordance with Spoornet (Infrastructure) (Electrical) specification CEE.0012.**

Complies/Does not comply

**3.2 Tendering prices shall be based on cost of the process that will achieve the results required under clause 9.0 for each individual transformer described in Appendix 1, 2 & 3.**

Complies/Does not comply

**3.3 Tenderer's shall quote separately for the replacement of lost oil if required, (per litre).**

Complies/Does not comply

**3.4 Spoornet reserves the right to inspect the Tenderer's facilities prior to awarding the contract in order to ensure that suitable equipment is available for the type of operation.**

Complies/Does not comply

**4.0 APPENDICES**

The following appendices form an integral part of this specification:

Appendix 1: Schedule of transformers to be regenerated.

Appendix 2: Schedule of transformers to be de-sludged.

Appendix 3: Schedule of transformers to be dried-out.

Appendix 4: Moisture content of oil leaving transformer at which dry-out process must be terminated for various transformers temperatures.



**SPECIFICATION No. CEE.0229.95**

**5.0 TRANSFORMER DRY-OUT (DE-ENERGISED)**

5.1 Note: Any moisture present in the transformer will be partly in the oil and partly in the layers of solid insulation. Normally more than 95 percent of moisture in the transformer is trapped in the insulation and less than 5 percent in the oil. Removal of moisture from the solid insulation in situ is a slow process due to the slow rate of diffusion of moisture between insulation and oil. No quick dry-out processes (eg 48 hours) will thus be accepted, as this will dry-out the oil only and not the solid insulation.

5.2 The dry-out plant shall include a vacuum type drier or alternative dry-out method with suitable filter (see clause 5.2.1) to remove the solid particles and a suitable pump (see clause 5.2.2).

Complies/Does not comply

5.2.1 The hoses between the dry-out plant and the transformer shall have a built-in earth conductor to avoid static electricity to be charged to a high potential. The filter and tanks in the plant shall also be connected to earth.

Complies/Does not comply

5.2.2 The transformer tank shall not be subjected to a vacuum in excess of the maximum possible indication on the transformer name plate.

Complies/Does not comply

5.2.3 The oil temperature inside the transformer tank shall not exceed 90 degrees Celsius while the dry-out process is in progress.

Complies/Does not comply

5.3 The silica gel crystals in the transformer breather shall be replaced at the start of the dry-out process and the colour change shall be monitored during the process. New crystals shall be provided when more than 50 percent of the crystals are coloured pink.

Complies/Does not comply

**5.4 ON LOAD DRY-OUT**

5.4.1 When using an on load dry-out plant the Contractor shall work in close conjunction with the Regional Engineer Electrical staff, who will lay down the requirements for safe operation of the plant.

Complies/Does not comply

**6.0 REGENERATION OF OIL (Purification)**

6.1 In order to remove acidic and colloidal contaminants an activated clay or Fuller's earth process shall be used to achieve the results required as per clause 9.0.

Complies/Does not comply

**SPECIFICATION NO. CEE.0229.95**

- 6.1.1 The purification plant shall include provision for heating, automatic vacuum degasser, and shall be able to draw a vacuum in the transformer as well as circulate the oil in the transformer.

Complies/Does not comply

- 6.2 In the event of reclaiming of oil only being required, the complete volume of oil in the transformer may be replaced with new or factory regenerated oil as alternative to clause 6.1. When pumping oil into electrical equipment, the following precautionary measures shall be taken:

- 6.2.1 A paper filter (0,5 micron ) shall always be installed between the pump and the equipment.

Complies/Does not comply

- 6.2.2 Pumps shall not have metal-to-metal friction which can release conductive metal particles into the oil.

Complies/Does not comply

- 6.2.3 The Contractor shall ensure that no air is trapped in the transformer while new oil is being added to the transformer. The tenderer shall indicate what method will be used to prevent air being trapped.

Complies/Does not comply

**7.0 DE-SLUDGING OF TRANSFORMERS**

- 7.1 The transformer shall be de-sludged in situ, completely filled with oil in accordance with the following process:-

Complies/Does not comply

- 7.1.1 The oil shall be heated and maintained at a temperature of approximately 90 degrees Celsius in the transformer, where the sludge in the transformer will go from a solid to a solution, re-entering the oil. A temperature of approximately 80 degrees Celsius should be reached in the core of the transformer and shall then be subjected to multiple passes of hot oil, for sufficient time to dissolve the sludge inside the transformer. The dissolved sludge is to be removed from the oil by passing the oil through an activated clay or Fuller's earth medium.

Complies/Does not comply

- 7.2 If required, and in agreement with Spoornet, the transformer may be kept on load to minimise the amount of external energy to obtain the laid down temperature of approximately 80 degrees Celsius in the core.

**SPECIFICATION No. CEE.0229.95**

**8.0 REPLACEMENT OF LOST OIL**

On completion of the process the oil level in the conservator shall be at the original level prior to the commencement of the dry-out, reclaiming or the de-sludging processes.

Complies/Does not comply

**9.0 TESTS ON OIL**

- 9.1 The oil shall be tested by Spoornet immediately after completion of the process to confirm compliance with the requirements of SABS 555 for both reclaiming and de-sludging. The requirement for dielectric strength shall be 65kV.

Comply/Does not comply

- 9.2 During the filtration dry-out process the oil shall be tested by the contractor periodically and the process shall be stopped if the moisture content in the oil leaving the transformer core is in accordance with the moisture content values as stipulated in appendix 4.

Complies/Does not comply

- 9.2.1 Tests shall be carried out 2 weeks after termination of the dry-out process to ensure that the moisture content in the oil is still within the permissible limits (see Appendix 4).

Complies/Does not comply

**10.0 PRECAUTIONARY MEASURES**

- 10.1 If reclamation is done on the transformer oil in the main tank with positive head pressure, a non-return check valve shall be installed between the transformer and the outlet hose from the filtration plant, in order to prevent excessive spilling of oil in the event of failure of the outlet hose.

Complies/Does not comply

- 10.2 An automatic isolating valve must be coupled to the transformer valve on the inlet side of the plant which will be closed automatically, in the event of a plant malfunction or when the oil level in the tank drops due to an inlet hose failure.

Complies/Does not comply

- 10.2.1 The following protection alarms must be provided on the dry-out plant if not attended full time:

- 10.2.1.1 Thermal motor failure.

Complies/ Does not comply

- 10.2.1.2 Pressure loss by using pressure switches.

Complies/ Does not comply

**SPECIFICATION No. CEE.0229.95**

- 10.2.1.3 The plant must have a leak proof base, with an automatic detection device to shut off the plant.

Complies/ Does not comply

- 10.2.2 The above alarms can be coupled via the Spoornet tellecontrol to give an alarm indication to Electrical Control.

- 10.2.3 Precautionary measures shall be taken to prevent environmental pollution.

Complies/Does not comply

**11.0 INSPECTION**

- 11.1 Spoornet reserves the right to be present during any stage of the process and must be timeously advised of dates of recommencement of any process.

Complies/Does not comply

**12.0 GUARANTEE**

- 12.1 The Contractor shall guarantee the transformer oil for a period of 12 months after the reclaiming and de-sludging process has been completed to comply with the requirements of clause 9.1, except for dielectric strength and water content.

Complies/Does not comply

- 12.2 The moisture content of the transformer shall be guaranteed to comply with the requirements of clause 9.2.1.

Complies/ Does not comply

- 12.3 Should the oil fail the tests as stated in clause 9.0, the Contractor shall repeat the process at his own cost.

Complies/Does not comply

TENDERER'S SIGNATURE .....

DATE .....

CHIEF ENGINEER (INFRASTRUCTURE)  
(ELECTRICAL)

SCHEDULE OF TRANSFORMERS TO BE REGENERATED

Identification / Location: _____			
1. Type of transformer: _____			
2. Volume of oil inside transformer: _____ litres.			
Oil Properties	Before	After	After 12 Months
3. Acid content (mg KOH/g oil):	_____	_____	_____
4. Moisture content (ppm):	_____	_____	_____
5. Dielectric strength (kV):	_____	_____	_____
6. Sludge content (< 0,02%):	_____	_____	_____

Identification / Location: _____			
1. Type of transformer: _____			
2. Volume of oil inside transformer: _____ litres.			
Oil Properties	Before	After	After 12 Months
3. Acid content (mg KOH/g oil):	_____	_____	_____
4. Moisture content (ppm):	_____	_____	_____
5. Dielectric strength (kV):	_____	_____	_____
6. Sludge content (< 0,02%):	_____	_____	_____

CHIEF ENGINEER (INFRASTRUCTURE)  
(ELECTRICAL)

REFERENCE :

SCHEDULE OF TRANSFORMERS TO BE DE-SLUDGED

Identification / Location: _____			
1. Type of transformer: _____			
2. Volume of oil inside transformer: _____ litres.			
Oil Properties	Before	After	After 12 Months
3. Acid content (mg KOH/g oil):	_____	_____	_____
4. Moisture content (ppm):	_____	_____	_____
5. Dielectric strength (kV):	_____	_____	_____
6. Sludge content (> 0,02%):	_____	_____	_____

Identification / Location: _____			
1. Type of transformer: _____			
2. Volume of oil inside transformer: _____ litres.			
Oil Properties	Before	After	After 12 Months
3. Acid content (mg KOH/g oil):	_____	_____	_____
4. Moisture content (ppm):	_____	_____	_____
5. Dielectric strength (kV):	_____	_____	_____
6. Sludge content (> 0,02%):	_____	_____	_____

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APPENDIX 3

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SCHEDULE OF TRANSFORMERS TO BE DRIED-OUT

Identification / Location: _____			
1. Type of transformer: _____			
2. Volume of oil inside transformer: _____ litres.			
3. Maximum permissible tank vacuum: _____ torr			
Oil Properties	Before	After	After 2 Weeks
4. Moisture content (ppm):	_____	_____	_____
5. Transformer oil temp (deg C)	_____	_____	_____
6. Dielectric strength (kV):	_____	_____	_____

Identification / Location: _____			
1. Type of transformer: _____			
2. Volume of oil inside transformer: _____ litres.			
3. Maximum permissible tank vacuum: _____ torr			
Oil Properties	Before	After	After 2 Weeks
4. Moisture content (ppm):	_____	_____	_____
5. Transformer oil temp (deg C)	_____	_____	_____
6. Dielectric strength (kV):	_____	_____	_____

CHIEF ENGINEER (INFRASTRUCTURE)  
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**APPENDIX 4**

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**MOISTURE CONTENT OF OIL LEAVING TRANSFORMER AT WHICH DRY-OUT PROCESS  
MUST BE TERMINATED FOR VARIOUS TRANSFORMER TEMPERATURES.**

Oil Temperature Degrees Celsius	Moisture Content of Oil ppm (mg/kg )	Oil Temperature Degrees Celsius	Moisture Content of Oil ppm (mg/kg)
10	1,5	55	16,0
15	2,0	60	21,0
20	2,5	65	28,0
25	3,3	70	35,5
30	4,2	75	44,0
35	5,5	80	54,0
40	7,2		
45	9,3		
50	11,0		

Note 1: This table is based on moisture content of not more than 2,1 percent in the paper.

Note 2: The oil temperature shall be the top oil temperature of the transformer.

Note 3: For temperatures falling in between the numbers in the table, use the next lower value.

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<b>A, B</b>	<b>SUPERVISION AND MAINTENANCE OF INSULATING OILS IN ELECTRICAL EQUIPMENT</b>	<b>GI.012 ISSUE 2</b>

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1.0 SCOPE

Note: All references to "oil" in this instruction shall mean mineral insulating oil.

- 1.1 This instruction covers the procedure for storage, handling, testing and maintenance of oil used in electrical equipment.
- 1.2 This instruction does not cover insulating liquids containing Polychlorinated Biphenols (PCB). These are toxic and should be handled strictly in accordance with Engineering Instruction G.009.
- 1.3 This instruction does not cover other synthetic dielectric fluids which should be maintained as per suppliers instructions.

2.0 STORAGE OF OIL IN DRUMS

- 2.1 Drums of insulating oil shall be stored indoors or under cover.
- 2.2 Drums shall be stored upside down, i.e. with bungs at the bottom.
- 2.3 Before use, oil stored in drums shall be tested for compliance with clause 14.1.1 (Dielectric strength).

3.0 PUMPING OF OIL

- 3.1 When pumping oil into electrical equipment, the following precautionary measures shall be taken:
  - 3.1.1 A 0,5 micron paper filter shall always be installed between the pump and the equipment.
  - 3.1.2 Pumps shall not have metal-to-metal friction which can release conductive metal particles into the oil.

4.0 FILTERING TO RESTORE DIELECTRIC STRENGTH OF OIL

Note: It is not possible to reduce the acidity of insulating oil by filtration. Therefore, if the acidity exceeds the permissible upper limit laid down in clause 14.1.2 the oil must be reclaimed, or replaced (See clause 6.0).

- 4.1 To maintain a high dielectric strength it is important that the oil should be free of impurities such as water and solid particles.
- 4.2 To restore dielectric strength to a permissible level as per clause 14.1.1, one of the following methods shall be used to remove moisture and solid particles from the oil:
  - 4.2.1 Heat-vacuum process
    - 4.2.1.1 This method requires an external heating system, with a suitable oil filter for removal of solid particles and a vacuum-type drier capable of providing a vacuum of 5 mm Hg (5 mm Hg = 5 Torr).

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5.2.2 Transformer on site and on load

This method requires an on-load filtration plant, using Fullers earth as filter medium and which is equipped with suitable safety devices. Depending on the amount of water present, the dry-out process can last from 8 to 20 weeks. On site dry-out with a transformer on load can only be carried out by suitably qualified contractors.

5.2.3 Oven dry-out

If the dry-out is being done in a workshop, the core may be removed from the tank and dried in an oven. Larger units may be dried in their tanks inside a suitable enclosure.

Note: During dry-out the temperature of the transformer shall not exceed 140 degrees Celsius to prevent degradation of the insulation.

6.0 RECLAIMING OR REPLACING OF OIL

Note: In the event of the acidity of the oil being in excess of the permissible level (clause 14.1.2) the oil shall be reclaimed or replaced.

6.1 Reclaiming is a process which uses Fullers earth as a medium to remove the acidic and colloidal contaminants and other products of oil deterioration from the oil. This process produces clean dry oil which complies with the specification for new oil.

6.2 The choice of whether oil should be reclaimed or replaced with new oil shall depend upon practical and economic considerations for a given situation.

6.3 Reclaiming of oil can either be carried out on site, with the transformer/equipment de-energised or alternatively in the factory or workshop. On site reclaiming is carried out using specialised equipment and can only be carried out by suitably qualified contractors. See Specification CEE.0229 to be used for contract purposes.

6.4 Oil that has been reclaimed or replaced shall be tested after 6 months and should the acidity have increased by more than 0.03 mg Potassium Hydroxide (KOH)/g oil, the transformer shall be desludged as described in clause 7.0.

7.0 TRANSFORMER DE-SLUDGE

7.1 Transformers must be desludged as soon as the permissible sludge limit as per clause 14.1.3 is exceeded; or when accelerated deterioration sets in after reclaiming or replacing the oil as per clause 6.4.

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9.0 SWITCH-GEAR

9.1 Routine tests shall be carried out on switch-gear oil in accordance with clause 12.2 and should the test be failed, the oil shall be filtered or replaced.

9.1.1 In the case of oil filtering, the appropriate procedure described in clause 4.0 shall be used.

9.1.2 After filtration, the oil shall be re-tested.

9.1.3 On complete overhaul of switch-gear, the oil shall be filtered or replaced with new oil.

10.0 OIL COOLED RECTIFIERS

10.1 No tests are prescribed for oil in oil cooled rectifiers.

10.2 In the event of flash-overs occurring inside the rectifier, the oil shall be replaced.

11.0 OIL TO BE TESTED BEFORE USE

11.1 New oil in tanks and drums shall be tested for dielectric strength before use, as per Appendix 2, clause 2.0.

11.2 Oil in equipment that has been decommissioned for longer than 3 months shall be tested for dielectric strength and water content in accordance with Appendix 2, clauses 2.0 and 3.0 before commissioning.

11.3 The results shall be recorded in the test book used by electrical laboratory personnel. See Engineering Instruction GI.008.

12.0 ROUTINE TESTING OF OIL

12.1 Oil in transformers shall be tested as per Appendix 2 on a routine basis as follows:

12.1.1 A schedule for tests shall be drawn up. The intervals between tests shall be determined in accordance with the operating conditions of the individual equipment, but shall not exceed the following:

12.1.1.1 Transformers of 500 kVA and greater, 4 yearly except dissolved gas analysis (DGA).

12.1.1.2 ~~Dissolved gas analysis must be performed annually on all traction transformers above the age of 25 years.~~ In addition, all transformers classified as strategic, as recommended in section 5 of publication CEE EP.005 (Condition Monitoring of Network Transformers), must be monitored on an annual basis. If the gas content exceeds the limits as per clause 14.1.5, more regular monitoring should take place as specified in the same clause.

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13.3 Dissolved gas analysis

13.3.1 Faults caused by partial electrical discharges or localised overheating and arcing inside the transformer leads to decomposition (breakdown) of the oil and insulation materials (paper, barrier board, resin, etc.). This decomposition of insulation causes gas generation which will generally dissolve in oil.

13.3.2 The Buchholtz relay is a gas collector relay in the transformer and operates on a large release of gas or on the accumulation of approximate 250 cc volume gas. However, it does not respond to breakdowns which produce gas at a very slow rate.

13.3.3 The technique of gas-chromatography has been developed which makes it possible to separate a mixture of gases dissolved in oil to identify the various types of gases present. If the gases are generated slowly, they are quantitatively dissolved in the oil and if these faults are not discovered, they can slowly attack the insulation to a point where serious damage results to the transformer. For this reason there is a general trend, especially with larger transformers, to monitor the oil for degenerated gases in the solution. The amounts and quantity of gases in the oil can identify the severity and type of faults. The magnitude of the normal concentrations of gas depends on the age and loading of the transformers but limiting values for the concentrations for various decomposition gases can be determined empirically. The permissible concentrations of various types of gases are given in clause 14.1.5.

13.3.4 In the event of Buchholtz relay operation, it is recommended that oil samples be taken for dissolved gas analysis, rather than analysing the trapped gas in the relay.

13.3.5 The dissolved gas analysis can only be done by suitably equipped laboratories providing this service.

13.4 Water content

13.4.1 Moisture in oil may emanate from either the atmosphere via the breather or leaking gaskets, or is produced by deterioration of paper and oil in transformers and equipment.

13.4.2 Water, even in minute quantities is harmful in power equipment because it is attracted to the places where electrical stress is highest. Concentration of moisture in those areas may result in ultimate failure of the insulation.

13.4.3 Water also accelerates the deterioration of the insulating material (paper etc.) and more water is produced during this process. This is a continuous cycle and once the paper has been degraded it can never (unlike the oil) be returned to its original condition.

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- 14.1.4 Water content:  
 New oil - Not more than 10 ppm.  
 Oil in service - See Appendix 3.

Note: Dielectric strength, neutralisation number, sludge and water content values are based on IEC 422, tables 1 and 2.

14.1.5 Dissolved gas analysis (DGA)

If any one of the gas concentrations indicated in the first column below is exceeded, the gas analysis must be performed every six months and every three months for the concentrations indicated in the second column:

	6 monthly level	3 monthly level
Hydrogen	150 ppm	1 000 ppm (V/V)
Methane	25 ppm	50 ppm (V/V)
Ethane	10 ppm	25 ppm (V/V)
Ethylene	20 ppm	100 ppm (V/V)
Acetylene	15 ppm	70 ppm (V/V)

Where: ppm (V/V) = parts per million volume / volume of specific gas in oil.

Note: The above values are based on DE GRIJP M.H.B. (Dissolved Gas Analysis and its interpretation).

- 14.1.5.1 The transformer must be de-energised when the average total gas content (including CO and CO<sub>2</sub>) increases at a rate of more than 10 percent per month, or when recommended by the laboratory.

15.0 ENVIRONMENTAL PRECAUTIONS

When mineral oil has to be disposed of, certain precautions are necessary to avoid risk of environmental pollution, and legal requirements may apply. Normally, if the precautions and regulations applicable to the handling and disposal of industrial and other lubricants (e.g. automobile crank case oil) are applied to mineral insulating oils, no problems should arise. See Guide to Legislation Concerning Hazardous Substance Act (Act 15 of 1973) and the Environmental Conservation Act (Act 73 of 1989).

16.0 ASSOCIATED DOCUMENTS, SPECIFICATIONS, ENGINEERING INSTRUCTIONS AND APPENDICES

- 16.1 The following documents are referred to in this instruction:

- 16.1.1 Guide to Legislation Concerning Hazardous Substance Act (Act 15 of 1973).

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4.2.2 Carrier-solution

Use 4760 ml isopropyl alcohol, add 240 ml distilled water, stir this mixture thoroughly. Add 5 litres of white spirits to the first mixture and stir well.

Note: Always add the distilled water to the isopropyl alcohol and not vice versa.

4.3 Indicators

Phenolphthalein or Paranaphtholbenzene or Alkali Blue  
(See note clause 14.1.2 of Instruction).

4.4 Test method

4.4.1 Take approximately 100 ml of carrier-solution, add three drops of phenolphthalein indicator and stir thoroughly using a clean glass rod.

4.4.2 Fill the 10 ml burette with alcohol KOH and titrate against the above colourless solution until the colour changes to pink (not crimson). This should take between one and five drops of KOH. Note the burette reading (X).

4.4.3 Pipette 25 ml of oil and add this to the titrated solution obtained in clause 4.4.2.

4.4.4 Titrate KOH against the solution of clause 4.4.3 until the colour changes and note the burette reading (A). The colour change will be dependent upon the original solution colour. If phenolphthalein indicator is used the change could be to an orange colour. With colourless oil the change would be to a pink colour. With light green oil the change would be to a light brown colour. If alkali blue indicator is used, the colour change will be from blue/blue green to a strong red colour.

4.4.5 Calculate the acid content of the oil using the following formula:

$$(A - X) \times 2,65 \times N \text{ mg KOH/g oil}$$

Where: N = Normality of KOH.

A = First titration KOH.

X = Second titration oil.

4.4.6 In some instances oil is a very dark red-amber colour, and when diluted with carrier-solution it may still mask the indicator change to pink. To overcome this situation either:

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**MAXIMUM PERMISSIBLE WATER CONTENT OF OIL IN TRANSFORMERS  
VERSUS TEMPERATURE OF TOP OIL SAMPLE UNDER EQUILIBRIUM  
CONDITIONS**

TEMP. OIL Deg. Celsius	MOISTURE ppm	TEMP. OIL Deg. Celsius	MOISTURE ppm
10	8	31	24
11	9	32	26
12	9	33	27
13	10	34	29
14	10	35	30
15	11	36	31
16	11	37	32
17	12	38	34
18	12	39	36
19	13	40	38
20	13	41	40
21	14	42	43
22	15	43	46
23	16	44	50
24	17	45	53
25	18	46	57
26	19	47	60
27	20	48	64
28	21	49	67
29	22	50	71
30	23		

Note 1: If the water content exceeds 50 ppm, irrespective of temperature, the office of Chief Engineer (Electrical) must be notified.

Note 2: This table is based on values being used by ESKOM for moisture content of 5 percent in the paper insulation.

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2.2.4 The KOH normality is calculated from the formula:

$$\begin{aligned}\text{Normality KOH} &= \frac{W}{V} \times \frac{1000}{204,23} \\ &= \frac{W}{V} \times 4,9\end{aligned}$$

Where: N = Normality of KOH.  
W = Mass potassium hydrogen phthalate.  
V = Volume KOH pellets.

2.2.5 Always store alcohol (KOH) in amber bottles at constant temperature in a dark place.

END

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