

Transnet Freight Rail

an Operating Division of **TRANSNET SOC LTD**

[hereinafter referred to as **Transnet**]

[Registration No. 1990/000900/30]

REQUEST FOR PROPOSAL [RFP]

FOR THE SUPPLY OF: OHTE WIRES AND CABLES AT RICHARDS BAY HARBOUR ON AN "AS AND WHEN" REQUIRED BASIS

FOR A PERIOD OF: 36 MONTHS

RFP NUMBER: HOAC-RCB-35571-MM-154

ISSUE DATE: 29 SEPTEMBER 2021

CLOSING DATE: 21 OCTOBER 2021

CLOSING TIME: 10H00

BID VALIDITY PERIOD: 90 BUSINESS DAYS FROM CLOSING DATE
(25 FEBRUARY 2022)

PREFERENTIAL PROCUREMENT PREQUALIFICATION CRITERIA - ONLY THE FOLLOWING RESPONDENTS MAY RESPOND TO THIS RFP:

- EXEMPTED MICRO ENTERPRISES (EMEs) OR QUALIFYING SMALL ENTERPRISES (QSEs) WITH A MINIMUM B-BBEE STATUS LEVEL OF 2 OR BETTER

SCHEDULE OF BID DOCUMENTS

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RFP FOR THE SUPPLY AND DELIVERY OF OHTE WIRES AND CABLES AT RICHARDS BAY HARBOUR ON AN "AS AND WHEN" REQUIRED BASIS FOR A PERIOD OF 36 MONTHS

SECTION 1: SBD1 FORM

PART A

INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF TRANSNET FREIGHT RAIL, A DIVISION TRANSNET SOC LTD							
BID NUMBER:	HOAC-RCB-35571-MM-154	ISSUE DATE:	29 SEPTEMBER 2021	CLOSING DATE:	21 OCTOBER 2021	CLOSING TIME:	10H00
DESCRIPTION:	SUPPLY AND DELIVERY OF OHTE WIRES AND CABLES AT RICHARDS BAY HARBOUR ON AN "AS AND WHEN" REQUIRED BASIS FOR A PERIOD OF 36 MONTHS						
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)							
TRANSNET FREIGHT RAIL,							
SUPPLY CHAIN SERVICES							
100 EEL ROAD, BAYHEAD, DURBAN							
4052							
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO				TECHNICAL ENQUIRIES MAY BE DIRECTED TO:			
CONTACT PERSON	MARI MARITZ			CONTACT PERSON	MARI MARITZ		
TELEPHONE NUMBER	035 906 7348			TELEPHONE NUMBER	035 906 7348		
FACSIMILE NUMBER	011 773 0866			FACSIMILE NUMBER	011 773 0866		
E-MAIL ADDRESS	MARI.MARITZ@TRANSNET.NET			E-MAIL ADDRESS	MARI.MARITZ@TRANSNET.NET		
SUPPLIER INFORMATION							
NAME OF BIDDER							
POSTAL ADDRESS							
STREET ADDRESS							
TELEPHONE NUMBER	CODE		NUMBER				
CELLPHONE NUMBER							
FACSIMILE NUMBER	CODE		NUMBER				
E-MAIL ADDRESS							
VAT REGISTRATION NUMBER							
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE	UNIQUE REGISTRATION REFERENCE NUMBER: & MAAA		
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] ☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		[TICK APPLICABLE BOX] ☐ Yes ☐ No		

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]

1 ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]	2 ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, ANSWER QUESTIONNAIRE BELOW]
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QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	☐ YES ☐ NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 1.3 BELOW.

PART B

TERMS AND CONDITIONS FOR BIDDING

1. TAX COMPLIANCE REQUIREMENTS

- 1.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 1.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
- 1.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
- 1.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 1.5 IN BIDS WHERE UNINCORPORATED CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 1.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

(Proof of authority must be submitted e.g. company resolution)

DATE:

SECTION 2: NOTICE TO BIDDERS**1. INVITATION TO BID**

Responses to this RFP [hereinafter referred to as a **Bid** or a **Proposal**] are requested from persons, companies, close corporations or enterprises [hereinafter referred to as an **entity, Respondent** or **Bidder**].

DESCRIPTION	Supply and delivery of OHTE wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months [the Goods]
TENDER ADVERT	All Transnet tenders are advertised on the National Treasury's e-Tender Publication Portal and the Transnet website. Should one of these media (i.e. National Treasury's e-Tender Publication Portal or Transnet website) not be available, bidders are advised to check on the other media for advertised tenders.
RFP DOWNLOADING	This RFP may be downloaded directly from National Treasury's e-Tender Publication Portal at www.etenders.gov.za and Transnet website at www.transnet.net free of charge. To download RFP and Annexures: • Click on "Tender Opportunities"; • Select "Advertised Tenders"; • In the "Department" box, select Transnet SOC Ltd; Once the tender has been located in the list, click on the 'Tender documents' tab and process to download all uploaded documents. The RFP may also be downloaded from the Transnet website at www.transnet.net free of charge. To access the Transnet eTender portal, please click here. To download RFP and Annexures, • Scroll towards the bottom right hand side of the page, • On the blue window click on 'Transnet SOC Ltd' or Select Operating Division. Alternatively, this RFP may be purchased at R 250.00 (inclusive of VAT) per set for those bidders that require a hard copy from Transnet. Payment is to be made as follows: Bank: Standard Bank Account Number: 203158598 Branch: Braamfontein Branch code: 004805 Account Name: Transnet Freight Rail Reference: HOAC-RCB-35571-MM-154 NOTE – This amount is not refundable. A receipt for such payment made must be presented when collecting the RFP documents and submitted thereafter with your Proposal.
COMMUNICATION	Any addenda to the RFP or clarifications will be published on the e-tender portal and Transnet website. Bidders are required to check the e-tender portal and Transnet website prior to finalising their bid submissions for any changes or clarifications to the RFP. Transnet will not be held liable if Bidders do not receive the latest information regarding this RFP with the possible consequence of either being disadvantaged or disqualified as a result thereof.
ISSUE AND COLLECTION DATE DEADLINE	Bidders are to note that the RFP documents will be available for download from 29 September 2021 or may be collected between 09h00 and 15h00 from 29 September 2021 until 20 October 2021. Bidders wishing to collect a CD, USB or hard copy of such RFP documents from the Transnet issuing office, are required to inform that office at the contact details indicated below on the day before collection in order to allow for timeous reproduction of the

	documentation. Name: Carroll Smith Email address: Carroll.Smith2@transnet.net Room: Tender office Transnet Freight Rail, Supply Chain Services - Durban, 100 Eel Road, Bayhead, Durban, 4052
BRIEFING SESSION	No – Refer to paragraph 2 for details.
CLOSING DATE	10h00 on Thursday, 21 October 2021 Bidders must ensure that bids are delivered timeously to the correct address. As a general rule, if a bid is late or delivered to the incorrect address, it will not be accepted for consideration.
BID OPENING	A public opening will not be held for this bid, however Respondents will be provided with a copy of the opening register indicating the names of the Respondents, upon request.
VALIDITY PERIOD	90 Business Days from Closing Date (25 February 2022) Bidders are to note that they may be requested to extend the validity period of their bid, at the same terms and conditions, if the internal evaluation process has not been finalised within the validity period. However, once the adjudication body has approved the process and award of the business to the successful bidder(s), the validity of the successful bidder(s)' bid will be deemed to remain valid until a final contract has been concluded. With regard to the validity period of next highest ranked bidders, please refer to Section 2, paragraph 12.12

Any additional information or clarification will be published on the e-Tender portal and Transnet website, if necessary.

2. FORMAL BRIEFING

A formal briefing session will not be held but should Respondents have specific queries they should email these to the Transnet employee(s) indicated in paragraph 8 *[Communication]* below.

3. PROPOSAL SUBMISSION

Proposals must be addressed on the cover as follows:

The Secretariat, Transnet Acquisition Council

RFP No: HOAC-RCB-35571-MM-154

Description: SUPPLY AND DELIVERY OF OHTE WIRES AND CABLES AT RICHARDS BAY HARBOUR ON AN "AS AND WHEN" REQUIRED BASIS FOR A PERIOD OF 36 MONTHS

Closing date and time: Thursday, 21 October 2021 at 10h00

Closing address: THE SECRETARIAT
TRANSNET ACQUISITION COUNCIL
TENDER BOX
SUPPLY CHAIN SERVICES
100 EEL ROAD,
BAYHEAD, DURBAN, 4052

4. RFP INSTRUCTIONS

- 4.1. The measurements of the "tender slot" are 350mm wide x 200mm high. Bid responses which are larger than the dimensions mentioned must be split into two or more files and clearly marked. **Transnet will not be held responsible if bid documents do not comply with the mentioned dimensions and Respondents experience difficulty in submitting their bids as a result.**
- 4.2. It should also be noted that the above tender box is accessible to the public from 07h30 until 16h00 business working days only.
- 4.3. Proposals must be submitted in duplicate hard copies [1 original and 1 copy] and must be bound.
- 4.4. Sign one set of original documents [sign, stamp and date the bottom of each page]. This set will serve as the legal and binding copy. A duplicate set of documents is also required. This second set must be a copy of the original signed Proposal.
- 4.5. Both sets of documents are to be submitted to the address specified, and Bidders must ensure that the original and copies (where applicable) are identical in all respects.
- 4.6. A CD copy of the RFP Proposal must be submitted. Please provide files in MS Word / Excel format, not PDF versions, noting that the signed original set will be legally binding.
- 4.7. **All returnable documents tabled in the Proposal Form [Section 5] must be returned with proposals.**
- 4.8. Unless otherwise expressly stated, all Proposals furnished pursuant to this RFP shall be deemed to be offers. Any exceptions to this statement must be clearly and specifically indicated.
- 4.9. Any additional conditions must be embodied in an accompanying letter. Subject only to clause 15 [Alterations made by the Respondent to Bid Prices] of the General Bid Conditions, paragraph 13 below (Legal Review) and Section 6 of the RFP, alterations, additions or deletions must not be made by the Respondent to the actual RFP documents.

5. JOINT VENTURES OR CONSORTIUMS

Respondents who would wish to respond to this RFP as a Joint Venture **[JV]** or consortium with B-BBEE entities, must state their intention to do so in their RFP submission. Such Respondents must also submit a signed JV or consortium agreement between the parties clearly stating the percentage [%] split of business and the associated responsibilities of each party. If at the time of the bid submission such a JV or consortium agreement has not been concluded, the partners must submit confirmation in writing of their intention to enter into a JV or consortium agreement should they be awarded business by Transnet through this RFP process. This written confirmation must clearly indicate the percentage [%] split of business and the responsibilities of each party. In such cases, award of business will only take place once a signed copy of a JV or consortium agreement is submitted to Transnet.

6. PREFERENTIAL PROCUREMENT PREQUALIFICATION CRITERIA

6.1. **Exempted Micro Enterprises or Qualifying Small Enterprises with a minimum B-BBEE level**

Transnet has set a prequalification criterion that only Exempted Micro Enterprises (EMEs) or Qualifying Small Enterprises (QSEs) with a minimum B-BBEE Level 2 or better may participate in this RFP process. A bid that fails to meet this pre-qualifying criteria will be regarded as an unacceptable bid.

7. COMPULSORY LOCAL CONTENT THRESHOLD

In terms of section 8(1) of the Preferential Procurement Regulations, 2017, and the Instruction Note issued by National Treasury on the "Invitation and Evaluation of Bids based on a stipulated minimum threshold for local content and production for the **Electrical Cable Products** Sector and the **Powerline Hardware** Sector", Transnet is required to set a stipulated minimum threshold be set for this RFP.

7.1. Local Content Threshold

A Local Content threshold of **90%** [ninety percent] and **100%** [one hundred percent] will be required for the goods specified in SBD 6.2, to be manufactured by a successful Respondent.

7.2. Local Content Notes

7.2.1. The exchange rate to be used for the calculation of local production and content must be the exchange rate published by the South African Reserve Bank (SARB) on the date of the advertisement of the tender;

7.2.2. Only the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 must be used to calculate local content;

7.2.3. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the following formula which must be disclosed in the bid documentation:

$$LC = [1 - x/y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by the SARB at 12:00 on the date of advertisement of the bid.

7.2.4. The SABS approved technical specification number SATS 1286:2011 and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)] are accessible to all potential tenderers on the DTI's official website; <http://www.the dti.gov.za/industrial development/ip.jsp> at no cost.

7.2.5. The rates of exchange quoted by the tenderer in paragraph 4.1 of Returnable Schedule (the Declaration Certificate for Local Production and Content for Designated Sectors) will be verified for accuracy.

7.2.6. Declaration Certificate for Local Production and Content (SBD 6.2) together with the Annex C (Local Content Declaration: Summary Schedule) must be completed, duly signed and submitted at the closing date and time of the bid;

7.2.7. Tenderers must familiarise themselves with all the information provided in the Local Content instruction notes with particular reference to paragraph 4 of the instruction notes.

7.2.8. Respondents are to ensure that they complete the local content annexures in line with the provisions made in the Guidance Document for the calculation of Local Content. Failure to comply will lead to disqualification.

7.3. **Mandatory RFP Annexures**

The regulatory and mandatory RFP Annexures, which must be completed by all Respondents in order to declare Local Content, are as follows:

- Annexure B – Declaration Certificate for Local Production and Content [SBD 6.2]
- Annexure C – Local Content Declaration: Summary Schedule
- Annexure B and C must be completed and submitted even if a complete Local Content exemption letter from DTI has been obtained.
- To the extent that an exemption from Local Content has been granted by the DTI, the exemption letter from DTI will be a mandatory returnable document.
- Annexures D and E are Supporting Schedules to Annexure C. They are named as follows:
 - Annexure D – Imported Content Declaration: Supporting Schedule to Annexure C
 - Annexure E – Local Content Declaration: Supporting Schedule to Annexure C
- Annexure F - Guidance Document for the calculation of Local Content

After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. Declaration C should be submitted with the bid documentation at the closing date and time of the bid. Declarations D and E should be kept by Respondents for verification purposes for a period of at least 5 years. The successful Respondent is required to continuously update Declarations C, D and E with the actual values for the duration of the contract. In addition to what is stated above regarding Annexures D and E, please note that these declarations are to be submitted as part of the Essential Returnable Documents.

7.4. **Challenges meeting the Local Content Threshold**

Should, after the award of a Bid, the Supplier experience challenges in meeting the stipulated minimum threshold for Local Content, Transnet is required to inform the DTI accordingly in order for the DTI to verify the circumstances and provide directives in this regard.

7.5. **Exchange Rate Verification**

The rate of exchange quoted by the Respondent in the declaration certificates (Annexure B – Declaration Certificate for Local Production & Content [SBD 6.2] and Annexure C – Local Content Declaration: Summary Schedule) will be verified for accuracy as per the requirement of National Treasury Instruction Notes and Circulars.

7.6. **Local Content Obligations**

Respondents are to note that the Local Content commitments made by the successful Respondent(s) will be incorporated as a term of the contract and monitored for compliance. Should the successful Respondent fail to meet its Local obligations, non-compliance penalties shall be applicable as per the contract or Standard Terms and Conditions of Contract. Breach of Local Content obligations also provide Transnet cause to terminate the contract in certain cases where material non-compliance with Local Content requirements are not achieved.

8. COMMUNICATION

- 8.1. For specific queries relating to this RFP, an RFP Clarification Request Form should be submitted to [**Mari Maritz – mari.maritz@transnet.net**] before **12h00 on 15 October 2021**, substantially in the form set out in Section 8 hereto. In the interest of fairness and transparency, Transnet's response to such a query will be published on the e-tender portal and Transnet website.
- 8.2. After the closing date of the RFP, a Respondent may only communicate with the Secretariat of the Transnet Acquisition Council, at telephone number 011 584 0821, email prudence.nkabinde@transnet.net on any matter relating to its RFP Proposal.
- 8.3. Respondents are to note that changes to its submission will not be considered after the closing date.
- 8.4. It is prohibited for Respondents to attempt, either directly or indirectly, to canvass any officer or employee of Transnet in respect of this RFP between the closing date and the date of the award of the business.
- 8.5. Respondents found to be in collusion with one another will be automatically disqualified and restricted from doing business with organs of state for a specified period.

9. CONFIDENTIALITY

All information related to this RFP is to be treated with strict confidence. In this regard Respondents are required to certify that they have acquainted themselves with the Non-Disclosure Agreement. All information related to a subsequent contract, both during and after completion thereof, will be treated with strict confidence. Should the need however arise to divulge any information related to this RFP or the subsequent contract, written approval must be obtained from Transnet.

10. COMPLIANCE

The successful Respondent [hereinafter referred to as the **Supplier**] shall be in full and complete compliance with any and all applicable laws and regulations.

11. EMPLOYMENT EQUITY ACT

Respondents must comply with the requirements of the Employment Equity Act 55 of 1998 applicable to it including (but not limited to) Section 53 of the Employment Equity Act.

12. DISCLAIMERS

Respondents are hereby advised that Transnet is not committed to any course of action as a result of its issuance of this RFP and/or its receipt of Proposals. In particular, please note that Transnet reserves the right to:

- 12.1. modify the RFP's Goods and request Respondents to re-bid on any such changes;
- 12.2. reject any Proposal which does not conform to instructions and specifications which are detailed herein;
- 12.3. disqualify Proposals submitted after the stated submission deadline [closing date];
- 12.4. award a contract in connection with this Proposal at any time after the RFP's closing date;
- 12.5. award a contract for only a portion of the proposed Goods which are reflected in the scope of this RFP;
- 12.6. split the award of the contract between more than one Supplier, should it at Transnet's discretion be more advantageous in terms of, amongst others, cost or developmental considerations;
- 12.7. cancel the bid process;

- 12.8. validate any information submitted by Respondents in response to this bid. This would include, but is not limited to, requesting the Respondents to provide supporting evidence. By submitting a bid, Respondents hereby irrevocably grant the necessary consent to Transnet to do so;
- 12.9. request audited financial statements or other documentation for the purposes of a due diligence exercise;
- 12.10. not accept any changes or purported changes by the Respondent to the bid rates after the closing date and/or after the award of the business, unless the contract specifically provided for it;
- 12.11. to cancel the contract and/request that National Treasury place the Respondent on its Database of Restricted Suppliers for a period not exceeding 10 years, on the basis that a contract was awarded on the strength of incorrect information furnished by the Respondent or on any other basis recognised in law;
- 12.12. to award the business to the next ranked bidder, provided that he/she is still prepared to provide the required Goods at the quoted price, should the preferred bidder fail to sign or commence with the contract within a reasonable period after being requested to do so. Under such circumstances, the validity of the bids of the next ranked bidder(s) will be deemed to remain valid, irrespective of whether the next ranked bidder(s) were issued with a Letter of Regret. Bidders may therefore be requested to advise whether they would still be prepared to provide the required Goods at their quoted price, even after they have been issued with a Letter of Regret.

Note that Transnet will not reimburse any Respondent for any preparatory costs or other work performed in connection with its Proposal, whether or not the Respondent is awarded a contract.

13. LEGAL REVIEW

A Proposal 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. A material deviation from the Standard terms or conditions could result in disqualification.

14. SECURITY CLEARANCE

Acceptance of this bid could be subject to the condition that the Successful Respondent, its personnel providing the goods and its subcontractor(s) must obtain security clearance from the appropriate authorities to the level of **CONFIDENTIAL/ SECRET/TOP SECRET**. Obtaining the required clearance is the responsibility of the Successful Respondent. Acceptance of the bid is also subject to the condition that the Successful Respondent will implement all such security measures as the safe performance of the contract may require.

15. NATIONAL TREASURY'S CENTRAL SUPPLIER DATABASE

Respondents are required to self-register on National Treasury's Central Supplier Database (CSD) which has been established to centrally administer supplier information for all organs of state and facilitate the verification of certain key supplier information. Respondents must register on the CSD prior to submitting their bids. Business may not be awarded to a Respondent who has failed to register on the CSD. Only foreign suppliers with no local registered entity need not register on the CSD.

For this purpose, the attached SBD 1 form must be completed and submitted as a mandatory returnable document by the closing date and time of the bid.

16. TAX COMPLIANCE

Respondents must be compliant when submitting a proposal to Transnet and remain compliant for the entire contract term with all applicable tax legislation, including but not limited to the Income Tax Act, 1962 (Act No. 58 of 1962) and Value Added Tax Act, 1991 (Act No. 89 of 1991).

It is a condition of this bid that the tax matters of the successful Respondent be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.

The Tax Compliance status requirements are also applicable to foreign bidders / individuals who wish to submit bids.

Where Consortia / Joint Ventures / Sub-contractors are involved, each party must be registered on the Central Supplier Database and their tax compliance status will be verified through the Central Supplier Database.

Transnet urges its clients, suppliers and the general public to report any fraud or corruption to

TIP-OFFS ANONYMOUS:



Ethics Helpdesk (Pty) Ltd
Ethics Management Systems™

You can choose to be Anonymous or Non-Anonymous on ANY of the platforms
PLEASE RETAIN YOUR REFERENCE NUMBER

				
	AI Voice Bot "Jack" Speak to our AI Voice Chat Bot "JACK", you converse with him like chatting to a human, with the option to record a message and speak to an agent at anytime.	What's App Speak to an Agent via What's App.	Speak to an Agent Speak to an Agent via the platform with no call or data charge	Telegram Speak to an Agent via Telegram

 **0800 003 056**

 **086 551 4153**

 **reportit@ethicshelpdesk.com**

 ***120*0785960808#**

SECTION 3: BACKGROUND, OVERVIEW AND SCOPE OF REQUIREMENTS

1 BACKGROUND

Transnet Freight Rail (TFR), Rail Network Construction (RNC) is a division of Transnet which is responsible for construction and maintenance of Transnet Infrastructure. Transnet Freight Rail is one of the biggest consumers of Overhead Track Equipment (OHE) material. RNC - OHE depend on the materials to ensure that the electrical infrastructure is rehabilitated according to maintenance standards.

2 EXECUTIVE OVERVIEW

Whereas Transnet is seeking a partner(s) to provide solutions for its Overhead Track Equipment (OHE) material regionally, it also seeks to improve its current processes for providing these Goods to its end user community throughout its locations.

The selected Supplier(s) must share in the mission and business objectives of Transnet. These mutual goals will be met by meeting contractual requirements and new challenges in an environment of teamwork, joint participation, flexibility, innovation and open communications. In this spirit of partnership, Transnet and its Supplier(s) will study the current ways they do business to enhance current practices and support processes and systems. Such a partnership will allow Transnet to reach higher levels of quality, service and profitability.

Specifically, Transnet seeks to benefit from this partnership in the following ways:

- 2.1 Transnet must receive reduced cost of acquisition and improved service benefits resulting from the Supplier's economies of scale and streamlined service processes.
- 2.2 Transnet must achieve appropriate availability that meets user needs while reducing costs for both Transnet and the chosen Supplier(s).
- 2.3 Transnet must receive proactive improvements from the Supplier with respect to supply of Goods and related processes.
- 2.4 Transnet's overall competitive advantage must be strengthened by the chosen Supplier's leading edge technology and service delivery systems.
- 2.5 Transnet end users must be able to rely on the chosen Supplier's personnel for service enquiries, recommendations and substitutions.
- 2.6 Transnet must reduce costs by streamlining its acquisition of Goods, including managed service processes on a Group basis.

3 SCOPE OF REQUIREMENTS

- 3.1 Supplying OHE wires and cables on an "as and when" required for 36 months
- 3.2 Detailed Specifications and drawings are annexed as Annexure H

4 GREEN ECONOMY / CARBON FOOTPRINT

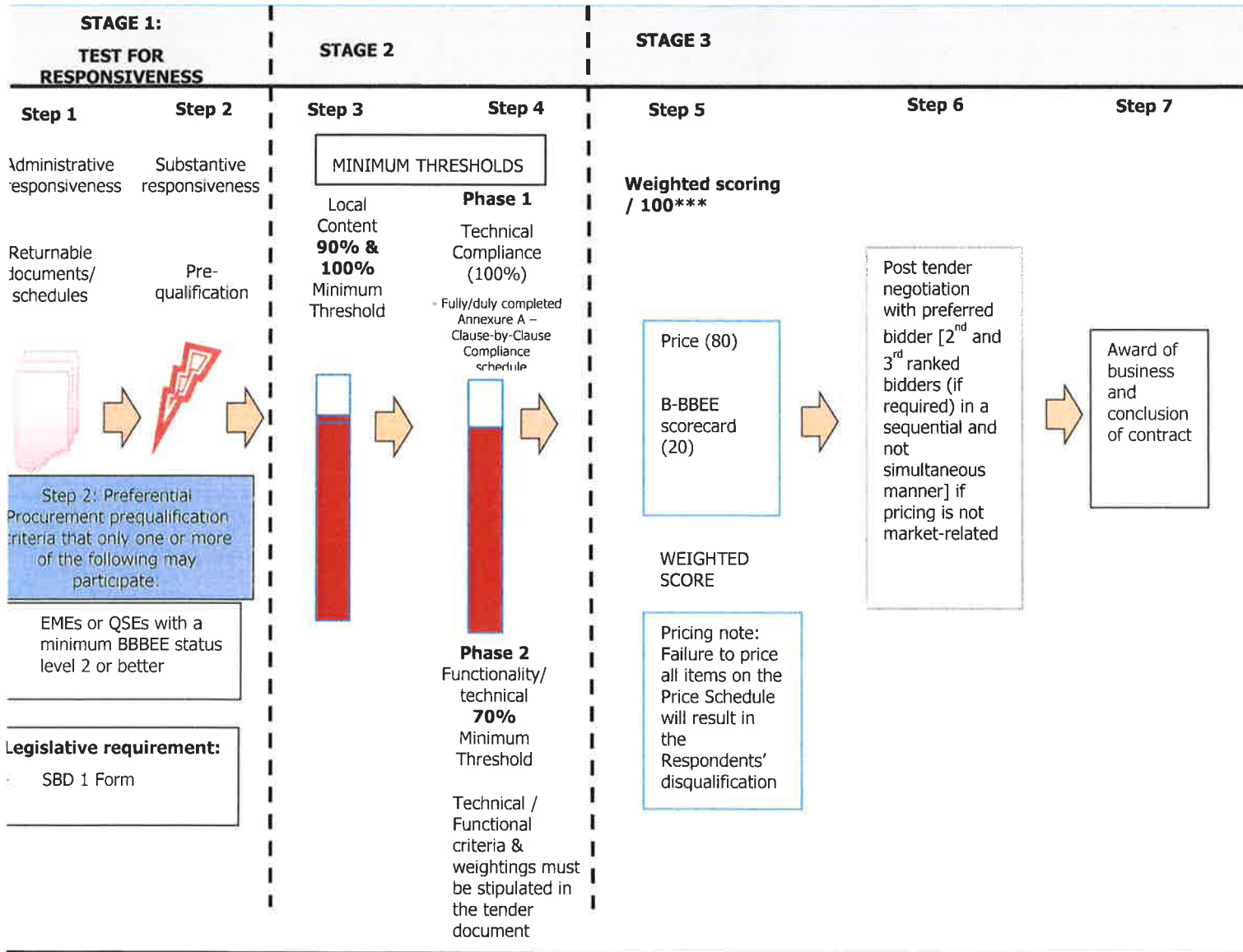
Transnet wishes to have an understanding of your company's position with regard to environmental commitments, including key environmental characteristics such as waste disposal, recycling and energy conservation. *Please submit details of your entity's policies in this regard.*

5 GENERAL SUPPLIER OBLIGATIONS

- 5.1 The Supplier(s) shall be fully responsible to Transnet for the acts and omissions of persons directly or indirectly employed by them.
- 5.2 The Supplier(s) must comply with the requirements stated in this RFP.

6 EVALUATION METHODOLOGY

Transnet will utilise the following methodology and criteria in selecting a preferred Supplier:



NB: Evaluation of the various stages will normally take place in a sequential manner. However, in order to expedite the process, Transnet reserves the right to conduct the different stages of the evaluation process in parallel. In such instances the evaluation of bidders at any given stage must not be interpreted to mean that bidders have necessarily passed any previous stage(s).

6.1 Step One: Test for Administrative Responsiveness

The test for administrative responsiveness will include the following:

Administrative responsiveness check	RFP Reference
Whether the Bid has been lodged on time	<i>Section 1 paragraph 3</i>
Whether all Returnable Documents and/or schedules [where applicable] were completed and returned by the closing date and time	<i>Section 5</i>
Verify the validity of all returnable documents	<i>Section 5</i>
Verify if the Bid document has been duly signed by the authorised respondent	<i>All sections</i>

The test for administrative responsiveness [Step One] must be passed for a Respondent's Proposal to progress to Step Two for further pre-qualification

6.2 Step Two: Test for Substantive Responsiveness to RFP

The test for substantive responsiveness to this RFP will include the following:

Check for substantive responsiveness	RFP Reference
Whether any general pre-qualification criteria set by Transnet, have been met	<i>All sections including: Section 2 paragraphs 2.2, 6, 11.2, General Bid Conditions clause 20</i>
Whether the Bid contains a priced offer	<i>Section 4</i>
- Whether any set prequalification criteria for preferential procurement have been met: - Only EMEs or QSEs with a minimum BBBEE status level 2 or better	<i>Section 2 - Paragraph 6</i>
- Whether any set legislative prequalification criteria have been met: - SBD1 Form must be completed in full and submitted	<i>Section 1</i>

The test for substantive responsiveness [Step Two] must be passed for a Respondent's Proposal to progress to Step Three for the evaluation of Local Content

6.3 Step Three: Minimum Threshold for Local Content

Local Production and Content Threshold	RFP REFERENCE
A minimum threshold of 90% and 100% is required for Local Content of Goods offered	<i>Section 2, paragraph 6 Annexures B and C</i>

The test for meeting the Local Content threshold [Step Three] must be passed for a Respondent's proposal to progress to Step Four for further evaluation

- Respondents are to note that Transnet will not round off final Local Content scores for the purposes of determining whether the Local Content threshold has been met.
- A bid that fails to meet the minimum stipulated threshold for local production and content will be regarded as an unacceptable bid.

6.4 Step Four: Technical/Functionality Criteria

6.4.1 Phase One:

Check for technical compliance requirements	RFP Reference
• Whether any Technical criteria set by Transnet have been met as follows: - Fully/duly completed Annexure A – Clause-by-Clause Compliance schedule - Bidders who do not manufacture the material shall submit a Memorandum of Understanding with their OEM or an approved/authorisation letter with the OEM to manufacture the material. The MOU shall be on the OEM's official letterhead; it shall be signed and dated. The MOU shall state; • Terms of the agreement. • Type of material which will be manufactured. - or - Bidders who have their own manufacturing facility shall provide a letter on the company's official letterhead, signed and dated stating; • The material which they manufacture. <i>Failure to provide the above mentioned Returnable Document used for purposes of scoring a bid, by the closing date and time of this bid will not result in a Respondent's disqualification. However, Bidders will receive an automatic score of zero for the applicable evaluation criterion</i>	<i>Annexure A - Clause-by-Clause Compliance schedule</i>

The test for technical compliance [Phase One] must be passed for a Respondent's Proposal to progress to Phase Two for further Technical/Functionality evaluations

6.4.2 Phase Two: Minimum Threshold 70% for Technical Criteria

The test for the Technical and Functional threshold will include the following:

Technical Evaluation Criteria	% Weightings	Scoring guideline
Years' experience The bidder's relevant experience in the supplying of OHTE wires and cables Bidder must provide reference letter/s from current and previous client/s. Letter/s must be on client's company letterhead and signed; and shall contain detail on (i) the type of goods provided (ii) satisfaction with the goods provided and (iii) details of reference contact person. The references must not be older than the past 5 years (June 2016 to date)	60%	More than three (3) References in the supplying of OHTE wires and cables = 100 points (60%) Three (3) References in the supplying of OHTE wires and cables = 75 points (45%) Two (2) References in the supplying of OHTE wires and cables = 50 points (30%) One (1) Reference in the supplying of OHTE wires and cables = 25 points (15%) No experience in the supplying of OHTE wires and cables or no information submitted = 0 points (0%)
Delivery Lead time after receiving an official PO Number of weeks lead time for each item in Section 4: Pricing and Delivery Schedule	40%	= < Two (2) to = Four (4) weeks delivery lead-time = 100 points (40%) > Four (4) to = Six (6) weeks delivery lead-time = 75 points (30%) > Six (6) to = Eight (8) weeks delivery lead-time = 50 points (20%) > Eight (8) to = Twelve (12) weeks delivery lead-time = 25 points (10%) > Twelve (12) weeks delivery lead-time or no delivery lead-time indicated = 0 points (0%)

Respondents must complete and submit **Annexure G** which include a **Technical Questionnaire**. A Respondent's compliance with the minimum functionality/technical threshold will be measured by their responses to Annexure G.

Respondents are to note that Transnet will round off final technical scores to the nearest 2 (two) decimal places for the purposes of determining whether the technical threshold has been met.

The minimum threshold for technical/functionality [Step Four] must be met or exceeded for a Respondent's Proposal to progress to Step Five for final evaluation

6.5 Step Five: Evaluation and Final Weighted Scoring**a) Price Criteria** [Weighted score 80 points]:

Evaluation Criteria	RFP Reference
• Commercial offer	Section 4

Transnet will utilise the following formula in its evaluation of Price:

$$PS = 80 \left(1 - \frac{Pt - Pmin}{Pmin} \right)$$

Where:

Ps = Score for the Bid under consideration

Pt = Price of Bid under consideration

$Pmin$ = Price of lowest acceptable Bid

Pricing note: Failure to price all items on the Price Schedule will result in the Respondents' disqualification

b) Broad-Based Black Economic Empowerment criteria [Weighted score 20 points]

- B-BBEE - current scorecard / B-BBEE Preference Points Claims Form

Preference points will be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table indicated in Section 4.1 of the B-BBEE Preference Point Claim Form.

6.6 SUMMARY: Applicable Thresholds and Final Evaluated Weightings

Threshold	Minimum Percentage [%]
Local Content	90% & 100%
Technical / functionality	70%

Evaluation Criteria	Final Weighted Scores
Price	80
B-BBEE - Scorecard	20
TOTAL SCORE:	100

6.7 Step Six: Post Tender Negotiations (if applicable)

- Respondents are to note that Transnet may not award a contract if the price offered is not market-related. In this regard, Transnet reserves the right to engage in PTN with the view to achieving a market-related price or to cancel the tender. Negotiations will be done in a sequential manner i.e.:
 - first negotiate with the highest ranked bidder or cancel the bid, should such negotiations fail,
 - negotiate with the 2nd and 3rd ranked bidders (if required) in a sequential manner.

- In the event of any Respondent being notified of such short-listed/preferred bidder status, his/her bid, as well as any subsequent negotiated best and final offers (BAFO), will automatically be deemed to remain valid during the negotiation period and until the ultimate award of business.
- Should Transnet conduct post tender negotiations, Respondents will be requested to provide their best and final offers to Transnet based on such negotiations. Where a market related price has been achieved through negotiation, the contract will be awarded to the successful Respondent(s).

6.8 Step Seven: Award of business and conclusion of contract

- Immediately after approval to award the contract has been received, the successful or preferred bidder(s) will be informed of the acceptance of his/their Bid either by way of a Letter of Award or Letter of Intent where Transnet will negotiate any final terms and conditions of the contract with the successful Respondent(s). Thereafter the final contract will be concluded with the successful Respondent(s).
- Otherwise, a final contract will be concluded and entered into with the successful Bidder at the acceptance of a letter of award by the Respondent.

SECTION 4: PRICING AND DELIVERY SCHEDULE*Respondents are required to complete the table below:*

Item No	Description of Item	Specification	Unit	Estimated Quantity for 36 months	Unit delivered price for Year 1 (2021/2022)	Unit delivered price for Year 2 (2022/2023)	Unit delivered price for Year 3 (2023/2024)
1	Wire Flex 50mm ² Jumper CU 19/1,85mm, 45kg/m	SANS 182-1	Metre	117			
2	Wire 19/4mm Stay Galvanized Steel, 479MPA	CEE-TPB-2	Metre	10 425			
3	Wire 50mm ² Ali 6/1/3,50mm AAC, Un-Greased	SANS 182-2	Metre	16 200			
4	Wire 250 ACC HD Conductor	SANS 182-2	Metre	5125			
5	Wire flex 160mm ² CU 61/1,8mm Annealed	SANS 182-1	Metre	1772			
6	Wire catenary 80mm ² 7/3, 75mm Hard Drawn	SANS 182-2	Metre	4519			
7	Contact wire 161mm ² CU Hard Drawn 1830M on drum.	BS EN 50149	Metre	4390			
8	Wire dropper 4mm CU solid	CEE-TN-0265/ SANS 182-1	Metre	14941			
9	Cable steel 97mm ² 49/1,6mm Galvanized-PVC-Cover	BBB0784	Metre	11 221			
10	Cable 70mm PVC Insulated	BBB0784	Metre	26			
11	Bond composite 50mm ² X 610mm		Metre	12			
12	Stainless wire for auto tension pulley 44mm ²	CEE-TP-168	Metre	1388			
13	Stay wire attachment concrete mast single wire 3CR12 360crs	CEE-TMFB-058	Each	194			
14	Anchor Contact and Catenary wire CONC S/S 360CRS, 100X15 ANG M26 hole	CEE-TMFB-59	Each	2			
15	Splice line tension Pre-form 50mm ² Ali Hazel QPO	SANS 182-2/3	Each	6			
16	Dead end PREFORM STRAIN 19/4 GI	CEE-TNB-77	Each	4512			
17	Splice PREFORM 250mm ² Cu Catenary Wrap On	SANS 182-2/3	Each	1			
18	Splice Preform 80mm ² Cu Catenary Wrap On	SANS 182-2/3	Each	106			
19	Preform repair kit 80mm ² Catenary	SANS 182-2/3	Each	503			
20	Splice Contact Wire 161mm ² CU	BBH2139	Each	166			

Respondents are to note that Transnet will round off final pricing scores to the nearest 2 (two) decimal places.

Respondent's Signature

Date & Company Stamp

Notes to Pricing:

- a) Respondents are to note that if the price offered by the highest scoring bidder is not market-related, Transnet may not award the contract to that Respondent. Transnet may-
- (i) negotiate a market-related price with the Respondent scoring the highest points or cancel the RFP;
 - (ii) if that Respondent does not agree to a market-related price, negotiate a market-related price with the Respondent scoring the second highest points or cancel the RFP;
 - (iii) if the Respondent scoring the second highest points does not agree to a market-related price, negotiate a market-related price with the Respondent scoring the third highest points or cancel the RFP.

If a market-related price is not agreed with the Respondent scoring the third highest points, Transnet must cancel the RFP.

- b) All Prices must be quoted in South African Rand exclusive of VAT.
- c) To facilitate like-for-like comparison bidders must submit pricing strictly in accordance with this pricing schedule and not utilise a different format. Deviation from this pricing schedule could result in a bid being declared non-responsive.
- d) **Failure to price all items on the Price Schedule will result in the Respondents' disqualification**
- e) **Quantities given are estimates only. Any orders resulting from this RFP will be on an "as and when required" basis.**
- f) Prices are to be quoted on a delivered basis to the Port of Richards Bay.
- g) 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.
- h) Where a Respondent's price(s) includes imported content, the rate of exchange to be used must be the currency's rate published by the South African Reserve Bank on the date of the advertisement of the bid:
Currency rate of exchange utilised: _____
- i) Respondents, if awarded the contract, are required to indicate that their prices quoted would be kept firm and fixed for the contract duration. [Not to be confused with bid validity period Section 2, clause 1]

YES	
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1 DISCLOSURE CONTRACT INFORMATION**PRICES TENDERED**

Respondents are to note that, on award of business, Transnet is required to publish the tendered prices and preferences claimed of the successful and unsuccessful Respondents *inter alia* on the National Treasury e-Tender Publication Portal, (www.etenders.gov.za), as required per National Treasury Instruction Note 01 of 2015/2016.

JOHANNESBURG STOCK EXCHANGE DEBT LISTING REQUIREMENTS

Transnet may also be required to disclose information relating to the subsequent contract i.e. the name of the company, goods/services provided by the company, the value and duration of the contract, etc. in compliance with the Johannesburg Stock Exchange (JSE) Debt Listing Requirements.

DOMESTIC PROMINENT INFLUENTIAL PERSONS (DPIP) OR FOREIGN PROMINENT PUBLIC OFFICIALS (FPPO)

Transnet is free to procure the services of any person within or outside the Republic of South Africa in accordance with applicable legislation. Transnet shall not conduct or conclude business transactions, with any Respondents without having:

- Considered relevant governance protocols;
- Determined the DPIP or FPPO status of that counterparty; and
- Conducted a risk assessment and due diligence to assess the potential risks that may be posed by the business relationship.

As per the Transnet Domestic Prominent Influential Persons (DPIP) and Foreign Prominent Public Officials (FPPO) and Related Individuals Policy available on Transnet website <https://www.transnet.net/search/pages/results.aspx?k=FPIDP#k=DPIP>, Respondents are required to disclose any commercial relationship with a DPIP or FPPO (as defined in the Policy) by completing the following section:

Is the Respondent (Complete with a "Yes" or "No")						
A DPIP/FPPO		Closely Related to a DPIP/FPPO		Closely Associated to a DPIP/FPPO		
List all known business interests, in which a DPIP/FPPO may have a direct/indirect interest or significant participation or involvement.						
No	Name of Entity / Business	Role in the Entity / Business (Nature of interest/ Participation)	Shareholding %	Registration Number	Status (Mark the applicable option with an X)	
					Active	Non-Active
1						
2						
3						

Respondents declaring a commercial relationship with a DPIP or FPPO are to note that Transnet is required to annually publish on its website a list of all business contracts entered into with DPIP or FPPO. This list will include successful Respondents, if applicable.

2 "AS AND WHEN REQUIRED" CONTRACTS

- 3.1. Purchase orders will be placed on the Supplier(s) from time to time as and when Goods are required.
- 3.2. Transnet reserves the right to place purchase orders until the last day of the contract for deliveries to be effected, within the delivery period / lead time specified, beyond the expiry date of the contract under the same terms and conditions as agreed upon.
- 3.3. Delivery requirements may be stipulated in purchase orders and scheduled deliveries may be called for. However, delivery periods and maximum monthly rates of delivery offered by the

Respondents will be used as guidelines in establishing lead times and monthly delivery requirements with the Supplier.

- 3.4. Where scheduled deliveries are required, the delivery period(s) specified must be strictly complied with, unless otherwise requested by Transnet. Material supplied earlier than specified may not be paid for or may be returned by Transnet, with the Supplier being held liable for all expenses so incurred, e.g. handling and transport charges.
- 3.5. If the delivery period offered by the Respondents is subject to a maximum monthly production capacity, full particulars must be indicated in Section 4 *[Pricing and Delivery Schedule]*
- 3.6. The Respondent must state hereunder its annual holiday closedown period [if applicable] and whether this period has been included in the delivery lead time offered:

3.7. Respondents are required to indicate below the action that the Respondent proposes to take to ensure continuity of supply during non-working days or holidays and periods occupied in stocktaking or in effecting repairs to plant or in overhaul of plant which would ordinarily occur within the stated delivery lead time/s:

3 RETURN OF SURPLUS GOODS

Respondents are required to indicate whether they have a return policy in place (if so attach a copy):

YES		NO	
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Respondents are required to indicate a reasonable timeframe during which Transnet may return any surplus goods:

4 PRE-PRODUCTION SAMPLES/PROTOTYPES

- 6.1. In this RFP, the successful Respondent is required to provide a pre-production sample(s) or prototype(s). The Respondent should state here the time required to deliver the necessary pre-production samples(s) or prototype(s) calculated as from the date of notification of acceptance of its Proposal by Transnet:

-
- 6.2. NB: Purchase Orders will be placed on the Supplier(s) only after the date of approval of the pre-production sample(s).

- 6.3. State the number of days/weeks/months after which delivery would commence subject to Transnet's approval of the pre-production sample(s) or prototype(s), calculated as from the date of such approval:
-

5 MANUFACTURERS

7.1. The Respondents must state hereunder the actual manufacturer(s) of the Goods tendered for:

7.2. Local Manufacturer(s):

RFP ITEM NO.	NAME	BUSINESS ADDRESS

7.3. Foreign Manufacturer(s):

RFP ITEM NO.	NAME	BUSINESS ADDRESS

6 INSPECTION DETAILS

The Respondents must state the actual name(s) and address/addresses of the suppliers of the Goods for inspection purposes only:

8.1. Local Manufacturer(s)

RFP ITEM NO.	NAME	BUSINESS ADDRESS

8.2. Foreign Manufacturer(s):

RFP ITEM NO.	NAME	BUSINESS ADDRESS

7 IMPORTED CONTENT

The Respondents must state hereunder the value and percentage of the imported content as well as the country of origin in respect of each item tendered for:

RFP ITEM NO / DESCRIPTION.	VALUE	% COST	COUNTRY OF ORIGIN

Note: Where more than one country is applicable to one item, the Respondents must furnish this information separately.

8 EXCHANGE AND REMITTANCE

The attention of the Respondents is directed to clause 17 *[Exchange and Remittance]* of the General Bid Conditions. If Transnet is requested by the Respondent to effect payment overseas direct to the Respondent's principal or supplier, which is not a registered South African Company please complete the

Respondent's Signature

Date & Company Stamp

details below, using the rate of exchange published by the South African Reserve Bank 7 [seven] calendar days before the closing date of this RFP:

10.1. ZAR 1.00 [South African currency] being equal to _____ [foreign currency]

10.2. _____ % in relation to tendered price(s) to be remitted overseas by Transnet

10.3. _____ [Name of country to which payment is to be made]

10.4. Beneficiary details:

Name [Account holder] _____

Bank [Name and branch code] _____

Swift code _____

Country _____

10.5. _____ [Applicable base date of Exchange Rate used]

Respondents are advised that should a contract be awarded for deliveries on an "as and when required" basis, any future remittance(s) to overseas principals/suppliers, as instructed above, will be based on an agreed rate of exchange related to the contractual price of the Goods at that time.

Respondents should note that Transnet would prefer to receive fixed price offers expressed in South African Rand [ZAR].

9 EXPORT CREDIT AGENCY SUPPORTED FINANCE

In order to finance its payment obligations under a future contract where foreign transactions are involved, Transnet may consider raising debt financing [an **ECA Facility**] from one or more banks or financial institutions, with the benefit of export credit agency [**ECA**] credit support to be provided by an ECA.

Under such circumstances the successful Respondent will agree to undertake:

- a) to provide [and/or cause the Parent/OEM to provide, as applicable] to Transnet and the banks and financial institutions that may participate in the ECA Facility all such assistance as an importer of Goods and/or Services, which are eligible for ECA credit supported finance by an ECA, is generally required to provide for the purposes of obtaining ECA support;
- b) not to do or [as Supplier of the relevant eligible Goods or services] omit to do anything, which may adversely affect Transnet's prospects of qualifying for or, once obtained, maintaining ECA credit support by an ECA in respect of an ECA Facility.

All cost, expenses, charges and liabilities incurred by Transnet in establishing an ECA Facility with credit support from an Export Credit Agency, may be for the account of Transnet.

10 SERVICE LEVELS

- 13.1. An experienced regional account representative(s) is required to work with Transnet's procurement department. [No sales representatives are needed for individual department or locations]. Additionally, there shall be a minimal number of people, fully informed and accountable for this agreement.
- 13.2. Transnet will have quarterly reviews with the Supplier's account representative on an on-going basis.
- 13.3. Transnet reserves the right to request that any member of the Supplier's team involved on the Transnet account be replaced if deemed not to be adding value for Transnet.

13.4. The Supplier guarantees that it will achieve a 95% [ninety-five per cent] service level on the following measures:

- a) Random checks on compliance with quality/quantity/specifications
- b) On-time delivery

If the Supplier does not achieve this level as an average over each quarter, Transnet will receive a 1.5% [one and a half per cent] rebate on quarterly sales payable in the next quarter

13.5. The Supplier must provide a telephone number for customer service calls.

13.6. Failure of the Supplier to comply with stated service level requirements will give Transnet the right to cancel the contract in whole, without penalty to Transnet, giving 30 [thirty] calendar days' notice to the Supplier of its intention to do so.

Acceptance of Service Levels:

YES	
------------	--

NO	
-----------	--

11 TOTAL COST OF OWNERSHIP AND CONTINUOUS IMPROVEMENT INITIATIVES

14.1. Respondents shall indicate whether they would be committed, for the duration of any contract which may be awarded through this RFP process, to participate with Transnet in its continuous improvement initiatives to reduce the total cost of ownership [TCO], which will reduce the overall cost of transportation services and related logistics provided by Transnet's operating divisions within South Africa to the ultimate benefit of all end-users.

Accepted:

YES	
------------	--

NO	
-----------	--

If "yes", please specify details in paragraph 14.2 below.

14.2. Respondents must briefly describe their commitment to TCO and continuous improvement initiatives and give examples of specific areas and strategies where cost reduction initiatives can be introduced. Specific areas and proposed potential savings percentages should be included. Additional information can be appended to the Respondent's Proposal if there is insufficient space available below.

12 RISK

Respondents must elaborate on the control measures put in place by their entity, which would mitigate the risk to Transnet pertaining to potential non-performance by the Respondents, in relation to:

15.1. **Quality and specification of Goods delivered:**

15.2. Continuity of supply:

15.3. Compliance with the Occupational Health and Safety Act, 85 of 1993:

SIGNED at _____ on this ____ day of _____ 20__

SIGNATURE OF WITNESSES

ADDRESS OF WITNESSES

1 _____

Name _____

2 _____

Name _____

SIGNATURE OF RESPONDENT'S AUTHORISED REPRESENTATIVE: _____

NAME: _____

DESIGNATION: _____

Respondent's Signature_____
Date & Company Stamp

SECTION 5: PROPOSAL FORM AND LIST OF RETURNABLE DOCUMENTS

I/We _____
 [name of entity, company, close corporation or partnership] of [full address]

carrying on business trading/operating as

represented by _____

in my capacity as _____

being duly authorised thereto by a Resolution of the Board of Directors or Members or Certificate of Partners, dated _____ to enter into, sign execute and complete any documents relating to this proposal and any subsequent Agreement. The following list of persons are hereby authorised to negotiate on behalf of the abovementioned entity, should Transnet decide to enter into Post Tender Negotiations with highest ranked bidder(s).

FULL NAME(S)	CAPACITY	SIGNATURE
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

I/We hereby offer to supply the abovementioned Goods at the prices quoted in the schedule of prices in accordance with the terms set forth in the documents listed in the accompanying schedule of RFP documents.

I/We agree to be bound by those conditions in Transnet's:

- a) Master Agreement (which may be subject to amendment at Transnet's discretion if applicable);
- b) General Bid Conditions; and
- c) any other standard or special conditions mentioned and/or embodied in this Request for Proposal.

I/We accept that unless Transnet should otherwise decide and so inform me/us in the letter of award/intent, this Proposal [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.

Should Transnet decide that a formal contract should be signed and so inform me/us in a letter of intent [the **Letter of Intent**], this Proposal [and, if any, its covering letter and any subsequent exchange of correspondence] together with Transnet's Letter of Intent, shall constitute a binding contract between Transnet and me/us until the formal contract is signed.

I/We further agree that if, after I/we have been notified of the acceptance of my/our Proposal, I/we fail to enter into a formal contract if called upon to do so, or fail to commence the supply of Goods within 2 [two] weeks thereafter, Transnet may, without prejudice to any other legal remedy which it may have, recover from me/us any expense to which it may have been put in calling for Proposals afresh and/or having to accept any less favourable Proposal.

 Respondent's Signature

 Date & Company Stamp

Furthermore, I/we agree to a penalty clause/s to be negotiated with Transnet, which will allow Transnet to invoke a penalty against us for non-compliance with material terms of this RFP including the delayed delivery of the Goods due to non-performance by ourselves, failure to meet Local Content etc.

I/we agree that non-compliance with any of the material terms of this RFP, including those mentioned above, will constitute a material breach of contract and provide Transnet with cause for cancellation.

ADDRESS FOR NOTICES

The law of the Republic of South Africa shall govern any contract created by the acceptance of this RFP. The *domicilium citandi et executandi* shall be a place in the Republic of South Africa to be specified by the Respondent hereunder, at which all legal documents may be served on the Respondent who shall agree to submit to the jurisdiction of the courts of the Republic of South Africa. Foreign Respondents shall, therefore, state hereunder the name of their authorised representative in the Republic of South Africa who has the power of attorney to sign any contract which may have to be entered into in the event of their Proposal being accepted and to act on their behalf in all matters relating to such contract.

Respondent to indicate the details of its *domicilium citandi et executandi* hereunder:

Name of Entity:

Facsimile:

Address:

NOTIFICATION OF AWARD OF RFP

As soon as possible after approval to award the contract(s), the successful Respondent [**the Supplier**] will be informed of the acceptance of its Proposal. Unsuccessful Respondents will be advised in writing of the name of the successful Supplier and the reason as to why their Proposals have been unsuccessful, for example, in the category of price, delivery period, quality, B-BBEE status or for any other reason.

VALIDITY PERIOD

Transnet requires a validity period of 90 [ninety] Business Days [from closing date] – 25 February 2022 against this RFP, excluding the first day and including the last day.

NAME(S) AND ADDRESS / ADDRESSES OF DIRECTOR(S) OR MEMBER(S)

The Respondent must disclose hereunder the full name(s) and address(s) of the director(s) or members of the company or close corporation [**C.C.**] on whose behalf the RFP is submitted.

- (i) Registration number of company / C.C. _____
- (ii) Registered name of company / C.C. _____
- (iii) Full name(s) of director/member(s) Address/Addresses ID Number(s)

RETURNABLE DOCUMENTS

Returnable Documents means all the documents, Sections and Annexures, as listed in the tables below. There are three types of returnable documents as indicated below and Respondents are urged to ensure that these documents are returned with their bids based on the consequences of non-submission as indicated below:

Mandatory Returnable Documents	<i>Failure to provide all these Mandatory Returnable Documents at the Closing Date and time of this RFP <u>will</u> result in a Respondent's disqualification.</i>
Returnable Documents Used for Scoring	<i>Failure to provide all Returnable Documents used for purposes of scoring a bid, by the closing date and time of this bid will not result in a Respondent's disqualification. However, Bidders will receive an automatic score of zero for the applicable evaluation criterion.</i>
Essential Returnable Documents	<i>Failure to provide essential Returnable Documents <u>will</u> result in Transnet affording Respondents a further opportunity to submit by a set deadline. Should a Respondent thereafter fail to submit the requested documents, this may result in a Respondent's disqualification.</i>

All Returnable Sections, as indicated in the header and footer of the relevant pages, must be signed, stamped and dated by the Respondent.

a) Mandatory Returnable Documents

Respondents are required to submit with their bid submissions the following **Mandatory Returnable Documents**, and also to confirm submission of these documents by so indicating [Yes or No] in the tables below:

Mandatory Returnable Documents	Submitted [Yes/No]
Section 1: SBD1 Form	
Section 4 : Pricing and Delivery Schedule	
ANNEXURE B – Declaration Certificate for Local Production and Content [SBD6.2] (SBD6.2 must be completed and submitted even if a complete Local Content exemption letter from DTI has been obtained)	
ANNEXURE C – Local Content Declaration: Summary Schedule (Annexure C must be completed and submitted even if a complete Local Content exemption letter from DTI has been obtained)	
A Local Content exemption letter from DTI (where applicable)	
Valid proof of Respondent's compliance to B-BBEE requirements stipulated in Section 9 of this RFP	

b) Returnable Documents Used for Scoring

In addition to the requirements of section (a) above, Respondents are further required to submit with their Proposals the following **Returnable Documents Used for Scoring** and also to confirm submission of these documents by so indicating [Yes or No] in the table below:

Returnable Documents used for Scoring	Submitted [Yes or No]
Annexure A: Clause-by-Clause Compliance Schedule	
Bidders who do not manufacture the material shall submit a Memorandum of Understanding with their OEM or an approved/authorisation letter with the OEM to manufacture the material	
Bidders who have their own manufacturing facility shall provide a letter on the company's official letterhead	
Annexure G: Technical Submission/Questionnaire	
Reference letter/s from current and previous client/s	

c) Essential Returnable Documents:

Over and the above the requirements of section (a) and (b) mentioned above, Respondents are further required to submit with their Proposals the following **Essential Returnable Documents** and also to confirm submission of these documents by so indicating [Yes or No] in the table below:

Essential Returnable Documents & Schedules	SUBMITTED [Yes or No]
Receipt for payment of RFP documents, where a bid fee is applicable [Section 2, paragraph 1]	
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	
Latest Financial Statements signed by your Accounting Officer or latest Audited Financial Statements plus 2 previous years	
Section 5: Proposal Form and List of Returnable documents	
Section 6: Certificate Of Acquaintance with RFP, Terms & Conditions & Applicable Documents	
Section 7: RFP Declaration and Breach of Law Form	
Section 9: B-BBEE Preference Claim Form	
Section 10: SBD 9 - Certificate Of Independent Bid Determination	
Section 11: Protection of Personal Information	
Annexure D – Imported Content Declaration: Supporting Schedule to Annexure C	
Annexure E – Local Content Declaration: Supporting Schedule to Annexure C	
Supplier Declaration Form	

CONTINUED VALIDITY OF RETURNABLE DOCUMENTS

The successful Respondent will be required to ensure the validity of all returnable documents, including but not limited to its valid proof of B-BBEE status, for the duration of any contract emanating from this RFP. Should the Respondent be awarded the contract [**the Agreement**] and fail to present Transnet with such renewals as and when they become due, Transnet shall be entitled, in addition to any other rights and remedies that it may have in terms of the eventual Agreement, to terminate such Agreement immediately without any liability and without prejudice to any claims which Transnet may have for damages against the Respondent.

SIGNED at _____ on this _____ day of _____ 20____

SIGNATURE OF WITNESSES

ADDRESS OF WITNESSES

1 _____

Name _____

2 _____

Name _____

SIGNATURE OF RESPONDENT'S AUTHORISED REPRESENTATIVE: _____

NAME: _____

DESIGNATION: _____

Respondent's Signature

Date & Company Stamp

SECTION 6: CERTIFICATE OF ACQUAINTANCE WITH RFP, MASTER AGREEMENT & APPLICABLE DOCUMENTS

By signing this certificate the Respondent is deemed to acknowledge that he/she has made himself/herself thoroughly familiar with, and agrees with all the conditions governing this RFP. This includes those terms and conditions contained in any printed form stated to form part hereof, including but not limited to the documents stated below. As such, Transnet SOC Ltd will recognise no claim for relief based on an allegation that the Respondent overlooked any such term or condition or failed properly to take it into account for the purpose of calculating tendered prices or any other purpose:

1	Transnet's General Bid Conditions
2	Master Agreement attached
3	Transnet's Supplier Integrity Pact
4	Non-disclosure Agreement
5	Specifications and drawings attached to this RFP
6	Supplier Declaration Form and all supporting documents (first time vendors only). Alternatively, for all existing vendors, please complete the table below under the heading "Existing vendors".

Existing vendors: existing vendors are required to confirm whether all the information (e.g. company address, contact details, banking details, etc.) relating to the existing vendor number is still correct at the time of submission of this bid failing which such Respondents are required to indicate so below and provide the updated information in their bid submission:

Transnet Operating Division [e.g. TFR, TE, etc.]	Vendor Number	Information still current [tick if applicable]	Information change [indicate detail of change/s & attach appropriate proof]

Should the Bidder find any terms or conditions stipulated in any of the relevant documents quoted in the RFP unacceptable, it should indicate which conditions are unacceptable and offer alternatives by written submission on its company letterhead, attached to its submitted Bid. Any such submission shall be subject to review by Transnet's Legal Counsel who shall determine whether the proposed alternative(s) are acceptable or otherwise, as the case may be. A material deviation from any term or condition may result in disqualification.

Bidders accept that an obligation rests on them to clarify any uncertainties regarding any bid to which they intend to respond on, before submitting the bid. **The Bidder agrees that he/she will have no claim or cause of action based on an allegation that any aspect of this RFP was unclear but in respect of which he/she failed to obtain clarity.**

The bidder understands that his/her Bid will be disqualified if the Certificate of Acquaintance with RFP documents included in the RFP as a returnable document, is found not to be true and complete in every respect.

SIGNED at _____ on this _____ day of _____ 20____

Respondent's Signature

Date & Company Stamp

SIGNATURE OF WITNESSES

ADDRESS OF WITNESSES

1 _____

Name _____

2 _____

Name _____

SIGNATURE OF RESPONDENT'S AUTHORISED REPRESENTATIVE: _____

NAME: _____

DESIGNATION: _____

SECTION 7: RFP DECLARATION AND BREACH OF LAW FORM

NAME OF ENTITY: _____

We _____ do hereby certify that:

1. Transnet has supplied and we have received appropriate responses to any/all questions [as applicable] which were submitted by ourselves for RFP Clarification purposes;
2. We have received all information we deemed necessary for the completion of this Request for Proposal [**RFP**];
3. We have been provided with sufficient access to the existing Transnet facilities/sites and any and all relevant information relevant to the Supply of the Goods as well as Transnet information and Employees, and have had sufficient time in which to conduct and perform a thorough due diligence of Transnet's operations and business requirements and assets used by Transnet. Transnet will therefore not consider or permit any pre- or post-contract verification or any related adjustment to pricing, service levels or any other provisions/conditions based on any incorrect assumptions made by the Respondent in arriving at his Bid Price;
4. At no stage have we received additional information relating to the subject matter of this RFP from Transnet sources, other than information formally received from the designated Transnet contact(s) as nominated in the RFP documents;
5. We are satisfied, insofar as our entity is concerned, that the processes and procedures adopted by Transnet in issuing this RFP and the requirements requested from Bidders in responding to this RFP have been conducted in a fair and transparent manner;
6. We have complied with all obligations of the Bidder/Supplier as indicated in the Transnet Supplier Integrity which includes but are not limited to ensuring that we take all measures necessary to prevent corrupt practices, unfairness and illegal activities in order to secure or in furtherance to secure a contract with Transnet;
7. We declare that a family, business and/or social relationship **exists / does not exist** [delete as applicable] between an owner / member / director / partner / shareholder of our entity and an employee or board member of Transnet including any person who may be involved in the evaluation and/or adjudication of this Bid;
8. We declare that an owner / member / director / partner / shareholder of our entity **is / is not** [delete as applicable] an employee or board member of Transnet;
9. In addition, we declare that an owner / member / director / partner / shareholder/employee of our entity **has / has not been** [delete as applicable] a former employee or board member of Transnet in the past 10 years. I further declare that if they were a former employee or board member of Transnet in the past 10 years that they **were/were not** involved in the bid preparation or had access to the information related to this RFP; and
10. If such a relationship as indicated in paragraph 7, 8 and/or 9 exists, the Respondent is to complete the following section:

FULL NAME OF OWNER/MEMBER/DIRECTOR/
PARTNER/SHAREHOLDER/EMPLOYEE:

ADDRESS:

Indicate nature of relationship with Transnet:

[Failure to furnish complete and accurate information in this regard will lead to the disqualification of a response and may preclude a Respondent from doing future business with Transnet]

11. We declare, to the extent that we are aware or become aware of any relationship between ourselves and Transnet [other than any existing and appropriate business relationship with Transnet] which could unfairly advantage our entity in the forthcoming adjudication process, we shall notify Transnet immediately in writing of such circumstances.

DECLARATION OF INTEREST REGARDING PERSONS EMPLOYED BY THE STATE (SBD4)

12. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price quotation, advertised competitive bid, limited bid or proposal). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-
- the bidder is employed by the state; and/or
 - the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

13. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid:

- 13.1. Full Name of bidder or his or her representative:
- 13.2. Identity Number:
- 13.3. Position occupied in the Company (director, trustee, shareholder²):
- 13.4. Company Registration Number:
- 13.5. Tax Reference Number:
- 13.6. VAT Registration Number:.....

13.7. Are you or any person connected with the bidder presently employed by the state?	YES / NO
13.7.1. If so, furnish the following particulars:	
Name of person / director / trustee / shareholder/ member:	

¹ "State" means –

- (a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

"Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

Name of state institution at which you or the person connected to the bidder is employed :	
Position occupied in the state institution:	
Any other particulars:	
13.8. If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector?	YES / NO
13.8.1. If yes, did you attached proof of such authority to the bid document? (Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.	YES / NO
13.8.2. If no, furnish reasons for non-submission of such proof:	
13.9. Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months?	YES / NO
13.9.1. If so, furnish particulars:	
13.10. Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid?	YES / NO
13.10.1. If so, furnish particulars:	
13.11. Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid?	YES / NO
13.11.1. If so, furnish particulars:	
13.12. Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract?	YES / NO
13.12.1. If so, furnish particulars:	

The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / persal numbers must be indicated in paragraph 14 below.

14. Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	Personal Tax Reference Number	State Employee Number / Persal Number

BREACH OF LAW

15. We further hereby certify that *I/we* (the bidding entity and/or any of its directors, members or partners) **have/have not been** [delete as applicable] found guilty during the preceding 5 [five] years of a serious breach of law, including but not limited to a breach of the Competition Act, 89 of 1998, by a court of law, tribunal or other administrative body. The type of breach that the Respondent is required to disclose excludes relatively minor offences or misdemeanours, e.g. traffic offences. This includes the imposition of an administrative fine or penalty.

Where found guilty of such a serious breach, please disclose:

NATURE OF BREACH:

 _____ DATE OF
 BREACH: _____

Furthermore, I/we acknowledge that Transnet SOC Ltd reserves the right to exclude any Respondent from the bidding process, should that person or entity have been found guilty of a serious breach of law, tribunal or regulatory obligation.

SIGNED at _____ on this ____ day of _____ 20__

For and on behalf of _____ duly authorised hereto	AS WITNESS:
Name:	Name:
Position:	Position:
Signature:	Signature:
Date:	Registration No of Company/CC
Place:	Registration Name of Company/CC

Date & Company Stamp

SECTION 9: B-BBEE PREFERENCE POINTS CLAIM FORM

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

Transnet will award preference points to companies who provide valid proof of their B-BBEE status using either the latest version of the generic Codes of Good Practice or Sector Specific Codes (if applicable).

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable. Despite the stipulated preference point system, Transnet shall use the lowest acceptable bid to determine the applicable preference point system in a situation where all received acceptable bids are received outside the stated preference point system.

1.3 Preference points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contribution.

1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTION	20
Total points for Price and B-BBEE must not exceed	100

1.5 Failure on the part of a bidder to submit proof of B-BBEE status level of contributor together with the bid will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6 The purchaser 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 the purchaser.

2. DEFINITIONS

- (a) **"all applicable taxes"** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- (b) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (c) **"B-BBEE status level 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;
- (d) **"bid"** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the supply/provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;

- (e) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (f) **"EME"** means an Exempted Micro Enterprise as defines by Codes of Good Practice under section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (g) **"functionality"** means the ability of a bidder to provide goods or services in accordance with specification as set out in the bid documents
- (h) **"Price"** includes all applicable taxes less all unconditional discounts.
- (i) **"Proof of B-BBEE Status Level of Contributor"**
- (i) the B-BBEE status level certificate issued by an authorised body or person;
 - (ii) a sworn affidavit as prescribed by the B-BBEE Codes of Good Practice; or
 - (iii) any other requirement prescribed in terms of the B-BBEE Act.
- (j) **"QSE"** means a Qualifying Small EEnterprise as defines by Codes of Good Practice under section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (k) **"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.

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 PREFERENCE POINT SYSTEMS

A maximum of 80 points is allocated for price on the following basis:

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)^{80/20}$$

Where

- P_s = Points scored for comparative price of bid under consideration
- P_t = Comparative price of bid under consideration
- $P_{\min}$ = Comparative price of lowest acceptable bid

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

- 4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must 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 (80/20 system)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

4.2 The table below indicates the required proof of B-BBEE status depending on the category of enterprises:

Enterprise	B-BBEE Certificate & Sworn Affidavit
Large	Certificate issued by SANAS accredited verification agency
QSE	Certificate issued by SANAS accredited verification agency Sworn Affidavit signed by the authorised QSE representative and attested by a Commissioner of Oaths confirming annual turnover and black ownership (only black-owned QSEs - 51% to 100% Black owned) [Sworn affidavits must substantially comply with the format that can be obtained on the DTI's website at www.dti.gov.za/economic_empowerment/bee_codes.jsp .]
EME ²	Sworn Affidavit signed by the authorised EME representative and attested by a Commissioner of Oaths confirming annual turnover and black ownership Certificate issued by CIPC (formerly CIPRO) confirming annual turnover and black ownership Certificate issued by SANAS accredited verification agency only if the EME is being measured on the QSE scorecard

- 4.3 A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Status Level verification certificate for every separate bid.
- 4.4 Tertiary Institutions and Public Entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 4.5 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 sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.
- 4.6 A person awarded a contract may not sub-contract more than 25% 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 sub-contracted to an EME that has the capability and ability to execute the sub-contract.
- 4.7 Bidders are to note that the rules pertaining to B-BBEE verification and other B-BBEE requirements may be changed from time to time by regulatory bodies such as National Treasury or the DTI. It is the Bidder's responsibility to ensure that his/her bid complies fully with all B-BBEE requirements at the time of the submission of the bid.

5. BID DECLARATION

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

6. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 6.1

- 6.1 B-BBEE Status Level of Contribution: =(maximum of 20 points)

(Points claimed in respect of paragraph 6.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

7. SUB-CONTRACTING

- 7.1 Will any portion of the contract be sub-contracted?

(***Tick applicable box***)

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

² In terms of the Implementation Guide: Preferential Procurement Regulations, 2017, Version 2, paragraph 11.11 provides that in the Transport Sector, EMEs can provide a letter from accounting officer or get verified and be issued with a B-BBEE certificate by SANAS accredited professional or agency as the Transport Sector Code has not been aligned to the generic Codes. EMEs in the Transport Sector are not allowed to provide a Sworn Affidavit as the generic codes are not applicable to them.

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted..... %
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE.

(Tick applicable box)

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

- v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

Designated Group: An EME or QSE which is at least 51% owned by:	EME ✓	QSE ✓
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

8. **DECLARATION WITH REGARD TO COMPANY/FIRM**

8.1 Name of company/firm:

8.2 VAT registration number:

8.3 Company registration number:

8.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited

[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

.....

8.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional Supplier
- ☐ Other Suppliers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

8.7 Total number of years the company/firm has been in business:

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBEE status level of contribution indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that

the claims are correct;

- iv) If a bidder submitted false information regarding its B-BBEE status level of contributor, local production and content, or any other matter required in terms of the Preferential Procurement Regulations, 2017 which will affect or has affected the evaluation of a bid, or where a bidder has failed to declare any subcontracting arrangements or any of the conditions of contract have not been fulfilled, the purchaser 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) if the successful bidder subcontracted a portion of the bid to another person without disclosing it, Transnet reserves the right to penalise the bidder up to 10 percent of the value of the contract;
 - (e) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and
 - (f) forward the matter for criminal prosecution.

WITNESSES

1.

2.

.....

SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS.....

SECTION 10: SBD 9- CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. Section 4(1)(b)(iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging). Collusive bidding is a per se prohibition meaning that it cannot be justified under any grounds. Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.
2. Transnet will take all reasonable steps to prevent abuse of the supply chain management system and to:
 - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
 - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
3. This SBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
4. In order to give effect to the above, the following certificate of Bid Determination (SBD 9) must be completed and submitted with the bid:

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Institution)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: _____ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - a. has been requested to submit a bid in response to this bid invitation;
 - b. could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - c. provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - a. prices;
 - b. geographical area where product or service will be rendered (market allocation)
 - c. methods, factors or formulas used to calculate prices;
 - d. the intention or decision to submit or not to submit, a bid;
 - e. the submission of a bid which does not meet the specifications and conditions of the bid; or
 - f. bidding with the intention not to win the bid.

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

- 8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

SECTION 11: PROTECTION OF PERSONAL INFORMATION

1. The following terms shall bear the same meaning as contemplated in Section 1 of the Protection of Person information act, No.4 of 2013.(“POPIA”):

consent; data subject; electronic communication; information officer; operator; person; personal information; processing; record; Regulator; responsible party; special information; as well as any terms derived from these terms.
2. Transnet will process all information by the Respondent in terms of the requirements contemplated in Section 4(1) of the POPIA:

Accountability; Processing limitation; Purpose specification; Further processing limitation; Information quality; Openness; Security safeguards and Data subject participation.
3. The Parties acknowledge and agree that, in relation to personal information that will be processed pursuant to this RFP, the Responsible party is “Transnet” and the Data subject is the “Respondent”. Transnet will process personal information only with the knowledge and authorisation of the Respondent and will treat personal information which comes to its knowledge as confidential and will not disclose it, unless so required by law or subject to the exceptions contained in the POPIA.
4. Transnet reserves all the rights afforded to it by the POPIA in the processing of any of its information as contained in this RFP and the Respondent is required to comply with all prescripts as detailed in the POPIA relating to all information concerning Transnet.
5. In responding to this bid, Transnet acknowledges that it will obtain and have access to personal information of the Respondent. Transnet agrees that it shall only process the information disclosed by Respondent in their response to this bid for the purpose of evaluating and subsequent award of business and in accordance with any applicable law.
6. Transnet further agrees that in submitting any information or documentation requested in this RFP, the Respondent is consenting to the further processing of their personal information for the purpose of, but not limited to, risk assessment, assurances, contract award, contract management, auditing, legal opinions/litigations, investigations (if applicable), document storage for the legislatively required period, destruction, de-identification and publishing of personal information by Transnet and/or its authorised appointed third parties.
7. Furthermore, Transnet will not otherwise modify, amend or alter any personal data submitted by the Respondent or disclose or permit the disclosure of any personal data to any third party without the prior written consent from the Respondent. Similarly, Transnet requires the Respondent to process any personal information disclosed by Transnet in the bidding process in the same manner.
8. Transnet shall, at all times, ensure compliance with any applicable laws put in place and maintain sufficient measures, policies and systems to manage and secure against all forms of risks to any information that may be shared or accessed pursuant to this RFP (physically, through a computer or any other form of electronic communication).
9. Transnet shall notify the Respondent in writing of any unauthorised access to information, cybercrimes or suspected cybercrimes, in its knowledge and report such crimes or suspected crimes to the relevant authorities in accordance with applicable laws, after becoming aware of such crimes or suspected crime. The Respondent must take all necessary remedial steps to mitigate the extent of the loss or compromise of personal information and to restore the integrity of the affected personal information as quickly as is possible.
10. The Respondent may, in writing, request Transnet to confirm and/or make available any personal information in its possession in relation to the Respondent and if such personal information has been accessed by third parties and the identity thereof in terms of the POPIA. The Respondent may further request that Transnet correct (excluding critical/mandatory or evaluation information), delete, destroy, withdraw consent or object to the processing of any

personal information relating to the Respondent in Transnet's possession in terms of the provision of the POPIA and utilizing Form 2 of the POPIA Regulations.

11. In submitting any information or documentation requested in this RFP, the Respondent is hereby consenting to the processing of their personal information for the purpose of this RFP and further confirming that they are aware of their rights in terms of Section 5 of POPIA

Respondents are required to provide consent below:

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

12. Further, the Respondent declares that they have obtained all consents pertaining to other data subject's personal information included in its submission and thereby indemnifying Transnet against any civil or criminal action, administrative fines or other penalty or loss that may arise as a result of the processing of any personal information that the Respondent submitted.
13. The Respondent declares that the personal information submitted for the purpose of this RFP is complete, accurate, not misleading, is up to date and may be updated where applicable.

Signature of Respondent's authorised representative: _____

Should a Respondent have any complaints or objections to processing of its personal information, by Transnet, the Respondent can submit a complaint to the Information Regulator on <https://www.justice.gov.za/infoereg/>, click on contact us, click on complaints.IR@justice.gov.za

ANNEXURE A: CLAUSE-BY-CLAUSE COMPLIANCE TO SPECIFICATION INFORMATION QUESTIONNAIRE

Respondents are required to indicate if the offered products/services comply with all the Specifications set by Transnet by indicating "Comply" next to each of the specification items mentioned below.

Any deviations from Transnet's requirement must be indicated under the column provided.

Note: Failure to duly complete and submit this form and fully comply with the requirements below will result in the respondent's disqualification. This Annexure will be evaluated under Step Three - Technical/Functionality Criteria (Phase 1)

Specification	Compliance response	Comments
The material shall be as per provided descriptions and specifications as well as the referenced SANS and IEC of item 1 to 13 below:		
Item 1: Wire Flex 50mm ² Jumper CU 19/ 1,85mm, 45kg/m	SANS 182-1	
Item 2: Wire 19/4mm STAY Galvanized Steel, 479MPA	CEE-TPB-2	
Item 3: Wire 50mm ² Ali 6/1/3,50mm AAC, UN-GREASED	SANS 182-2	
Item 4: Wire 250 ACC HD Conductor	SANS 182-2	
Item 5: Wire flex 160mm ² CU 61/1,8mm ANNEALED	SANS 182-1	
Item 6: Wire catenary 80mm ² 7/3, 75mm HARD DRAWN	SANS 182-2	
Item 7: Contact wire 161mm ² CU HARD DRAWN 1830M on drum.	BS EN 50149	
Item 8: Wire dropper 4mm CU solid	CEE-TN-0265/ SANS 182-1	
Item 9: Cable steel 97mm ² 49/1,6mm Galvanized-PVC-Cover	BBB0784	
Item 10: Cable 70mm PVC Insulated	BBB0784	
Item 11: Bond composite 50mm ² X 610mm		
Item 12: Stainless wire for auto tension pulley 44mm ²	CEE-TP-168	
Item 13: Stay wire attachment concrete mast single wire 3CR12 360crs	CEE-TMFB-058	

Specification		Compliance response	Comments
The material shall be as per provided descriptions and specifications as well as the referenced SANS and IEC of item 14 to 20 below:			
Item 14: Anchor Contact and Catenary wire CONC S/S 360CRS, 100X15 ANG M26 hole	CEE-TMFB-59		
Item 15: Splice line tension Pre-form 50mm ² Ali Hazel QPO	SANS 182-2/3		
Item 16: Dead end PREFORM STRAIN 19/4 GI	CEE-TNB-77		
Item 17: Splice PREFORM 250mm ² Cu Catenary WRAP ON	SANS 182-2/3		
Item 18: Splice PREFORM 80mm ² Cu Catenary WRAP ON	SANS 182-2/3		
Item 19: PREFORM repair kit 80mm ² Catenary	SANS 182-2/3		
Item 20: SPLICE CONTACT WIRE 161mm ² CU	BBH2139		
No material made out of malleable iron or pig iron is acceptable			

ANNEXURE B: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS [SBD 6.2]

This Standard Bidding Document (SBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

- 1.1. Preferential Procurement Regulations, 2017 (Regulation 8) makes provision for the promotion of local production and content.
- 1.2. Regulation 8.(2) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. In terms of Regulation 16(2) of the Preferential Procurement Regulations, 2017, any sector designated and minimum threshold determined for local production and content for purposes of regulation 9 of the 2011 Regulations and in force immediately before the repeal of the 2011 Regulations, are regarded as having been done under regulation 8(1) of the 2017 Regulations.
- 1.4. Where necessary, for bids referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.5. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.6. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on <http://www.thedti.gov.za/industrial-development/ip.jsp> at no cost.

- 1.7. A bid will be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;
2. **The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:**

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
Electrical Cable Products [Items 1, 3 to 8 & 10 – Section 4: Pricing and delivery Schedule]	90%
Powerline Hardware [Items 2, 9, 11 to 20 – Section 4: Pricing and delivery Schedule]	100%

4. Does any portion of the services, works or goods offered
have any imported content?

(Tick applicable box)

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

- 4.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

5. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO. HOAC-RCB-35571-MM-154

ISSUED BY: TRANSNET SOC LTD T/A TRANSNET FREIGHT RAIL

NB

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thdti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, (full names), do hereby declare, in my capacity as of (name of bidder entity), the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
 - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above) - Items 1, 3 to 8 & 10	90%
Local content %, as calculated in terms of SATS 1286:2011	

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above) - Items 2, 9, 11 to 20	100%
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

ANNEXURE C: LOCAL CONTENT DECLARATION - SUMMARY SCHEDULE

SATS 1286.2011

Annex C

MANDATORY RETURNABLE DOCUMENT:
FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE C WILL RESULT IN THE BID BEING NON-RESPONSIVE & DISQUALIFIED

Local Content Declaration - Summary Schedule

(C1)

Tender No.

HOAC-RCB-35571-MM-154

(C2)

Tender description:

Supply and delivery of OHTE wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months

(C3)

Designated product(s)

Electrical Cable Products

(C4)

Tender Authority:

(C5)

Tendering Entity name:

(C6)

Tender Exchange Rate:

Pula

(C7)

Specified local content %

EU

GBP

Note: VAT to be excluded from all calculations

Calculation of local content				Tender summary			
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)
1	Wire Flex 50mm² Jumper CU 19/1,85mm, 45kg/m						
3	Wire 50mm² Al l 6/1/3,50mm AAC, Un-Greased						
4	Wire 250 ACC HD Conductor						
				(C20) Total tender value R	Total tender value	(C17)	(C19)
				(C21) Total Exempt imported content R	Total exempted imported content	(C18)	(C19)
				(C22) Total Tender value net of exempt imported content R	(C23) Total Imported content R	(C24) Total local content R	
					(C25) Average local content % of tender		

Signature of tenderer from Annex B

Date:

SATS 1286.2011

FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE C WILL RESULT IN THE BID BEING NON-RESPONSIVE & DISQUALIFIED

(C1)
(C2)
(C3)
(C4)
(C5)
(C6)
(C7)

Tender No.	HOAC-RCB-35571-MM-154
Tender description:	Supply and delivery of OHTe wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months
Designated product(s)	Electrical Cable Products
Tender Authority:	
Tendering Entity name:	
Tender Exchange Rate:	Pula EU
Specified local content %	

Note: VAT to be excluded from all calculations

GBF

Calculation of local content						
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local content % (per item)
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)
5	Wire flex 160mm ² CU 61/1,8mm Annealed					
6	Wire catenary 80mm ² 7/3, 75mm Hard Drawn					
7	Contact wire 161mm ² CU Hard Drawn 1830M on drum.					

Tender summary			
Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C16)	(C17)	(C18)	(C19)

(C21) Total Exempt imported content R

Signature of tenderer from Annex B

(C23) Total In

(C23) Total Imported content R

(C24) Total local content R

(C25) Average local content % of tender

Date: _____

SATS 1286.2011

Annex C

MANDATORY RETURNABLE DOCUMENT:
FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE C WILL RESULT IN THE BID BEING NON-RESPONSIVE &
DISQUALIFIED

Local Content Declaration - Summary Schedule

(C1)
Tender No.

(C2)
Tender description:

(C3)
Designated product(s)

(C4)
Tender Authority:

(C5)
Tendering Entity name:

(C6)
Tender Exchange Rate:

(C7)
Specified local content %

HOAC-RCB-35571-MM-154

Supply and delivery of OHTE wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months

Electrical Cable Products

Pula

EU

GBP

Note: VAT to be excluded from all calculations

Calculation of local content				Tender summary		
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local content % (per item)
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)
8	Wire dropper 4mm CU solid					(C15)
10	Cable 70mm PVC Insulated					
				(C20) Total tender value R	(C16)	(C17)
				(C21) Total Exempt imported content R	(C18)	
				(C22) Total Tender value net of exempt imported content R	(C19)	

Signature of tenderer from Annex B

Date:

(C23) Total Imported content R

(C24) Total local content R

(C25) Average local content % of tender

SATS 1286.2011

Annex C

MANDATORY RETURNABLE DOCUMENT:
FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE C WILL RESULT IN THE BID BEING NON-RESPONSIVE &
DISQUALIFIED

Local Content Declaration - Summary Schedule

Note: VAT to be excluded from all calculations

(C1)
Tender No.

HOAC-RCB-35571-MM-154

(C2)
Tender description:

Supply and delivery of OHTe wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months

(C3)
Designated product(s)

Powerline Hardware

(C4)
Tender Authority:

(C5)
Tendering Entity name:

(C6)
Tender Exchange Rate:

Pula

(C7)
Specified local content %

EU

GBP

Calculation of local content				Tender summary		
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)
2	Wire 19/4mm Stay Galvanized Steel, 479MPA					
9	Cable steel 97mm ² 49/1,6mm Galvanized-PVC-Cover					
11	Bond composite 50mm ² X 610mm					
12	Stainless wire for auto tension pulley 44mm ²					
				(C20) Total tender value R	(C16) Total tender Qty	(C17) Total tender value
				(C21) Total Exempt imported content R	(C18) Total exempted imported content	(C19) Total Imported content
				(C22) Total Tender value net of exempt imported content R	(C23) Total Imported content R	(C24) Total local content R
				(C25) Average local content % of tender		

Signature of tenderer from Annex B

Date:

SATS 1286.2011

Annex C

MANDATORY RETURNABLE DOCUMENT:
FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE C WILL RESULT IN THE BID BEING NON-RESPONSIVE &
DISQUALIFIED

Local Content Declaration - Summary Schedule

(C1)

Tender No.

HOAC-RCB-35571-MM-154

(C2)

Tender description:

Supply and delivery of OHTE wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months

(C3)

Designated product(s)

Powerline Hardware

(C4)

Tender Authority:

(C5)

Tendering Entity name:

(C6)

Tender Exchange Rate:

Pula

EU

GBP

(C7)

Specified local content %

Note: VAT to be excluded from all calculations

Calculation of local content					
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Local content % (per item)
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)
13	Stay wire attachment concrete mast single wire 3CR12 360crs				
14	Anchor Contact and Catenary wire CONC S/S 360CRS, 100X15 ANG M26 hole				
15	Splice line tension Pre-form 50mm ² Ali Hazel QPO				

Signature of tenderer from Annex B

(C20) Total tender value R

(C21) Total Exempt imported content R

(C22) Total Tender value net of exempt imported content R

(C23) Total Imported content R

(C24) Total local content R

(C25) Average local content % of tender

Date:

SATS 1286.2011

Annex C

MANDATORY RETURNABLE DOCUMENT:

FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE C WILL RESULT IN THE BID BEING NON-RESPONSIVE & DISQUALIFIED

Local Content Declaration - Summary Schedule

(C1)
Tender No.

HOAC-RCB-35571-MM-154

(C2)
Tender description:

Supply and delivery of OHTE wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months

(C3)
Designated product(s)

Powerline Hardware

(C4)
Tender Authority:

(C5)
Tendering Entity name:

(C6)
Tender Exchange Rate:

Pula

(C7)
Specified local content %

EU

GBP

Note: VAT to be excluded from all calculations

Calculation of local content					Tender summary		
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local content % (per item)	
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)
16	Dead end PREFORM STRAIN 19/4 GI						
17	Splice PREFORM 250mm ² Cu Catenary Wrap On						
18	Splice Preform 80mm ² Cu Catenary Wrap On						
					(C16)	(C17)	(C18)
							(C19)

Signature of tenderer from Annex B

Date:

(C20) Total tender value R

(C21) Total Exempt imported content R

(C22) Total Tender value net of exempt imported content R

(C23) Total Imported content R

(C24) Total local content R

(C25) Average local content % of tender

SATS 1286.2011

Annex C

MANDATORY RETURNABLE DOCUMENT:

FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE C WILL RESULT IN THE BID BEING NON-RESPONSIVE & DISQUALIFIED

Local Content Declaration - Summary Schedule

(C1)

Tender No.

HOAC-RCB-35571-MM-154

(C2)

Tender description:

Supply and delivery of OHTE wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months

(C3)

Designated product(s)

Powerline Hardware

(C4)

Tender Authority:

(C5)

Tendering Entity name:

(C6)

Tender Exchange Rate:

(C7)

Specified local content %

Pula

EU

GBP

Note: VAT to be excluded from all calculations

Calculation of local content					Tender summary		
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Total tender value	Total exempted imported content	Total Imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C16)	(C18)	(C19)
19	Preform repair kit 80mm ² Catenary						
20	Splice Contact Wire 161mm ² CU						

(C20) Total tender value R

(C21) Total Exempt imported content R

(C22) Total Tender value net of exempt imported content R

(C23) Total Imported content R

(C24) Total local content R

(C25) Average local content % of tender

Signature of tenderer from Annex B

Date:

Date & Company Stamp

FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE D MAY RESULT IN THE BID BEING NON-RESPONSIVE & DISQUALIFIED

(D1)	Tender No.	HOAC-RCB-35571-MM-154		Note: VAT to be excluded from all calculations
(D2)	Tender description:	Supply and delivery of OHTe wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months		
(D3)	Designated Products:	Electrical Cable Products		
(D4)	Tender Authority:			
(D5)	Tendering Entity name:			
(D6)	Tender Exchange Rate:	Pula EU GBP		

A. Exempted imported content				Calculation of imported content						Summary	
Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)
(D19) Total exempt imported value R										This total must correspond with Annex C - C 21	

B. Imported directly by the Tenderer				Calculation of imported content						Summary	
Tender Item no's	Description of imported content	Unit of measure	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)
									(D32) Total imported value by tenderer R		

C. Imported by a 3rd party and supplied to the Tenderer				Calculation of imported content						Summary	
Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)
(D45) Total imported value by 3rd party R											

D. Other foreign currency payments			Calculation of foreign currency payments		Summary of payments
Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange	Local value of payments
(D46)	(D47)	(D48)	(D49)	(D50)	(D51)

Signature of tenderer from Annex B

(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above R

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above

**This total must correspond with
Annex C - C23**

Date & Company Stamp

Annex D

ESSENTIAL RETURNABLE DOCUMENT:

FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE D MAY RESULT IN THE BID BEING NON-RESPONSIVE & DISQUALIFIED

Imported Content Declaration - Supporting Schedule to Annex C

(D1)	Tender No.	HOAC-RCB-35571-MM-154				Note: VAT to be excluded from all calculations
(D2)	Tender description:	Supply and delivery of OHTe wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months				
(D3)	Designated Products:	Powerline Hardware				
(D4)	Tender Authority:					
(D5)	Tendering Entity name:					
(D6)	Tender Exchange Rate:	Pula	EU		GBP	

A. Exempted imported content

[illegible]

(D19) Total exempt imported value R

This total must correspond with
Annex C - C 21

B. Imported directly by the Tenderer

[illegible]

(D32) Total imported value by tenderer	R
--	---

C. Imported by a 3rd party and supplied to the Tenderer

[illegible]

(D45) Total imported value by 3rd party	R
---	---

D. Other foreign currency payments

payments			payments	
Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange
(D46)	(D47)	(D48)	(D49)	(D50)

(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above

**This total must correspond with
Annex C - C 23**

Signature of tenderer from Annex B

Date: _____

Respondent's Signature

Date & Company Stamp

FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE D MAY RESULT IN THE BID BEING NON-RESPONSIVE & DISQUALIFIED

Date & Company Stamp

Imported Content Declaration - Supporting Schedule to Annex C

A. Exempted imported content

B. Imported directly by the Tenderer

C. Imported by a 3rd party and supplied to the Tenderer

D. Other foreign currency payments

(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above

This total must correspond with
Annex C - C23

ANNEXURE E: LOCAL CONTENT DECLARATION - SUPPORTING SCHEDULE TO ANNEX C

SATS 1286.2011

Annex E**ESSENTIAL RETURNABLE DOCUMENT:****FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE E MAY RESULT IN THE BID BEING NON-RESPONSIVE & DISQUALIFIED****Local Content Declaration - Supporting Schedule to Annex C**

(E1)	Tender No.	HOAC-RCB-35571-MM-154	Note: VAT to be excluded from all calculations
(E2)	Tender description:	Supply and delivery of OHTE wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months	
(E3)	Designated products:	Electrical Cable Products	
(E4)	Tender Authority:		
(E5)	Tendering Entity name:		

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	(E7)	(E8)
(E9) Total local products (Goods, Services and Works)			R

(E10)	Manpower costs	(Tenderer's manpower cost)	R
(E11)	Factory overheads	(Rental, depreciation & amortisation, utility costs, consumables etc.)	R
(E12)	Administration overheads and mark-up	(Marketing, insurance, financing, interest etc.)	R

(E13) Total local content R**This total must correspond with Annex C - C24****Signature of tenderer from Annex B**

Date: _____

Respondent's Signature

Date & Company Stamp

SATS 1286.2011

Annex E**ESSENTIAL RETURNABLE DOCUMENT:****FAILURE TO FULLY COMPLETE, DECLARE, SIGN & DATE THIS ANNEXURE E MAY RESULT IN THE BID BEING NON-RESPONSIVE & DISQUALIFIED****Local Content Declaration - Supporting Schedule to Annex C**

(E1)	Tender No.	HOAC-RCB-35571-MM-154	Note: VAT to be excluded from all calculations
(E2)	Tender description:	Supply and delivery of OHTE wires and cables at Richards Bay harbour on an "as and when" required basis for a period of 36 months	
(E3)	Designated products:	Powerline Hardware	
(E4)	Tender Authority:		
(E5)	Tendering Entity name:		

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	(E7)	(E8)
(E9) Total local products (Goods, Services and Works)			R

(E10)	Manpower costs	(Tenderer's manpower cost)	R
(E11)	Factory overheads	(Rental, depreciation & amortisation, utility costs, consumables etc.)	R
(E12)	Administration overheads and mark-up	(Marketing, insurance, financing, interest etc.)	R

(E13) Total local content R

This total must correspond with Annex C - C24Signature of tenderer from Annex B

Date: _____

ANNEXURE F - GUIDANCE DOCUMENT FOR THE CALCULATION OF LOCAL CONTENT

Respondent's Signature

Date & Company Stamp

Guidance Document for the Calculation of Local Content

1. DEFINITIONS

Unless explicitly provided in this guideline, the definitions given in SATS 1286:2011 apply.

2. GENERAL

2.1. Introduction

This guideline provides tenderers with a detailed description of how to calculate local content of products (goods, services and works) by components/material/services and enables them to keep an updated record for verification requirements as per the SATS 1286:2011 Annexure A and B.

The guideline consists of two parts, namely:

- a written guideline; and
- three declarations that must be completed:
 - Declaration C: “Local Content Declaration – Summary Schedule” (see Annexure C);
 - Declaration D: “Imported Content Declaration – Supporting Schedule to Annex C” (see Annexure D); and
 - Declaration E: “Local Content Declaration – Supporting Schedule to Annex C” (see Annexure E).

The guidelines and declarations should be used by tenderers when preparing a tender. A tenderer must complete Declarations D and E, and consolidate the information on Declaration C.

Annexure C must be submitted with the tender by the closing date and time as determined by the Tender Authority. The Tender Authority reserves the right to request that Declarations D and E also be submitted.

If the tender is successful, the tenderer must continuously update Declarations C, D and E with actual values for the duration of the contract.

NOTE:

Annexure A is a note to the purchaser in SATS 1286:2011; and
Annexure B is the Local Content Declaration IN SATS 1286:2011.

2.2. What is local content?

According to SATS 1286:2011, the local content of a product is the tender price less the value of imported content, expressed as a percentage. It is, therefore, necessary to first compute the imported value of a product to determine the local content of a product.

2.3. Categories: Imported and Local Content

The tenderer must differentiate between imported content and local content.

Imported content of a product by components/material/services is separated into two categories, namely:

- products imported directly by the tenderer; and
- products imported by a third party and supplied to the tenderer.

2.3.1. Imported Content

Identify the imported content, if any, by value for products by component/material/services. In the case of components/materials/services sourced from a South African manufacturer, agent, supplier or subcontractor (i.e. third party), obtain that information and Declaration D from the third party.

Calculate the imported content of components/materials/services to be used in the manufacture of the total quantity of the products for which the tender is to be submitted.

As stated in clause 3.2.4 of SATS 1286:2011: "If information on the origin of components, parts or materials is not available, it will be deemed to be imported content."

2.3.1.1. Imported directly by the tenderer:

When the tenderer import products directly, the onus is on the tenderer to provide evidence of any components/materials/services that were procured from a non-domestic source. The evidence should be verifiable and pertain to the tender as a whole. Typical evidence will include commercial invoices, bills of entry, etc.

When the tenderer procures imported services such as project management, design, testing, marketing, etc and makes royalty and lease payments, such payments relating to the tender must be included when calculating imported content.

2.3.1.2. Imported by a third party and supplied to the tenderer:

When the tenderer supplies components/material/services that are imported by any third party (for example, a domestic manufacturer, agent, supplier or subcontractor in the supply chain), the onus is on the tenderer to obtain verifiable evidence from the third party.

The tenderer must obtain Declaration D from all third parties for the related tender. The third party must be requested by the tenderer to continuously update Declaration D. Typical evidence of imported content will include commercial invoices, bills of entry etc.

When a third party procures imported services such as project management, design, testing, marketing etc. and makes royalty and lease payments, such payments relating to the tender must be included when calculating imported content.

2.3.1.3. Exempt Imported Content:

Exemptions, if any, are granted by the Department of Trade and Industry (**the dti**). Evidence of the exemptions must be provided and included in Annexure D.

2.3.2. Local Content

Identify and calculate the local content, by value for products by components/materials/services to be used in the manufacture of the total quantity of the products.

3. ANNEXURE C

3.1. Guidelines for completing Annexure C: Local Content Declaration – Summary Schedule

Note: The paragraph numbers correspond to the numbers in Annexure C.

C1. Tender Number

Supply the tender number that is specified on the specific tender documentation.

C2. Tender description

Supply the tender description that is specified on the specific tender documentation.

C3. Designated products

Supply the details of the products that are designated in terms of this tender (i.e. buses).

C4. Tender Authority

Supply the name of the tender authority.

C5. Tendering Entity name

Provide the tendering entity name (for example, Unibody Bus Builders (Pty) Ltd).

C6. Tender Exchange Rate

Provide the exchange rate used for this tender, as per the Standard Bidding Document (SBD) and Municipal Bidding Document (MBD) 6.2.

C7. Specified local content %

Provide the specified minimum local content requirement for the tender (i.e. 80%), as per the Standard Bidding Document (SBD) and Municipal Bidding Document (MDB) 6.2.

C8. Tender item number

Provide the tender item number(s) of the products that have a local content requirement as per the tender specification.

C9. List of items

Provide a list of the item(s) corresponding with the tender item number.
This may be a short description or a brand name.

Calculation of local content

C10. Tender price

Provide the unit tender price of each item excluding VAT.

C11. Exempted imported content

Provide the ZAR value of the exempted imported content for each item, if applicable. These value(s) must correspond with the value(s) of column D16 on Annexure D.

C12. Tender value net of exempted imported content

Provide the net tender value of the item, if applicable, by deducting the exempted imported content (C11) from the tender price (C10).

C13. Imported value

Provide the ZAR value of the items' imported content.

C14. Local value

Provide the local value of the item by deducting the Imported value (C13) from the net tender value (C12).

C15. Local content percentage (per item)

Provide the local content percentage of the item(s) by dividing the local value (C14) by the net tender value (C12) as per the local content formula in SATS 1286.

Tender Summary

C16. Tender quantity

Provide the tender quantity for each item number as per the tender specification.

C17. Total tender value

Provide the total tender value by multiplying the tender quantity (C16) by the tender price (C10).

C18. Total exempted imported content

Provide the total exempted imported content by multiplying the tender quantity (C16) by the exempted imported content (C11). These values must correspond with the values of column D18 on Annexure D.

C19. Total imported content

Provide the total imported content of each item by multiplying the tender quantity (C16) by the imported value (C13).

C20. Total tender value

Total tender value is the sum of the values in column C17.

C21. Total exempted imported content

Total exempted imported content is the sum of the values in column C18. This value must correspond with the value of D19 on Annexure D.

C22. Total tender value net of exempted imported content

The total tender value net of exempt imported content is the total tender value (C20) less the total exempted imported content (C21).

C23. Total imported content

Total imported content is the sum of the values in column C19. This value must correspond with the value of D53 on Annexure D.

C24. Total local content

Total local content is the total tender value net of exempted imported content (C22) less the total imported content (C23). This value must correspond with the value of E13 on Annexure E.

C25. Average local content percentage of tender

The average local content percentage of tender is calculated by dividing total local content (C24) by the total tender value net of exempted imported content (C22).

4. ANNEXURE D

4.1. Guidelines for completing Annexure D: “Imported Content Declaration – Supporting Schedule to Annexure C”

Note: The paragraph numbers correspond to the numbers in Annexure D.

D1. Tender number

Supply the tender number that is specified on the specific tender documentation.

D2. Tender description

Supply the tender description that is specified on the specific tender documentation.

D3. Designated products

Supply the details of the products that are designated in terms of this tender (i.e. buses).

D4. Tender authority

Supply the name of the tender authority.

D5. Tendering entity name

Provide the tendering entity name (i.e. Unibody Bus Builders (Pty) Ltd).

D6. Tender exchange rate

Provide the exchange rate used for this tender, as per the Standard Bidding Document (SBD) and Municipal Bidding Document (MBD) 6.2.

Table A. Exempted Imported Content

D7. Tender item number

Provide the tender item number(s) of the product(s) that have imported content.

D8. Description of imported content

Provide a list of the exempted imported product(s), if any, as specified in the tender.

D9. Local supplier

Provide the name of the local supplier(s) supplying the imported product(s).

D10. Overseas supplier

Provide the name(s) of the overseas supplier(s) supplying the exempted imported product(s).

D11. Imported value as per commercial invoice

Provide the foreign currency value of the exempted imported product(s) disclosed in the commercial invoice accepted by the South African Revenue Service (SARS).

D12. Tender exchange rate

Provide the exchange rate used for this tender as per the Standard Bidding Document (SBD) and Municipal Bidding Document (MBD) 6.2.

D13. Local value of imports

Convert the value of the exempted imported content as per commercial invoice (D11) into the ZAR value by using the tender exchange rate (D12) disclosed in the tender documentation.

D14. Freight costs to port of entry

Provide the freight costs to the South African Port of the exempted imported item.

D15. All locally incurred landing costs and duties

Provide all landing costs including customs and excise duty for the exempted imported product(s) as stipulated in the SATS 1286:2011.

D16. Total landed costs excl VAT

Provide the total landed costs (excluding VAT) for each item imported by adding the corresponding item values in columns D13, D14 and D15. These values must be transferred to column C11 on Annexure C.

D17. Tender quantity

Provide the tender quantity of the exempted imported products as per the tender specification.

D18. Exempted imported value

Provide the imported value for each of the exempted imported product(s) by multiplying the total landed cost (excl. VAT) (D16) by the

tender quantity (D17). The values in column D18 must correspond with the values of column C18 of Annexure C.

D19. Total exempted imported value

The total exempted imported value is the sum of the values in column D18. This total must correspond with the value of C21 on Annexure C.

Table B. Imported Directly By Tenderer

D20. Tender item numbers

Provide the tender item number(s) of the product(s) that have imported content.

D21. Description of imported content:

Provide a list of the product(s) imported directly by tender as specified in the tender documentation.

D22. Unit of measure

Provide the unit of measure for the product(s) imported directly by the tenderer.

D23. Overseas supplier

Provide the name(s) of the overseas supplier(s) supplying the imported product(s).

D24. Imported value as per commercial Invoice

Provide the foreign currency value of the product(s) imported directly by tenderer disclosed in the commercial invoice accepted by the South African Revenue Service (SARS).

D25. Tender rate of exchange

Provide the exchange rate used for this tender as per the Standard Bidding Document (SBD) and Municipal Bidding Document (MBD) 6.2.

D26. Local value of imports

Convert the value of the product(s) imported directly by the tenderer as per commercial invoice (D24) into the ZAR value by using the tender exchange rate (D25) disclosed in the tender documentation.

D27. Freight costs to port of entry

Provide the freight costs to the South African Port of the product(s) imported directly by the tenderer.

D28. All locally incurred landing costs and duties

Provide all landing costs including customs and excise duty for the product(s) imported directly by the tenderer as stipulated in the SATS 1286:2011.

D29. Total landed costs excl VAT

Provide the total landed costs (excluding VAT) for each item imported directly by the tenderer by adding the corresponding item values in columns D26, D27 and D28.

D30. Tender quantity

Provide the tender quantity of the product(s) imported directly by the tenderer as per the tender specification.

D31. Total imported value

Provide the total imported value for each of the product(s) imported directly by the tenderer by multiplying the total landed cost (excl. VAT) (D29) by the tender quantity (D30).

D32. Total imported value by tenderer

The total value of imports by the tenderer is the sum of the values in column D31.

Table C. Imported by Third Party and Supplied to the Tenderer

D33. Description of imported content

Provide a list of the product(s) imported by the third party and supplied to the tenderer as specified in the tender documentation.

D34. Unit of measure

Provide the unit of measure for the product(s) imported by the third party and supplied to tenderer as disclosed in the commercial invoice.

D35. Local supplier

Provide the name of the local supplier(s) supplying the imported product(s).

D36. Overseas supplier

Provide the name(s) of the overseas supplier(s) supplying the imported products.

D37. Imported value as per commercial invoice

Provide the foreign currency value of the product(s) imported by the third party and supplied to the tenderer disclosed in the commercial invoice accepted by SARS.

D38. Tender rate of exchange

Provide the exchange rate used for this tender as per the Standard Bidding Document (SBD) and Municipal Bidding Document (MBD) 6.2.

D39. Local value of imports

Convert the value of the product(s) imported by the third party as per commercial invoice (D37) into the ZAR value by using the tender exchange rate (D38) disclosed in the tender documentation.

D40. Freight costs to port of entry

Provide the freight costs to the South African Port of the product(s) imported by third party and supplied to the tenderer.

D41. All locally incurred landing costs and duties

Provide all landing costs including customs and excise duty for the product(s) imported by third party and supplied to the tenderer as stipulated in the SATS 1286:2011.

D42. Total landed costs excluding VAT

Provide the total landed costs (excluding VAT) for each product imported by third party and supplied to the tenderer by adding the corresponding item values in columns D39, D40 and D41.

D43. Quantity imported

Provide the quantity of each product(s) imported by third party and supplied to the tenderer for the tender.

D44. Total imported value

Provide the total imported value of the product(s) imported by third party and supplied to the tenderer by multiplying the total landed cost (D42) by the quantity imported (D43).

D45. Total imported value by third party

The total imported value from the third party is the sum of the values in column D44.

Table D. Other Foreign Currency Payments

D46. Type of payment

Provide the type of foreign currency payment. (i.e. royalty payment for use of patent, annual licence fee, etc).

D47. Local supplier making the payment

Provide the name of the local supplier making the payment.

D48. Overseas beneficiary

Provide the name of the overseas beneficiary.

D49. Foreign currency value paid

Provide the value of the listed payment(s) in their foreign currency.

D50. Tender rate of exchange

Provide the exchange rate used for this tender as per the Standard Bidding Document (SBD) and Municipal Bidding Document (MBD) 6.2.

D51. Local value of payments

Provide the local value of each payment by multiplying the foreign currency value paid (D49) by the tender rate of exchange (D50).

D52. Total of foreign currency payments declared by tenderer and/or third party

The total of foreign currency payments declared by tenderer and/or a third party is the sum of the values in column D51.

D53. Total of imported content and foreign currency payment

The total imported content and foreign currency payment is the sum of the values in column D32, D45 and D52. This value must correspond with the value of C23 on Annexure C.

5. ANNEXURE E

5.1. Guidelines to completing Annexure E: “Local Content Declaration-Supporting Schedule to Annexure C”

The paragraph numbers correspond to the numbers in Annexure E

E1. Tender number

Supply the tender number that is specified on the specific tender documentation.

E2. Tender description

Supply the tender description that is specified on the specific tender documentation.

E3. Designated products

Supply the details of the products that are designated in terms of this tender (for example, buses/canned vegetables).

E4. Tender authority

Supply the name of the tender authority.

E5. Tendering entity name

Provide the tendering entity name (for example, Unibody Bus Builders (Pty) Ltd) Ltd).

Local Goods, Services and Works

E6. Description of items purchased

Provide a description of the items purchased locally in the space provided.

E7. Local supplier

Provide the name of the local supplier that corresponds to the item listed in column E6.

E8. Value

Provide the total value of the item purchased in column E6.

E9. Total local products (Goods, Services and Works)

Total local products (goods, services and works) is the sum of the values in E8.

E10. Manpower costs:

Provide the total of all the labour costs accruing only to the tenderer (i.e. not the suppliers to tenderer).

E11. Factory overheads:

Provide the total of all the factory overheads including rental, depreciation and amortisation for local and imported capital goods, utility costs and consumables. (Consumables are goods used by individuals and businesses that must be replaced regularly because they wear out or are used up. Consumables can also be defined as the components of an end product that are used up or permanently altered in the process of manufacturing, such as basic chemicals.)

E12. Administration overheads and mark-up:

Provide the total of all the administration overheads, including marketing, insurance, financing, interest and mark-up costs.

E13. Total local content:

The total local content is the sum of the values of E9, E10, E11 and E12. This total must correspond with C24 of Annexure C.



national treasury

Department:
National Treasury
REPUBLIC OF SOUTH AFRICA

Private Bag X115, Pretoria, 0001

TO: ACCOUNTING OFFICERS OF ALL NATIONAL DEPARTMENTS AND
CONSTITUTIONAL INSTITUTIONS

ACCOUNTING OFFICERS OF ALL MUNICIPALITIES AND MUNICIPAL ENTITIES

ACCOUNTING AUTHORITIES OF ALL SCHEDULE 2 AND 3 PUBLIC ENTITIES

HEAD OFFICIALS OF PROVINCIAL TREASURIES

NATIONAL TREASURY DESIGNATED SECTORS CIRCULAR NUMBER 10 OF 2019/2020:

**INVITATION AND EVALUATION OF BIDS BASED ON A STIPULATED MINIMUM
THRESHOLD FOR LOCAL PRODUCTION AND CONTENT FOR ELECTRICAL CABLE
PRODUCTS**

1. PURPOSE

1.1 The purpose of this Circular is to:

- 1.1.1. introduce amendments to the instruction for Electrical Cable Products dated 30 June 2016; and
- 1.1.2. provide information to accounting officers (AOs) and accounting authorities (AAs) in terms of which they may procure the aforementioned products which have been designated as a sector for local production and content.

2. BACKGROUND

- 2.1 The Preferential Procurement Regulations, 2017 made in terms of section 5 of the Preferential Procurement Policy Framework Act, 2000 (Act No 5 of 2000), which came into effect on 01 April 2017, make provision for the Department of Trade and Industry (**the dti**) to designate sectors in line with national development and industrial policies for local production.
- 2.2 Regulation 8 (2) of the Preferential Procurement Regulations, 2017 prescribes that in the case of a designated sector, an organ of state must advertise the invitation to tender with a specific condition that only locally produced services or goods or locally manufactured goods with a stipulated minimum threshold for local production and content, will be considered.
- 2.3 To this end, **the dti** has designated and determined the stipulated minimum threshold for the Electrical Cable Products for local production and content.

- 2.4 The designation is applicable to all purchases regardless of the procurement method followed and there is no financial threshold.

3. SECTOR DESIGNATION

- 3.1 The stipulated minimum threshold percentages for local production and content for the different types of electrical cables is 90%.
- 3.2 To ensure that local production and content is discharged on manufacturing activities, the following must be included in bid invitations:

Table 2: Power Cables – cables used for power transmission

Cable Products	Stipulated minimum threshold local content
Low Voltage	90%
Low Cost Reticulation	90%
Medium & High Voltage	90%
ACR	90%

Table 3: Telecom Cables – cables used for telecommunications

Cable Products	Stipulated minimum threshold local content
Optical Fibre Cables	90%
Copper Telecom Cables	90%

- 3.3 Excluded in the designation is mainly copper, aluminium, polyvinyl chloride (PVC), cross-linked polyethylene (XLPE), aramid yarn, and optical fibre used for fabrication of cable products. This is to encourage local manufacturers to seek the best global competitive prices for primary materials hence the competitive imported materials used in the manufacture of cables will be deemed to have been sourced locally for the purposes of calculating local content

3.4 List of Specific Cables designated under this Circular:

Category	Type
LOW VOLTAGE	Housewire, Flat Twin and Earth, Surface Cable, Rip Cord, Cab Tyre, Bells Cable, 1,5mm ² – 16mm ² , 2-37 cores, Fire Retardant, Low Halogen and Low Smoke Zero Halogen (LSOH) Main Cable 25mm ² – 100mm ² , 1-4 cores, Fire Retardant, Low Halogen and Low Smoke Zero Halogen (LSOH), Flexible Cables, Aerial Cables, ACSR, Split Concentric & Aerial Bundled Conductor (ABC)

Category	Type
MEDIUM VOLTAGE	3,3kV – 22kV, 1-3 cores, Cross linked Polyethylene (XLPE) and Paper Insulated Lead Covered (PILC), Fire Retardant, Low Halogen and Low Smoke Zero Halogen (LSOH)
HIGH VOLTAGE	132kV, Single Core, Corrugated Seamless Aluminium (CSA) Sheathed

NOTE: The local Industry manufactures a vast range of engineered telecommunication, Industrial and Instrumentation copper and fibre optic cables, which are not limited to:

Category	Type
COPPER TELECOMMUNICATION CABLES	Standard and high frequency (ADSL) outside plant copper pair telecoms cables (10pair up to 240 pair), Indoor, PABX and high frequency (DSLAM) copper pair telecoms cables up to 200pair, Category 5e and Category 6 copper data cables.
COPPER INDUSTRIAL CABLES	Railway signalling copper cables, Electrical signalling copper cables, Steel wire armoured copper telecoms cables, UVG copper control cables for electrical utilities, Fire Alarm and control copper cables
COPPER INSTRUMENTATION CABLES	Thermocouple extension wire, Tray and direct buried instrumentation and control copper cables compliant to SABS, UL and BS standards accreditation.
FIBRE OPTIC TELECOMMUNICATION CABLES	Outside plant duct fibre optic cables up to 288 Fibre count, Aerial (short span, medium span and long span) self-support fibre optic cables up to 144 fibre count applications up to 144 fibre count
FIBRE OPTIC INDUSTRIAL CABLES	Metallic armoured instrumentation and control fibre optic cables, Steel wire armoured mineshaft fibre optic cables, Field deployable high durability fibre optic cables, Composite (fibre optic and copper core) cables

4. INVITATION OF BIDS FOR ELECTRICAL CABLES PRODUCTS

- 4.1 Bids in respect of Cables must contain a specific bidding condition that only locally produced or locally manufactured Cables with a stipulated minimum threshold for local production and content will be considered.
- 4.1.1 If the quantity of materials and/or products required cannot be wholly sourced from South African based manufacturers and/or at the designated local content threshold at any particular time, bidders should obtain written approval from **the dti** to supply the remaining portion at a lower local content threshold. Such requests for approval should be submitted and approval be obtained prior to the closure of the bid(s) concerned. **the dti**, in consultation with the procuring organ of state, will grant such approval on a case-by-case basis and will consider the following:
- a) required volumes in the particular bid;
 - b) available collective South African industry manufacturing capacity at that time;
 - c) delivery times;
 - d) availability of input materials and components;
 - e) technical considerations including operating conditions;
 - f) materials of construction; and
 - g) security of supply and emergencies.
- 4.1.2 Bidders must clearly indicate in their bids the quantities of material and products to be supplied and the level of local content for each product.
- 4.1.3 The turn-around time for processing of authorisation requests is 5 working days from the date of receipt. Therefore, such applications should reach **the dti** at least five days before closing date and time of bid.
- 4.1.4 The approval process that **the dti** follows is that if there is a particular designated product and the minimum threshold for local content cannot be met for various reasons, bidders must apply for approval or authorisation (when the tender is still open, before closing date). After checking with the industry, **the dti** will then decide whether or not to grant an authorisation. This is per bid.
- 4.1.5 The tender information / relevant information must be provided on the tenderer's / supplier's letterhead when requesting an authorisation letter:
- a) Procuring entity/government department/state owned company,
 - b) Tender/bid number,
 - c) Closing date,
 - d) Item(s) for which the approval is being requested,
 - e) Detailed specifications issued by the procuring entity,
 - f) Local content that can be met,
 - g) Reason(s) for the request, and
 - h) Supporting letters from local manufacturers/sub-suppliers.

- 4.1.6 Organs of state may contact **the dti** in instances where the stipulated minimum threshold for local content cannot be met in order for **the dti** to verify and in consultation with the AO/AA provide directives in this regard.
- 4.1.7 For further information, bidders and procuring state organs may contact the Director Electrotechnical Unit within **the dti** at telephone 012 394 3659/3622 or email localcontent@thedti.gov.za
- 4.1.8 Bid specifications for the cables referred to above may be done in collaboration with **the dti**.
- 4.2 AOs/AAs must stipulate in bid invitations that:
- 4.2.1 The exchange rate to be used for the calculation of local production and content must be the exchange rate published by the South African Reserve Bank (SARB) on the date of the advertisement of the bid.
- 4.2.2 Only the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 must be used to calculate local content.
- 4.3 The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the following formula which must be disclosed in the bid documentation:
- $$LC = (1 - x/y) * 100$$
- Where
- x is the imported content in Rand
- y is the bid price in Rand excluding value added tax (VAT)
- Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by the SARB on the date of advertisement of the bid.
- 4.4 AOs/AAs must clearly stipulate in the bid documentation that the SABS approved technical specification number SATS 1286:2011 and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)] are accessible to all potential bidders on **the dti's** official website http://www.thedti.gov.za/industrial_development/ip.jsp at no cost.
- 4.5 For the purpose of paragraphs 4.1, 4.2 and 4.3 above, the Declaration Certificates for Local Production and Content (SBD/MBD 6.2) must form part of the bid documentation. The SBD 6.2 is for use by all national and provincial departments, constitutional institutions and public entities listed in schedules 2, 3A, 3B, 3C and 3D to the Public Finance Management Act whilst the MBD 6.2 is for use by all municipalities and municipal entities to which the Municipal Finance Management Act (MFMA) applies.
- 4.6 AOs/AAs must stipulate in the bid documentation:
- 4.6.1 that the Declaration Certificate for Local Production and Content (SBD / MBD 6.2) together with the Annex C (Local Content Declaration: Summary Schedule) must be

- completed, duly signed and submitted by the bidder at the closing date and time of the bid;
- 4.6.2 that the rates of exchange quoted by the bidder in paragraph 4.1 of the Declaration Certificate will be verified for accuracy; and
- 4.6.3 all the information relevant to bidders provided in paragraphs 4.1.1 to 4.1.7.

5. EVALUATION OF BIDS FOR CABLE PRODUCTS

- 5.1 An evaluation process in line with Preferential Procurement Regulations, 2017 must be followed.

6. EVALUATION OF BIDS BASED ON FUNCTIONALITY

- 6.1 Whenever it is deemed necessary to evaluate bids on the basis of functionality, the prescripts contained in Preferential Procurement Regulations, 2017 and paragraph 6 and 11 of the Implementation Guide must be followed.

7. POST AWARD AND REPORTING REQUIREMENTS

- 7.1. Once bids are awarded, **the dti** must be:
- (i) notified of all the successful bidders and the estimated value of the contracts; and
 - (ii) provided with copies of the contracts, the SBD/MBD 6.2 Certificates together with the Declaration C submitted by the successful bidders within 30 days of award.
- 7.2 The purpose of the requirements of paragraph 7.1 above is for **the dti** to, among others, conduct compliance audits with a view to monitor the implementation of the industrial development strategies.
- 7.3 Contractors may not be allowed to sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the minimum threshold as stipulated in regulation 8 of the Preferential Procurement Regulations, 2017.

8. CONTACT INFORMATION

- 8.1 **Any enquiries in respect of Local Production and Content and all documents to be submitted to the dti must be directed as follows:**

The Department of Trade and Industry
Private Bag X84
Pretoria
0001

For Attention:

Chief Director: Industrial Procurement
Tel: (012) 394 1435
Fax: (012) 394 1535
EMAIL: localcontent@thedti.gov.za

9. APPLICABILITY

- 9.1 This Circular applies to all national and provincial departments, constitutional institutions; public entities listed in schedules 2 and 3 to the PFMA, and municipalities and municipal entities to which the MFMA applies.

10. DISSEMINATION OF INFORMATION CONTAINED IN THIS CIRCULAR

- 10.1 Heads of provincial treasuries are requested to bring the contents of this Circular to the attention of accounting officers and supply chain management officials of their respective provincial departments.
- 10.2 Accounting officers of national and provincial departments are requested to bring the contents of this Circular to the attention of accounting authorities and the supply chain management officials of their departments, Schedule 3A and 3C public entities reporting to their respective executive authorities.
- 10.3 Accounting officers of municipalities and municipal entities are requested to bring the contents of this Circular to the attention of the supply chain management officials of their municipalities and municipal entities.
- 10.4 Accounting authorities of Schedule 2, 3B and 3D public entities are requested to bring the contents of this Circular to the attention of the supply chain management officials of their public entities.

11. NOTIFICATION TO THE AUDITOR-GENERAL

- 11.1 A copy of this Circular will be forwarded to the Auditor-General for notification.

12. REPEAL OF INSTRUCTION DATED 30 JUNE 2016

This Circular repeals the Instruction on invitation and evaluation of bids based on a stipulated minimum threshold for local production and content for electrical cable products dated 30 June 2016 and effective on 27 July 2016.

13. AUTHORITY FOR THIS CIRCULAR AND EFFECTIVE DATE

- 13.1 This circular is issued in terms of regulation 8(3) of the Preferential Procurement Regulations, 2017 and takes effect on the date of issuance.


MR WILLIE MATHEBULA
ACTING CHIEF PROCUREMENT OFFICER
DATE: 19.12.19



national treasury

Department:
National Treasury
REPUBLIC OF SOUTH AFRICA

**TO: ACCOUNTING OFFICERS OF ALL NATIONAL DEPARTMENTS AND
CONSTITUTIONAL INSTITUTIONS**

**ACCOUNTING OFFICERS OF ALL MUNICIPALITIES AND MUNICIPAL
ENTITIES**

**ACCOUNTING AUTHORITIES OF ALL SCHEDULE 2 AND 3 PUBLIC
ENTITIES**

HEAD OFFICIALS OF PROVINCIAL TREASURIES

**NATIONAL TREASURY DESIGNATED SECTORS INSTRUCTION NUMBER 9 OF
2016/2017**

**INVITATION AND EVALUATION OF BIDS ON A STIPULATED MINIMUM THRESHOLD
FOR LOCAL PRODUCTION AND CONTENT FOR:**

- **STEEL POWER PYLONS**
- **MONOPOLE PYLONS**
- **STEEL SUBSTATION STRUCTURES;**
- **POWERLINE HARDWARE**
- **STREET LIGHTING STEEL POLES; AND**
- **STEEL LATTICE TOWERS AND MASTS**

1. PURPOSE

1.1 The purpose of this Instruction is to:

- 1.1.1. Introduce amendments to the Instruction for steel power pylon dated 28 September 2015 by amending all clauses that contained the deeming of imported primary steel as locally manufactured.
- 1.1.1. Regulate the environment within which Accounting Officers (AOs) and Accounting Authorities (AAs) may procure the aforementioned products which have been designated as a sector for local production and content.

2. BACKGROUND

- 2.1. The Preferential Procurement Regulations, 2011 (the regulations) made in terms of section 5 of the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000) which came into effect on 7 December 2011, make provision for Department of Trade and Industry (**the dti**) to designate sectors in line with national development and industrial policies for local production.
- 2.2. Regulation 9(1) of the regulations prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific condition that only locally produced goods,

services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

- 2.3. **The dti** has designated and determined the stipulated minimum threshold for the Steel Power and Monopoles Pylons; Steel Substation Structures; Powerline Hardware; Street Lighting Steel Poles and Steel Lattice Towers and Masts for local production and content.

3. PRODUCT DESIGNATION

- 3.1 Power pylons and substation structures are steel fabricated (cut, punched and galvanised) components erected for the transmission, distribution and/or reticulation of electrical power from the power station through to the consumer. At every transition between power generation, power transmission and power distribution there is a need for the erection of a substation which serves as a facility for the stepping up or down of power in preparation for the requirements of the next phase of the power transfer process. Substations are erected using steel structures which are fabricated by way of cutting, punching and galvanising.
- 3.2 Depending on the procuring entity's design requirements, galvanised steel monopole structures can be specified for the transfer of power from the power station through to reticulation to the end user. Galvanised steel monopoles are fabricated following a cutting, bending, welding and galvanising process.
- 3.3 In the construction of power pylons, a variety of auxiliary components are used to fulfil such requirements as providing stability to the power pylon structures, attachment and fastening of components, provision of platforms and foundations etc. They are made in a variety of metals including cast aluminium, galvanised steel and brass. These components are collectively referred to as powerline hardware.
- 3.4 The structures are classified under the harmonisation system as follows:
- H730890: Structures and parts of structures iron/steel (Including Steel Powerlines Hardware)
 - H730820: Towers and Lattice Masts (including Monopole Pylons and Street Lighting Poles)
 - H761090 : Aluminium structures and parts for construction (Including Aluminium Powerlines Hardware)
- 3.5 To ensure that local production and content is discharged on manufacturing activities, the following *steel structures* have been designated and must be included in bid invitations:

Product for designation	Minimum local content
Steel Power Pylons	100%
Monopole Pylons	100%
Steel Substation Structures	100%
Powerline Hardware (listed in Appendix A)	100%
Street Lighting Steel Poles	100%
Steel Lattice Towers and Masts	100%

- 3.6 All primary steel related products: flat products (plates and coils) and long products (rounds, angles, sections and wire related products) and secondary aluminium ingots

are included in this designation and must be manufactured and sourced locally. This is to support and sustain the existing local steelmaking and aluminium secondary smelting capacities respectively.

- 3.7 In this designation, imported input raw materials (aluminium extrusion billets for the manufacture of aluminium components; and zinc ingots used for galvanising powerline, street lighting and substation structure components) are deemed as locally manufactured input materials. These inputs should be imported in raw material form for further fabrication in South Africa.
- 3.8 The imported input raw materials indicated in 3.7 for fabrication of steel power pylons and monopole pylons, steel substation structures, powerline hardware, street lighting steel poles and steel lattice towers and masts will be deemed to have been sourced locally for the purposes of calculating local content.
- 3.9 Organs of State may contact **the dti** in instances where the stipulated minimum threshold for local content cannot be met in order for **the dti** to verify and in consultation with the AO/AA provide directives in this regard.
- 3.10 Subject to market changes, National Treasury in consultation with **the dti** reserves the right to reintroduce deeming of primary steel as locally produced.
- 3.11 For further information, bidders and procuring state organs may contact the Metals Fabrication, Capital and Rail Transport unit within **the dti** at telephone 012 394 4522 or email Muzi Manzi MManzi@thedti.gov.za.
- 3.12 Bid specifications for the designated products in this instruction may be may be done in collaboration with **the dti**.

4. INVITATION OF BIDS FOR:

- 4.1 Bids in respect of Steel Power Pylons, Monopole Pylons; Steel Substation Structures; Powerline Hardware; Street Lighting Poles and Lattice Towers and Masts must contain a specific bidding condition which states that:
- 4.1.1 Only locally produced or locally manufactured products with a stipulated threshold for local production and content will be considered;
- 4.1.2 If the quantity; input materials; and/or components of steel power pylons, monopole pylons, steel substation structures, power line hardware, street lighting steel poles, and lattice towers and masts required cannot be wholly sourced from South African (SA) based manufacturers to achieve the designated local content threshold at any particular time, bidders should request and obtain written exemption from the dti. Such exemption applications should be submitted and approvals should be obtained prior to the closure of the bid(s) concerned. The dti, in consultation with the procuring Organ of State and the local industry, will consider the exemption applications on a case-by-case basis and will consider the following:
- Required volumes in the particular bid;
 - Available collective SA industry manufacturing capacity at that time;
 - Delivery times;
 - Availability of input materials and components;
 - Technical considerations including operating conditions; and
 - Materials of construction.
- 4.1.3 Bidders must clearly indicate in their bids the quantities to be supplied and the level of local content for each product.
- 4.2 AOs/AAs must stipulate in bid invitations that:

- 4.2.1 The exchange rate to be used for the calculation of local production and content must be the exchange rate published by the South African Reserve Bank (SARB) on the date of advertisement of the bid.
- 4.2.2 Only the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 must be used to calculate local content.
- 4.3 The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the following formula which must be disclosed in the bid documentation:

$$LC = \left(1 - \frac{x}{y}\right) * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by SARB on the date of advertisement of the bid.

- 4.4 AOs/AAs must clearly stipulate in the bid documentation that the SABS approved technical specification number SATS 1286:2011 and the Guidance on the Calculation of Local Content together with the Local Content Declaration Template [Annex C (Local Content Declaration: Summary Schedule), D(Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)] are accessible to all potential bidders on the dti's official website <http://www.thedti.gov.za/industrialdevelopment/ip.jsp> at no cost.
- 4.5 For the purpose of paragraphs 4.1, 4.2 and 4.3 above, the attached Declaration Certificates for Local Production and Content (SBD/MBD 6.2) must form part of the bid documentation. The SBD 6.2 is for use by all National and Provincial Departments, Constitutional Institutions and Public Entities listed in Schedules 2, 3A, 3B, 3C and 3D to which the Public Finance Management Act apply, whilst the MBD 6.2 is for use by all Municipalities and Municipal Entities to which the Municipal Finance Management Act (MFMA) apply.
- 4.6 AOs/AAs must stipulate in the bid documentation that:
- 4.6.1 The Declaration Certificate for Local Production and Content (SBD/MBD 6.2) together with the **Annex C** (Local Content Declaration: Summary Schedule) must be completed, duly signed and submitted by the bidder at the closing date and time of the bid; and
- 4.6.2 The rate of exchange quoted by the bidder in paragraph 4.1 of the Declaration Certificate will be verified for accuracy.

5. EVALUATION OF BIDS FOR:

- **STEEL POWER PYLONS**
- **MONOPOLE PYLONS;**
- **SUBSTATION STRUCTURES;**
- **POWERLINE HARDWARE;**
- **STREET LIGHTING STEEL POLES; AND**
- **STEEL LATTICE TOWERS AND MASTS**

- 5.1 A two stage evaluation process must be followed to evaluate the bids received.

5.1.1 First stage: Evaluation in terms of the stipulated minimum threshold for local production and content

- (a) Bids must be evaluated in terms of the minimum threshold stipulated in the bid documents.
- (b) The declaration made by the bidder in the Declaration Certificate for Local Content (SBD / MBD 6.2) and Annex C (Local Content Declaration: Summary Schedule) must be used for this purpose. If the bid is for more than one product, the local content percentages for each product contained in Annex C must be used.
- (c) The amendment of the stipulated minimum threshold for local production and content is not allowed.
- (d) AOs/AAs must ensure that the **Declaration Certificate for Local Content** (SBD/MBD 6.2) and **Annex C** (Local Content Declaration: Summary Schedule) are submitted as part of the bid documentation.
- (e) AOs/AAs must verify the accuracy of the rates of exchange quoted by the bidder in paragraph 4.1 of the Declaration Certificate for Local Content (SBD/MBD 6.2).

5.1.2 Second stage: Evaluation in terms of the 80/20 or 90/10 preference point systems

- (a) Only bids that achieve the minimum stipulated threshold for local production and content must be evaluated further. The evaluation must be done in accordance with the 80/20 or 90/10 preference point systems prescribed in the Preferential Procurement Regulations, 2011.
- (b) AOs/AAs must ensure that bids for products that are designated in this Instruction are awarded at prices that are market related taking into account, among others, benchmarking prices, value for money and economies of scale.
- (c) Where appropriate, prices may be negotiated with short listed or preferred bidders. Such negotiations must not prejudice other bidders.

5.2 Benchmark/market related prices

5.2.1 AOs/AAs are required to ensure that reasonable or market related prices are secured for the products being procured taking into account factors such as benchmark prices, value for money and economies of scale.

5.2.2 For this purpose, AOs/AAs may approach the dti to assist, where possible, with benchmark prices. The dti will be in a position to provide price references for the different products that have been designated for local production and content.

6. EVALUATION OF BIDS BASED ON FUNCTIONALITY

Whenever it is deemed necessary to evaluate bids on the basis of functionality, the prescripts contained in Regulation 4 of the PPPFA regulation and paragraph 6 and 11 of the Implementation Guide must be followed.

7. POST AWARD AND REPORTING REQUIREMENTS

7.1. Once bids are awarded the dti must be:

7.1.1 Notified of all the successful bidders and the value of the contracts; and

7.1.2 Provided with copies of the contracts, the SBD/MBD 6.2 Certificates together with the Annex C submitted by the successful bidder(s).

- 7.2. The purpose of the requirements of paragraph 7.1 above is for **the dti** to, among others, conduct compliance audits with a view to monitor the implementation of industrial development strategies.
- 7.3. Contractors must not be allowed to sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 7.4. Where, after the award of a bid, contractors experience challenges in meeting the stipulated minimum threshold for local content **the dti** must be informed accordingly in order for the department to verify and in consultation with the AO/AA provide directives in this regard.

8. CONTACT INFORMATION

8.1 Any enquiries in respect of Local Production and Content and all documents to be submitted to the dti in respect of paragraph 7.1 above must be directed as follows:

The Department of Trade and Industry
Private Bag X84
Pretoria
0001

For attention:

Dr Tebogo Makube
Chief Director: Industrial Procurement
Tel: (012) 394 3927
Fax: (012) 394 4927
Email: TMakube@thedti.gov.za

9. APPLICABILITY

This Instruction note applies to all National and Provincial Departments, Constitutional Institutions, public Entities listed in Schedule 2 and 3 to the PFMA and Municipalities and Municipal Entities to which MFMA apply.

10. DISSEMINATION OF INFORMATION CONTAINED IN THIS INSTRUCTION NOTE

- 10.1 Heads of Provincial Treasuries are requested to bring the contents of this Instruction note to the attention of Accounting Officers and Supply Chain Management Officials of their respective Provincial Departments.
- 10.2 Accounting Officers of National and Provincial Departments are requested to bring the contents of this Instruction note to the attention of Accounting Authorities and the Supply Chain Management Officials of Schedule 3A and 3C Public Entities reporting to their respective Executive Authorities.
- 10.3 Accounting Officers of Municipalities and Municipal Entities are requested to bring the contents of this Instruction Note to the attention of the Supply Chain Management Officials of their Municipalities and Municipal Entities.
- 10.4 Accounting Authorities of Schedule 2, 3B and 3C Public Entities are requested to bring the contents of this Instruction note to the attention of the Supply Chain Management Officials of their Public Entities.

11. NOTIFICATION TO THE AUDITOR-GENERAL

A copy of this Instruction will be forwarded to the Auditor-General for notification.

12. REPEAL OF INSTRUCTION DATED 28 SEPTEMBER 2015

This Instruction repeals Instruction on invitation and evaluation of bids based on a stipulated minimum threshold for local production and content for Solar Water Heater Components dated 28 September 2015 and effected on 21 October 2015.

13. AUTHORITY FOR THIS INSTRUCTION NOTE AND EFFECTIVE DATE

13.1 The Minister of Finance has approved the issuance of this Instruction in terms of Regulation 9(2) of the Preferential Procurement Regulations.

13.2 The Instruction takes effect on **27 July 2016**.



KENNETH BROWN
CHIEF PROCUREMENT OFFICER

DATE: 30/6/2016.

APPENDIX A: DESIGNATED LINE HARDWARE COMPONENTS

The stipulated minimum threshold for local content is 100% for each of the items below

Designated Components		
Adaptor plates	Guy Grips	Termination bracket
Adjustable extension links	Helical line items	Threaded rods
Adjustable Stay rod,	Hip stay assembly	Tie strap
Adjustable U bolts	H-Pole Cross-arms	Triangle yokes
Adjustor plate	Insulator spindles & hardware	Trimble
A-Frame Cross-arms	Interim cross-arm	Turnbuckles
Anchor links	Joints & compression fittings	Vibration dampers
Ancillary materials - strain	Jumper terminals	X Arm – A Frames
Arcing horns	Light bracket	Yoke Plates
Armour rods	LV ancillary materials	
Ball clevis	Meter box bracket	
Ball hooks	Midspan joints	
Ball oval eyes	Non-Adjustable stay rod	
Ball tongues	PG clamps	
Base assembly	Pigtail	
Big guards	Pistol clamps	
Bird diverters	Pole clamps	
Bolted connectors	Pole top bracket	
Bolted strain clamps	Pole top make-offs	
Bonding clip	Repair sleeves	
Castings line hardware	Rigid spacers	
Composite/ Silicone Insulators	Rock anchor	
Compression strain clamps	Sag Adjustor	
Conductor clamps	Shackles	
Corona rings	S-Hook	
Counterweights	Socket clevis	
Crosby clamps	Socket tongues	
Cross-arm	Soil Anchors	
Curved washer	Spacer dampers	
Dampers	Spacer yokes	
D-Iron	Spindles	
Earth anchor	Stay bracket	
Earthing	Stay plate	
Equipment platform / Transformer platform	Stay steel components	
Equipment platform bracket	Stay Wire / Steel Wire	
Eye bolt	Steel Poles	
Eye nut	Steel rope terminal fittings	
Fasteners - threaded rods	Strain bracket	
Fasteners (Bolts, nuts, washers, threaded rod)	Strain cross-arm	
Fasteners bolt, nuts & washers	Strapping	
Fasteners strain nuts, strain bolts & forgings	Streetlight brackets	
Forging line hardware	Strut bracket	
Fuse Cut-out Brackets	Support cradle	
Fuse Holder brackets	Suspension cross-arm	
Galvanised pre-fabricated steel	Swivel bracket	

ANNEXURE G – TECHNICAL SUBMISSION/QUESTIONNAIRE**This Annexure will be evaluated under Step Three -Technical/Functionality Criteria (Phase 2)****1. Previous Experience (60%)**

The bidder's relevant experience in the supplying of OHTE wires and cables

Note to bidders:

- Bidder must provide reference letter/s from current and previous client/s. Letter/s must be on client's company letterhead and signed; and shall contain detail on (i) the type of goods provided (ii) satisfaction with the goods provided and (iii) details of reference contact person. The references must not be older than the past 5 years (June 2016 to date)

Index of documentation attached to this schedule:

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The scoring of the bidders experience requirements will be as follows:

Points Available	Scoring criteria
0 points (0%)	No experience in the supplying of OHTE wires and cables or no information submitted
25 points (15%)	One (1) Reference in the supplying of OHTE wires and cables
50 points (30%)	Two (2) References in the supplying of OHTE wires and cables
75 points (45%)	Three (3) References in the supplying of OHTE wires and cables
100 points (60%)	More than three (3) References in the supplying of OHTE wires and cables

Respondent's Signature

Date & Company Stamp

2. Delivery Lead Time from receiving an official Purchase order (40%)

Number of weeks lead time for each item in Section 4: Pricing and Delivery Schedule

Note to bidders:

- Contractor shall indicate number of weeks lead time for each item in Section 4: Pricing and Delivery Schedule

In this table indicate the delivery lead time:

------(weeks)

Index of documentation attached to this schedule:

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The scoring of the delivery lead time requirements will be as follows:

Points Available	Scoring criteria
0 points (0%)	> Twelve (12) weeks delivery lead-time or no delivery lead-time indicated
25 points (10%)	> Eight (8) to = Twelve (12) weeks delivery lead-time
50 points (20%)	> Six (6) to = Eight (8) weeks delivery lead-time
75 points (30%)	> Four (4) to = Six (6) weeks delivery lead-time
100 points (40%)	= < Two (2) to = Four (4) weeks delivery lead-time

ANNEXURE H: SPECIFICATIONS AND DRAWINGS

Respondent's Signature

Date & Company Stamp

ISBN 978-0-626-30424-9

SANS 182-1:2008

Edition 1.2

Any reference to SABS 182-1 is deemed
to be a reference to this standard
(Government Notice No. 1373 of 8 November 2002)

SOUTH AFRICAN NATIONAL STANDARD

Conductors for overhead electrical transmission lines

Part 1: Copper wires and stranded copper conductors

Published by SABS Standards Division
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www.sabs.co.za

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SABS

SANS 182-1:2008

Edition 1.2

Table of changes

Change No.	Date	Scope
Amdt 1	2001	Amended to replace reference standard test methods.
Amdt 2	2008	Amended to change the designation of SABS standards to SANS standards, to delete reference to the standardization mark scheme, to update referenced standards and to correct a definition.

Acknowledgement

The SABS Standards Division wishes to acknowledge the valuable assistance derived from publications of the International Electrotechnical Commission.

Foreword

This South African standard was approved by National Committee SABS/TC 066, *Electric cables*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in September 2008.

This document supersedes SABS 182-1:2001 (edition 1.1).

A vertical line in the margin shows where the text has been technically modified by amendment No. 2.

Preface

In this specification tests are not classified as type, sample, or routine tests. The requirements prescribed, if determined in accordance with the appropriate standard test methods on samples taken in accordance with the sampling procedure given in the specification, are a method of assessing whether a product complies with the specification or not. During production control the manufacturer may use whatever tests he deems necessary for ensuring compliance with the specification, but in a case of dispute only the appropriate standard test methods may be used.

~~The frequency of testing required and the tests to be used in the administration of the standardisation mark scheme are the subject of a separate agreement between the Council of the South African Bureau of Standards and the permit holder.~~

Amdt 2

**Reaffirmed and reprinted in June 2013.
This document will be reviewed every five years
and be reaffirmed, amended, revised or withdrawn.**

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Conductors for overhead electrical transmission lines

Part 1:

Copper wires and stranded copper conductors

1 Scope

1.1 This part of the specification applies to uninsulated, non-alloyed copper (in the annealed or in the hard-drawn condition) in the form of single wires or stranded conductors and intended for use as

- a) annealed jointing wire,
- b) annealed binding wire,
- c) hard-drawn circular wire for telecommunication purposes, and
- d) stranded hard-drawn conductors for overhead transmission lines and overhead service connectors.

NOTE

- a) The titles of standards referred to by number in the specification are listed in appendix A.
- b) Requirements that must be specified by the purchaser are listed in appendix B.
- c) Assessment of compliance with the requirements of 3.2.1 and, in the case of stranded conductors, 4.1 requires special agreement between supplier and purchaser. **Amdt 2**

2 Definitions

2.1 For the purposes of this part of the specification the following definitions shall apply:

acceptable

acceptable to the authority administering this standard or to the parties concluding the purchase contract, as relevant **Amdt 1**

copper

copper which complies with the requirements of 3.2.1

defective

a coil, reel, or drum of wire or stranded conductor that fails in one or more respects to comply with the relevant requirements of the specification **Amdt 2**

diameter of wire

the mean of two measurements at right angles taken at the same cross-section

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direction of lay

the lateral direction of inclination to the axis, either right hand or left hand, of the receding helix formed by a wire of a stranded conductor

NOTE With right hand lay, the wires conform to the direction of the central part of the letter Z when the conductor is held vertically. With left hand lay, the wires conform to the direction of the central part of the letter S when the conductor is held vertically

lay ratio

the ratio of the axial length of a complete turn of the helix formed by an individual wire in a stranded conductor to the external diameter of the helix

lot

not more than 3 000 coils, reels, or drums of copper wire of the same type and standard diameter or of stranded copper conductor of the same reference area and construction, and from one manufacturer, submitted at any one time for inspection and testing

reference area

the cross-sectional area to be used for designation and purchasing purposes

standard diameter of wire

the wire diameter on which the requirements for the mass and resistance per unit length and the breaking strength of the wire are based

stranded conductor

a conductor made up of a number of single wires of the same nominal diameter laid concentrically

wire

copper of circular cross-section, produced by cold drawing

3 Type and material

3.1 Type

The wire or conductor shall be one of the following types, as specified by the purchaser:

- a) annealed jointing wire;
- b) annealed binding wire;
- c) hard-drawn wire for telecommunication purposes; or
- d) stranded hard-drawn conductors for overhead transmission lines and overhead service connections.

3.2 Material

3.2.1 Copper from which wires are drawn shall be a high conductivity tough pitch copper that complies with the requirements of SANS 804 and, its physical properties shall conform to the relevant values given in IEC 60028 (see appendix C).

3.2.2 Welds are permitted in rods and wires before final drawing at of the finished wire.

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4 Constructional requirements

4.1 Wires

4.1.1 General

Single wires and the wires (before they are stranded) of a stranded conductor shall comply with the following requirements:

- a) **Diameter.** The diameter of a wire, measured in accordance with 7.2, shall be within the limits given in

columns 3 and 4 of table A, or

columns 2 and 3 of table B, or

columns 2 and 3 of table C,

as relevant to the type and standard diameter specified by the purchaser.
- b) **Freedom from defects.** The wires shall be smooth, uniform in quality, free from spills, splits, and other defects, and any departure from circularity of the cross-section shall not exceed 1 % of the mean diameter.
- c) **Physical properties.** The wires shall be annealed or hard-drawn, as appropriate, and shall, except as allowed in terms of 4.2.1(c), comply with the following requirements as applicable:
 - 1) **Resistance.** The resistance of hard-drawn wires, determined in accordance with 7.3, shall not exceed the appropriate maximum given in column 6 of table B, or column 6 of table C, as relevant.
 - 2) **Breaking strength.** The breaking strength, determined in accordance with 7.4, shall be
 - i) in the cases of annealed jointing and binding wire and of hard-drawn wires for stranded conductors, at least equal to the appropriate minimum given in tables A or C, as relevant, and
 - ii) in the case of hard-drawn circular wires for telecommunication purposes, within the limits given in columns 7 to 12 of table B, appropriate to the actual wire diameter determined in accordance with 7.2,
 - 3) **Elongation at break of jointing and binding wires.** The elongation at break of jointing and binding wires, determined in accordance with 7.6 shall be at least 25.
 - 4) **Ductility when lapped.** When tested in accordance with 7.5, jointing and binding wires and the wires of stranded conductors shall withstand lapping without showing any sign of cracks (when examined by unaided normal vision) or of breaking. Surface roughness caused by the lapping shall not be regarded as a defect.

NOTE The lapping test on jointing and binding wires involves two cycles of unlapping and relapping six turns. That on the hard-drawn wires requires one such cycle.
 - 5) **Ductility when twisted.** When tested in accordance with 7.7, hard-drawn circular wires for telecommunication purposes (of the appropriate length given in column 13 of table B) shall withstand the appropriate number of twists specified in column 14 of table B without breaking.

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- 6) **Tinning of jointing wires.** Jointing wires shall be uniformly coated with tin that contains not more than 8 % of copper and a total of not more than 1 % of other impurities. The quality of the tinning shall be such that, when the wire is subjected to the persulfate test given in 7.8, the mass of copper dissolved does not exceed $2,0 \text{ g/m}^2$.

4.1.2 Joints in wires

Jointing and binding wires and hard-drawn circular wires for telecommunication purposes shall be free from joints.

4.1.3 Length

Jointing and binding wires and hard-drawn wires for telecommunication purposes shall be supplied in lengths such that the continuity and mass of the wire in a coil complies with the requirements of 5.1(a) and (b) or (c), as relevant.

4.2 Stranded conductors

4.2.1 Joints in the wires

- a) There shall be no joints in finished wires of a stranded conductor comprised of seven wires.
- b) Joints in individual wires of a stranded conductor comprised of at least 19 wires shall be permitted, provided that
- 1) no two joints are less than 15 m apart in the case of a 19 wire strand and less than 7,5 m apart in the cases of 37 and 61 wire strands.
 - 2) the number of joints in any 1 000 m length of conductor does not exceed four,
 - 3) the joints are made by brazing or welding and are substantially smooth, and
 - 4) the diameter of the stranded conductor is not increased materially by the joint.
- c) The section of a wire containing a joint shall be exempt from the requirements given in table C.

4.2.2 Stranding

The number and diameter of the wires in a stranded conductor shall conform to the values given in column 2 of table D, appropriate to the reference area specified by the purchaser. The wires in each layer shall be evenly and closely stranded. The stranding shall be such that

- a) the overall diameter of the stranded conductor complies with the requirements of 4.2.5,
- b) the diameter, determined in accordance with 7.2, of individual wires taken from the stranded conductor is not more than 1 % below the appropriate minimum and not more than 1 % above the appropriate maximum given in table C, and
- c) the mean and the minimum breaking strengths, determined in accordance with 7.4, of the individual wires taken from the stranded conductor are at least 95 % and 90 % respectively of the appropriate minimum given in table C.

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4.2.3 Direction of lay

In all constructions, successive layers of a stranded conductor shall have opposite directions of lay, the outermost layer being right-handed.

4.2.4 Lay ratio

- a) The lay ratio of the different layers shall be within the appropriate limits given in table 1.
- b) In a stranded conductor having multiple layers of wires, the lay ratio of any layer shall not be greater than the lay ratio of the layer immediately beneath it.

Table 1 — Lay ratios for stranded copper conductors

1	2	3	4	5	6	7	8	9
Number of wires in conductor	Lay ratios							
	6-wire layer		12-wire layer		18-wire layer		24-wire layer	
	max.	min.	max.	min.	max.	min.	max.	min.
7	17	13	-	-	-	-	-	-
19	22	13	16	12	-	-	-	-
37	22	13	16	12	14	10	-	-
61	22	13	16	12	16	12	14	10

4.2.5 Overall diameter

The overall diameter of a conductor, determined in accordance with 7.2, shall not exceed the appropriate maximum given in column 3 of table D.

4.2.6 Resistance

The resistance of a conductor, determined in accordance with 7.3, shall not exceed the appropriate maximum given in column 5 of table D.

4.2.7 Breaking strength

The breaking strength of a conductor, determined in accordance with 7.4, shall be at least equal to the appropriate minimum given in column 6 of table D.

4.2.8 Freedom from defects and foreign matter

Stranded conductors shall be free from dirt, grit, excessive amounts of drawing lubricant and other foreign matter, and from broken wires.

4.2.9 Length

Unless stranded conductors of other lengths are specified by the purchaser, the conductors shall be supplied in the manufacturer's usual production lengths. In addition, unless otherwise specified by the purchaser, it shall be permissible to supply not more than 5 % of the length ordered on any one order in random lengths, provided that no random length is shorter than one-third of the appropriate production length. The actual length of the conductor on a drum or reel shall not differ from the nominal length (i.e. the production length or, when relevant, the length specified by the purchaser) by more than 1 %.

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5 Packing and marking

5.1 Packing

In addition to any special requirements specified by the purchaser, the product shall be packed as follows:

- a) **Continuity.** Unless otherwise acceptable, each continuous length of wire or stranded conductor shall be packed individually.
- b) **Jointing and binding wires.** In coils of inside diameter 230-255 mm, securely bound with an acceptable string or with binding wire. Unless otherwise specified by the purchaser, the mass of each coil shall be $4,5 \pm 0,25$ kg.
- c) **Hard-drawn wire for telecommunication purposes.** In coils of inside diameter 490-510 mm and of mass 45 ± 4 kg.
- d) **Stranded conductors**
 - 1) Unless otherwise specified by the purchaser, the conductor shall be packed on a robust wooden drum or wooden reel that has a barrel of diameter at least $30d$, where d is the nominal overall diameter of the conductor.
 - 2) The moisture content of the wood used for fabrication of the drums or reels shall not exceed 15 %.
 - 3) When wooden drums or reels resistant to biological attack are required by the purchaser, the wood shall have been impregnated (by pressure or in a hot/cold open tank) in accordance with SANS 10005, with a class C preservative or with chromated copper arsenate.

5.2 Marking

5.2.1 Except as allowed in terms of 5.2.2, each coil, reel, or drum shall bear the following information legibly and indelibly marked on a firmly attached label or printed on a cheek of the reel or drum:

- a) the manufacturer's trade name or trade mark or both;
- b) reference area of conductor or size of wire, as applicable, and type of product;
- c) nominal length in metres;
- d) gross mass in kg (net mass if in coils or on reels); and
- e) year of manufacture.

5.2.2 In the case of coils packed in containers, the information required in terms of 5.2.1 shall appear on the outside of each container. In such cases and, if acceptable, the individual coils need not be marked.

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6 Sampling and compliance with the specification¹⁾

6.1 Sampling

The following sampling procedure shall be applied in determining whether a lot complies with the appropriate requirements of the specification. The samples so drawn shall be deemed to represent the lot for the respective properties.

6.1.1 Sample for inspection

From the lot take at random a sample of the size given in column 2 of table 2 relative to the appropriate lot size given in column 1.

6.1.2 Sample for testing

After inspection (see 7.1.1) of the sample taken in accordance with 6.1.1, cut off and discard the first 300 mm length of the outer end of the wire or conductor on each coil, reel or drum and then cut the length required for the test pieces.

Table 2 — Sample sizes for single wires and stranded conductors

1	2	3
Lot size, coils, reels or drums	Sample size, coils, reels or drums	Number of defectives
1 - 30	All	0
31 - 500	30	1
501 - 800	40	2
801 - 1 300	55	2
1 301 - 3 000	75	3

6.2 Compliance

If after inspection and testing of the samples taken in accordance with 6.1 the number of defectives found does not exceed the appropriate number given in column 3 of table 2, the lot (less any coils, reels or drums found to contain one or more defectives) shall be deemed to comply with the relevant requirements of the specification.

1) This section applies to the sampling for inspection and testing before acceptance or rejection of single lots (consignments) in cases where no information about the implementation of quality control or testing during manufacture is available to help in assessing the quality of the lot. It is also used as the procedure for adjudicating in cases of dispute. The cost of sampling, inspection and testing is a matter for agreement.

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7 Inspection and methods of test²⁾

NOTE Place of testing – Unless otherwise agreed between the purchaser and the supplier at the time of ordering, all tests shall be done at the manufacturer's works.

7.1 Inspection

7.1.1 Inspect the sample taken in accordance with 6.1.1, for compliance with the requirements of 4.1.3 or 4.2.9 (as relevant) and section 3.

7.1.2 Before testing the sample taken in accordance with 6.1 check each length for compliance with all the applicable requirements of section 4 that are not assessed in 7.1.1 or by the tests given in 7.2 - 7.8 (inclusive).

7.2 Diameter

Use the method for conductor wires given in SANS 6281-1.

Amdt 1

7.3 Resistance

Use SANS 6282-1 and, in the case of hard-drawn circular wires for telecommunication purposes, correct the results to standard diameter.

Amdt 1

7.4 Breaking strength

7.4.1 Single wires and wires (before stranding) of a stranded conductor

Use SANS 6283. In the case of hard-drawn copper wires for telecommunication purposes, correct the results to standard diameter.

Amdt1

7.4.2 Wires from stranded conductors

Use the apparatus and procedure described in SANS 6283 to determine the breaking strength of wires taken in accordance with table 3 from each conductor. The specimens shall not be straightened other than as needed to ensure a materially straight pull between clamps.

Amdt 1

Table 3 — Test specimens from stranded conductors

1	2	3	4	5	6
Number of wires in conductor	Number of specimens per layer				
	Centre wire	1st layer	2nd layer	3rd layer	4th layer
7	1	3	—	—	—
19	1	2	3	—	—
37	1	2	3	4	—
61	1	2	3	4	5

Discard the lowest result, and record the mean and the lowest of the remaining results as the mean and the minimum individual breaking strengths respectively of the wires of the stranded conductor.

2) The test methods described in this section are the methods to be used to determine whether a product complies with the specification or not and apply to samples taken in accordance with section 6. The manufacturer is at liberty to use whatever tests he chooses to apply as quality control in his factory.

7.5 Lapping test

Use SANS 6282-3. In the cases of jointing and binding wires, subject each specimen to an additional sequence of six turns of unlapping and relapping.

Amdt 1

7.6 Elongation at break

Use SANS 6282-3.

Amdt 1

7.7 Twisting test

Use SANS 6282-3, using a value of *L* equal to the appropriate value given in column 13 of table B.

Amdt 1

7.8 Persulfate test

Use SANS 6282-2.

Amdt 1

8 Constructional tables

Table A — Annealed copper jointing and binding wires

1	2	3	4	5	6
Type of wire	Wire diameters mm			Mass per km*	Breaking strength
	Standard	Maximum	Minimum	kg	N, min.
Jointing	1,25	1,263	1,238	10,91	294
Binding	1,40	1,414	1,386	13,69	372
*Based on standard diameters.					

**Table B — Hard-drawn circular wires for telecommunication purposes
(Post office overhead conductors)**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Wire diameters mm			Nominal mass per km*	Resistance per km at 20 °C ohms		Breaking strength N						Torsional strength	
						Standard diameter wires [§]		Maximum diameter wires [§]		Minimum diameter wires [§]			
Standard	Max.	Min.		kg	Standard [¶]	max. [‡]	max.	min.	max.	min.	max.	min.	Length mm
1,70	1,717	1,683	20,18	7,828	7,988	1 105	1 080	1 130	1 105	1 075	1 050	75	35
2,00	2,020	1,980	27,93	5,656	5,771	1 485	1 455	1 515	1 485	1 455	1 425	75	30
2,50	2,525	2,475	43,64	3,620	3,694	2 295	2 250	2 335	2 290	2 250	2 205	75	25
2,80	2,828	2,772	54,74	2,886	2,945	2 850	2 790	2 900	2 840	2 795	2 735	75	20
3,55	3,586	3,515	88,00	1,795	1,831	4 470	4 380	4 555	4 465	4 380	4 290	150	30
4,25	4,293	4,208	126,12	1,253	1,278	6 095	5 980	6 210	6 095	5 980	5 865	150	25
* Based on standard diameters. ¶ These resistances are based on standard diameters and a volume resistivity of 0,017 77 Ω.m ² /m at 20 °. ‡ Based on minimum diameters. § See column 1, 2 and 3. The limits for the breaking strength of wires of intermediate diameter shall be as determined by interpolation.													

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Table C — Hard-drawn circular wires for stranded conductors

1	2	3	4	5	6	7
Wire diameter mm			Nominal mass per km*	Resistance per km at 20 °C Ω		Breaking strength* N, min.
Standard	Maximum	Minimum		Standard [†]	Maximum [‡]	
1,70	1,717	1,683	20,18	7,828	7,988	1 030
2,12	2,141	2,099	31,38	5,034	5,136	1 590
2,36	2,384	2,336	38,89	4,062	4,146	1 960
2,65	2,677	2,624	49,03	3,222	3,286	2 440
3,00	3,030	2,970	62,84	2,514	2,565	3 100
3,35	3,384	3,317	78,36	2,016	2,056	3 830
3.75	3,788	3,713	98,19	1,609	1,641	4 740

* Based on standard diameters.
[†] These resistances are based on standard diameters and a volume resistivity of 0,017 77 Ω.m²/m at 20 °C.
[‡] Based on minimum diameters.

Table D — Stranded hard-drawn conductors

1	2	3	4	5	6
Reference area mm ²	Number and diameter of wires mm	Overall diameter mm, max.	Approximate mass per km* kg	Maximum permissible resistance per km at 20 °C ohms	Breaking strength kN, min.
16	7/1,70	5,15	143	1,150	6,63
25	7/2,12	6,42	221	0,740	10,24
40	7/2,65	8,03	346	0,473	15,71
63	7/3,35	10,15	553	0,296	24,66
80	7/3,75	11,36	693	0,236	30,53
100	19/2,65	13,38	943	0,175	41,72
160	37/2,36	16,69	1 465	0,114	65,27
250	37/3,00	21,21	2,368	0,070 5	103,23
315	61/2,65	24,09	3 049	0,054 9	130,94
400	61/3,00	27,27	3 907	0,042 8	166,41

* For information only. For basis of calculation see appendix D.

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Appendix A³⁾

Applicable standards

Reference is made to the latest issues of the following standards:

IEC 60028, *International standard of resistance for copper*.

SANS 804, *Unwrought tough pitch coppers: Electrolytic tough pitch high conductivity copper*. Amdt 2

| SANS 10005, *The preservative treatment of timber*.

SANS 6281-1, *Test methods for impregnated paper-insulated electric cables – Part 1: Tests on insulating and semi-conducting paper*. Amdt 1; amdt 2

| SANS 6282-1, *Test methods for bare conductors and conductors of insulated electric cables – Part 1: Conductor resistance*. Amdt 1; amdt 2

| SANS 6282-2, *Test methods for bare conductors and conductors of insulated electric cables – Part 2: Quality of metallic coatings*. Amdt 1; amdt 2

SANS 6282-3, *Test methods for bare conductors and conductors of insulated electric cables – Part 3: Mechanical tests*. Amdt 1; amdt 2

| SANS 6283, *Test methods for armouring of insulated electric cables*. Amdt 1; amdt 2

Appendix B

Notes to purchasers

B.1 The following requirements must be specified in tender invitations and in the order or contract:

- a) the type of wire or conductor (see 3.1);
- b) in the case of single wires the standard diameter, in mm (see 4.1.1(a) and tables A and B);
- c) in the case of stranded conductors, the reference area, in m² (see 4.2.2 and table D);
- d) when relevant, that stranded conductors of specific length are required (see 4.2.9);
- e) when relevant, that stranded conductors shall not be supplied in random lengths (see 4.2.9);
- f) special requirements for packing, if any (see 5.1);
- g) when relevant, the mass of coils of jointing or binding wire if other than as specified (see 5.1(b));
- h) when relevant, the packing for stranded conductors, if other than as specified (see 5.1(d)(1); and

³⁾ The information in the appendices is additional to that in the specification and has been included purely for information and guidance.

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- i) when relevant, that wooden drums/reels on which stranded conductors are packed are to be resistant to biological attack (see 5.1(d)(3)).

B.2 The following must be agreed upon between the purchaser and the supplier:

- a) the place of testing, if not at the manufacturer's works (see note to section 7).

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Appendix C

Standards for copper

C.1 Standards for annealed copper

The following standard values, given in IEC 60028, have been taken as normal values for standard annealed copper at a temperature of 20 °C:

- a) volume resistivity: 0,017 241 $\Omega \cdot \text{m}^2/\text{m}$;
- b) density: 8,89 g/cm^3 ;
- c) coefficient of linear expansion: 17×10^{-6} per °C;
- d) coefficient of variation of the resistance with temperature, measured between two potential points rigidly fixed to the wire, the metal being allowed to expand freely: 0,003 93 per °C; and
- e) from (a) and (b) it follows that the mass resistivity of standard annealed copper is 0,153 8 $\Omega \cdot \text{g}$ per metre.

C.2 Standards for hard-drawn copper

- a) Volume resistivity: 0,017 77 $\Omega \cdot \text{m}^2/\text{m}$. This is based on a conductivity of 97 % of that of standard annealed copper defined in C.1 above.
- b) Density: 8,89 g/cm^3 .
- c) Coefficient of linear expansion: 17×10^{-6} per °C.
- d) Coefficient of variation of the resistance with temperature, measured between two potential points rigidly fixed to the wire, the metal being allowed to expand freely: 0,003 81 per °C.
- e) From (a) and (b) it follows that the mass resistivity of hard-drawn copper is 0,157 98 $\Omega \cdot \text{g}$ per metre.

C.3 Basis for calculation of hard-drawn copper resistance

C.3.1 According to C.2(a), the volume resistivity of hard-drawn copper at 20 °C is 0,017 77 $\Omega \cdot \text{m}^2/\text{m}$.

Therefore, the standard resistance per kilometre of a single wire at 20 °C is

$$\frac{22,625}{d^2} \text{ ohms}$$

where

d is the diameter of a single straight wire, mm

The calculated resistance of a stranded conductor is obtained by multiplying the above resistance by an appropriate constant (see table D.1). The actual resistance of a stranded conductor can be measured directly.

Appendix D

Notes on the calculation of the properties of stranded copper conductors (table D)

D.1 Effect of lay ratio on stranding

When straightened out, each wire (other than the central wire) in any particular layer of a stranded conductor, is longer than the stranded conductor by an amount depending on the lay ratio of that layer. This has a corresponding effect on the resistance and mass of the conductor.

In calculating the constants in table D.1 the mean lay ratio, i.e. the arithmetic mean of the relevant maximum and minimum values given in table 1, has been assumed for each layer.

Table D.1 — Stranding constants for copper conductors

1	2	3
Number of wires in conductor	Stranding constants	
	Mass	Electrical resistance
7	7,058	0,144 0
19	19,24	0,053 3
37	37,68	0,027 5
61	62,18	0,016 7

D.2 Calculated breaking strength of stranded conductor

Stranding reduces the breaking strength of a stranded conductor to below the sum of the strengths of the individual component wires. The strengths given in column 2 of table D.2 allow for the effects of stranding, and may, normally, be regarded as minimum values.

Table D.2 — Breaking strength of stranded conductor

1	2
Number of wires in conductor	Breaking strength, % of sum of breaking strengths of the component wires before stranding
7	92
19	90
37	90
61	88

NOTE If tests for the ultimate breaking strength of complete stranded conductors are agreed upon by the manufacturer and purchaser (before or at the time of placing the order) such tests should be carried out by securing a suitable fitting to each end of a sample of conductor (of length at least 5 m) and testing the assembly in a suitable testing machine. Because of certain factors inherent in such tests, results that are not less than 95 % of the value calculated as above should be regarded as confirmation of the validity of the calculated value.

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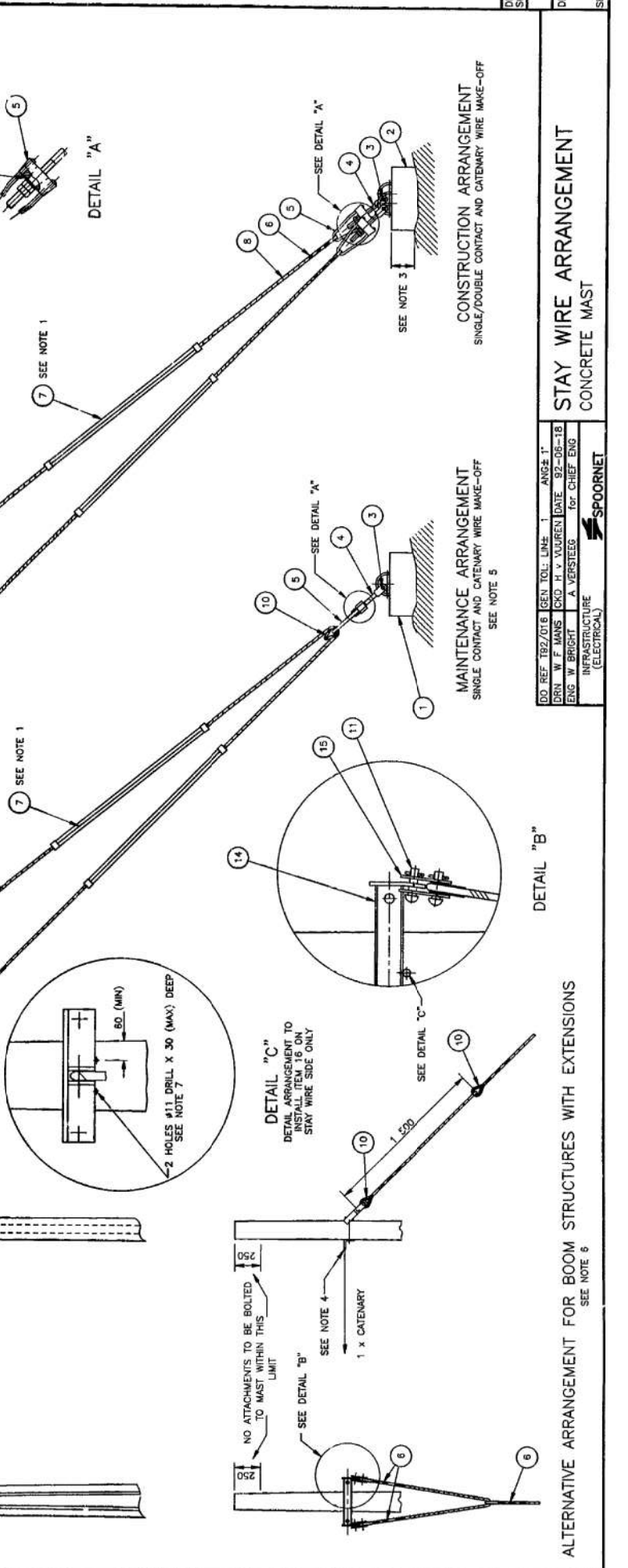
ITEM	DESCRIPTION	QTY	STORES ITEM NO	DWG NO CEE-
1	C&T ANCHOR FOUNDATION (SINGLE) EXISTING	1	_____	TO-43 (CASE 1)
2	C&T ANCHOR FOUNDATION (DOUBLE)	1	_____	TO-43 (CASE 2)
3	PIN, STAY WIRE (SEE NOTE 2)	*	_____	TNE-31 SHT 3
4	PIN, JOINT (SEE NOTE 2)	*	_____	TME-332
5	BOW AND CROSS-HEAD ASSEMBLY (SEE NOTE 2)	*	_____	TNE-50
6	CLAMP, ELECTRICAL CONDUCTOR, STRAIN	*	54/2437	TN-143
7	STAY WIRE GUARD (S E E NOTE 1)	2	54/5240	PPA-10
8	STRANDWIRE (19/ 4mm GALVANISED STEEL)	2	61/12881	_____
9	INSULATOR, STRAIN	2	54/16254	TN-388
10	INSULATOR, STRAIN	2	54/74084	TN-39
11	PIN, STRAIGHT, HEADED, #24 X 76L	2	54/5555	TN-55
12	ATTACHMENT, STAY WIRE	2	54/4607	TUPB-58
13	WASHER, PACKING (SEE NOTE 2)	2	_____	TN-28
14	ATTACHMENT, STAY WIRE	2	_____	TN-28
15	LINK STRAP	4	_____	TMEB-107
16	DOWEL PIN, STAINLESS STEEL, #10 X 50 LG (SEE NOTE 7)	4	_____	TNE-23

* AS REQUIRED

NOTES

1 ITEM 7 TO BE USED IN STATIONS AND YARDS ONLY.
 2 WIRE 7545 AND 13 TO BE COVERED WITH AN ANTI-CORROSION PASTE AND TAPE WHEN INSTALLED.
 3 FOUNDATION TO BE AT RAIL HEIGHT IN YARDS AND 100mm ABOVE FORMATION LEVEL ON OPEN LINES.
 4 FOR CONTACT AND CATENARY MAKE-OFF ARRANGEMENTS SEE DRG NO CEE-TPB-3 SHIT 1 & 2.
 5 NOT TO BE USED FOR CONSTRUCTION PURPOSES.
 6 USE THIS ARRANGEMENT ONLY ON DOUBLE BOOM STRUCTURES (CONCRETE MAST) WHEN AN EARTH ARM IS NOT PROVIDED. IN THIS CASE THE 132kV FEEDER EXTENSION, AERIAL BUNDLED CONDUCTOR EXTENSION OR 132kV TRANSMISSION LINE CROSS ARM IS INSTALLED.
 7 USE EPOXY TO SECURE ITEM 16 IN HOLES.

SEE NOTE 4
 1 x CONTACT WIRE
 2 x CONTACT WIRES (MAX)
 ± 2 000
 ± 2 000
 SEE DETAIL "C"
 13



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SANS 182-2:2008

Edition 1.4

Any reference to SABS 182-2 is deemed
to be a reference to this standard
(Government Notice No. 1373 of 8 November 2002)

SOUTH AFRICAN NATIONAL STANDARD

Conductors for overhead electrical transmission lines

Part 2: Stranded aluminium conductors

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Table of changes

Change No.	Date	Scope
Amdt 1	1980	Amended to bring the conductor sizes into line with those in current use and to amend certain corresponding electrical and physical requirements.
Amdt 2	1980	Amended to bring the conductor sizes into line with those in current use and to amend certain corresponding electrical and physical requirements.
Amdt 3	2001	Amended to change the definition of "acceptable" and to replace reference standard test methods.
Amdt 4	2008	Amended to change the designation of SABS standards to SANS standards, to remove reference to the standardization mark scheme, to change the chemical composition of aluminium and to update referenced standards.

Acknowledgement

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British Standards Institution
International Electrotechnical Commission

Foreword

This South African standard was approved by National Committee SABS/TC 066, *Electric cables*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in May 2008.

This document supersedes SABS 182-2:2001 (edition 1.3).

A vertical line in the margin shows where the text has been technically modified by amendment No. 4.

Preface

In this specification tests are not classified as type, sample, or routine tests. The requirements prescribed, if determined in accordance with the appropriate standard test methods on samples taken in accordance with the sampling procedure given in the specification, are a method of assessing whether a production complies with the specification or not. During production control, the manufacturer may use whatever tests he deems necessary for ensuring compliance with the specification, but in a case of dispute only the appropriate standard test methods may be used.

**Reaffirmed and reprinted in August 2013.
This document will be reviewed every five years
and be reaffirmed, amended, revised or withdrawn.**

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Edition 1.4

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Conductors for overhead electrical transmission lines

Part 2

Stranded aluminium conductors

1 Scope

1.1 This part of the specification applies to uninsulated, hard-drawn aluminium conductors for overhead transmission lines.

NOTE

- a) The standards referred to in the specification are listed in appendix A.
- b) Requirements that must be specified by the purchaser are listed in appendix B.
- c) Assessment of compliance with the requirements of 3.1 and 4.1 requires special agreement between supplier and purchaser. **Amdt 4**

2 Definitions

2.1 For the purpose of this part of the specification the following definitions shall apply:

acceptable

acceptable to the authority administering this standard or to the parties concluding the purchase contract, as relevant **Amdt 3**

aluminium

aluminium which complies with the requirements of 3.1

defective

reel or drum of stranded conductor that fails in one or more respects to comply with the relevant requirements of the specification

diameter of wire

mean of two measurements at right angles taken at the same cross-section

direction of lay

lateral direction of inclination to the axis, either right hand or left hand, of the receding helix formed by a wire of a stranded conductor

NOTE With right hand lay, the wires conform to the direction of the central part of the letter Z when the conductor is held vertically. With left hand lay, the wires conform to the direction of the central part of the letter S when the conductor is held vertically.

lay ratio

ratio of the axial length of a complete turn of the helix formed by an individual wire in a stranded conductor to the external diameter of the helix

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lot

not more than 3 000 reels or drums of stranded aluminium conductor of the same reference area, from one manufacturer, submitted at any one time for inspection and testing

reference area

cross-sectional area to be used for designation and purchasing purposes

standard diameter of wire

wire diameter on which the requirements for the mass and resistance per unit length and the breaking strength of the wire are based

stranded conductor

conductor made up of a number of single wires of the same nominal diameter laid concentrically

wire

aluminium of circular cross-section, produced by cold drawing

3 Material

3.1 Aluminium from which the wires are drawn shall be in the H9 condition and shall comply with the requirements as given in table C.3, and its volume resistivity, density, coefficient of linear expansion, and coefficient of variation of resistance with temperature shall conform to the relevant values given in IEC 60889 (see appendix C). **Amdt 4**

3.2 Welds are permitted in rods and wires before final drawing of the finished wire.

4 General constructional requirements

4.1 Wires

The wires that comprise a stranded conductor shall, before stranding, comply with the following requirements:

- a) **Diameter.** The diameter of a wire, measured in accordance with 7.2, shall be within the appropriate limits given in columns 2 and 3 of table 1.
- b) **Freedom from defects.** The wires shall be smooth, uniform in quality, free from spills, splits, and other defects, and any departure from circularity of the cross-section shall not exceed 1 % of the mean diameter.
- c) **Physical properties.** The wires shall be hard-drawn, and shall, except as allowed in terms of 4.2(c), comply with the following requirements:
 - 1) **Resistance.** The resistance of the wires, determined in accordance with 7.3, shall not exceed the appropriate maximum given in column 6 of table 1.
 - 2) **Breaking strength.** The breaking strength, determined in accordance with 7.4.1, shall be at least equal to the appropriate minimum given in column 7 of table 1.
 - 3) **Ductility.** The ductility shall be such that the wires withstand lapping in accordance with 7.5 without showing any sign of cracks (when examined by unaided normal vision) or of breaking.

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Table 1 — Hard-drawn circular aluminium wires for stranded aluminium overhead conductors

1	2	3	4	5	6	7
Wire diameter mm			Nominal mass per km [*] kg	Resistance per km at 20 °C Ω		Breaking strength [*] N, min.
Standard	Maximum	Minimum		Standard [†]	Maximum [‡]	
2,12	2,141	2,099	9,541	8,007	8,168	640
2,65	2,677	2,624	14,91	5,125	5,227	950
3,25	3,283	3,218	22,42	3,407	3,475	1 370
3,78	3,818	3,742	30,33	2,519	2,570	1 800
4,26	4,303	4,217	38,52	1,983	2,024	2 270
4,65	4,697	4,604	45,90	1,664	1,698	2 700
[*] Based on standard diameters. [†] These resistances are based on standard diameters and a volume resistivity of 0,028 264 Ω.mm ² /m at 20 °C. [‡] Based on minimum diameters.						

Amdt 1; amdt 2

4.2 Joints in wires

- a) There shall be no joints in the wires of a stranded conductor comprised of seven wires.
- b) Joints in individual wires of a stranded conductor comprised of at least 19 wires shall be permitted, provided that
 - 1) no two such joints are less than 15 m apart,
 - 2) the joints are made by resistance or cold pressure butt welding and are substantially smooth,
 - 3) joints made by resistance welding are, subsequent to welding, annealed over a distance of at least 200 mm on each side of the joint, and
 - 4) the diameter of the stranded conductor is not increased materially by the joint.
- c) The section of a wire containing a joint shall be exempt from the requirements given in table 1.

4.3 Stranding

4.3.1 General

The number and diameter of the wires in a stranded conductor shall conform to the values given in column 2 of table 3, appropriate to the reference area specified by the purchaser. The wires in each layer shall be evenly and closely stranded. The stranding shall be such that

- a) the overall diameter of the stranded conductor complies with the requirements of 4.4,
- b) the diameter, determined in accordance with 7.2, of individual wires taken from the stranded conductor is not more than 1 % below the appropriate minimum given in table 1, and

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- c) the mean and the minimum breaking strengths, determined in accordance with 7.4.2, of individual wires taken from the stranded conductor are at least 95 % and 90 % respectively of the appropriate minimum given in table 1.

4.3.2 Direction of lay

In all constructions, successive layers of a stranded conductor shall have opposite directions of lay, the outermost layer being right-handed.

4.3.3 Lay ratio

- a) The lay ratio of the different layers shall be within the appropriate limits given in table 2.
- b) In a stranded conductor having multiple layers of wires, the lay ratio of any layer shall not be greater than the lay ratio of the layer immediately beneath it.

Table 2 — Lay ratios for stranded aluminium conductors

1	2	3	4	5	6	7	8	9
Number of wires in conductor	Lay ratios							
	6-wire layer		12-wire layer		18-wire layer		24-wire layer	
	max.	min.	max.	min.	max.	min.	max.	min.
7	14	10	—	—	—	—	—	—
19	16	10	14	10	—	—	—	—
37	17	10	16	10	14	10	—	—
61	17	10	16	10	15	10	14	10

4.4 Overall diameter

The overall diameter of a conductor, determined in accordance with 7.2, shall not exceed the appropriate maximum given in column 3 of table 3.

Table 3 — Stranded hard-drawn aluminium overhead conductors

1	2	3	4	5	6
Reference area	Number and diameter of wires	Overall diameter	Approximate mass per km*	Calculated maximum resistance per km at 20 °C*	Calculated breaking strength*
mm ²	No./mm	mm, max.	kg	Ω	kN, min.
25	7/2,12	6,42	68	1,182	4,12
39	7/2,65	8,03	106	0,756 3	6,12
58	7/3,25	10,15	152	0,502 9	8,82
100	7/4,26	12,91	273	0,292 9	14,6
158	19/3,25	16,92	434	0,196 2	23,4
273	19/4,26	21,52	745	0,108 4	38,8
323	19/4,65	23,49	888	0,090 96	46,2
415	37/3,78	26,73	1 145	0,070 85	59,9
527	37/4,26	30,12	1 454	0,055 80	75,6
685	61/3,78	34,36	1 891	0,043 07	96,6
869	61/4,26	38,73	2 402	0,033 92	122

* For information only. (For basis of calculation see appendix D.)

Amdt 1; amdt 2

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4.5 Freedom from defects and foreign matter

Stranded conductors shall be free from dirt, grit, excessive amounts of drawing lubricant and other foreign matter, and from broken wires.

4.6 Length

Unless stranded conductors of other lengths are specified by the purchaser, the conductors shall be supplied in the manufacturer's usual production lengths. In addition, unless otherwise specified by the purchaser, it shall be permissible to supply not more than 5 % of the length ordered on any one order in random lengths, provided that no random length is shorter than one-third of the appropriate production length. The actual length of the conductor on a drum or reel shall be at least equal to the nominal length (i.e. the production length or, when relevant, the length specified by the purchaser) and shall not exceed it by more than 5 % or 50 m, whichever is less.

5 Packing and marking

5.1 Packing

5.1.1 General

Unless otherwise specified by the purchaser, the conductor shall be packed on a robust drum or reel that has a barrel of diameter $30 d$, where d is the nominal overall diameter of the conductor.

5.1.2 Continuity

Unless otherwise acceptable, each continuous length of a stranded conductor shall be packed individually.

5.1.3 Wooden drums and reels

- a) Where wooden drums or wooden reels are used, the moisture content of the wood used for fabrication of the drums or reels shall not exceed 15 %.
- b) When wooden drums or reels resistant to biological attack are required by the purchaser, the wood shall have been impregnated (by pressure or in a hot/cold open tank) in accordance with SANS 10005, with a class C preservative or with chromated copper arsenate. **Amdt 4**

5.2 Marking

Each reel or drum shall bear the following information legibly and indelibly marked on a firmly attached label or printed on a cheek of the reel or drum:

- a) the manufacturer's trade name or trademark or both;
- b) reference area and material of conductors;
- c) nominal length in metres (i.e. the production length or the specified length, as relevant (see 4.6));
- d) gross mass in kg; and
- e) year of manufacture.

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6 Sampling and compliance with the specification

NOTE This section applies to the sampling for inspection and testing before acceptance or rejection of single lots (consignments) in cases where no information about the implementation of quality control or testing during manufacture is available to help in assessing the quality of the lot. The cost of sampling, inspection and testing is a matter for agreement between manufacturer and purchaser.

6.1 Sampling

The following sampling procedure shall be applied in determining whether a lot complies with the appropriate requirements of the specification. The samples so drawn shall be deemed to represent the lot for the respective properties.

6.1.1 Sample for inspection

From the lot take at random a sample of the size given in column 2 of table 4 relative to the appropriate lot size given in column 1.

6.1.2 Sample for testing

After inspection (see 7.1.1) of the sample taken in accordance with 6.1.1, cut off and discard the first 300 mm length of the outer end of the wire or conductor on each reel or drum and then cut the length required for the test pieces.

Table 4 — Sample sizes for stranded conductors

1	2	3
Lot size, coils, reels or drums	Sample size, coils reels or drums	Number of defectives
1 – 30	All	0
31 – 500	30	1
501 – 800	40	2
801 – 1 300	55	2
1 301 – 3 000	75	3

6.2 Compliance

If after inspection and testing of the samples taken in accordance with 6.1 the number of defectives found does not exceed the appropriate number given in column 3 of table 4, the lot (less any reels or drums found to contain one or more defectives) shall be deemed to comply with the relevant requirements of the specification.

7 Inspection and methods of test¹⁾

7.1 Inspection

7.1.1 Inspect the sample taken in accordance with 6.1.1 for compliance with the requirements of 4.6 and section 5.

1) The test methods described in this section are the methods to be used to determine whether a product complies with the specification or not and apply to samples taken in accordance with section 6. The manufacturer is at liberty to use whatever tests he chooses to apply as quality control in his factory.

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7.1.2 Before testing the sample taken in accordance with 6.1.2, check each length for compliance with the requirements of 4.3 (other than those assessed by 7.2 and 7.4.2) and 4.5.

7.2 Diameter

Use the method for conductor wires given in SANS 6281-1.

Amdt 3

7.3 Resistance

Use SANS 6282-1 to determine the resistance of a single wire, to be used in composing the stranded conductor, and multiply the value obtained by the appropriate constant given in appendix D, table D.1, to obtain the resistance of the stranded conductor.

Amdt 3

7.4 Breaking strength

7.4.1 Wires (before stranding)

Use SANS 6283, and correct the result as in 7.3 to standard diameter.

Amdt 3

7.4.2 Wires from stranded conductors

Use the apparatus and procedure described in SANS 6283 to determine the breaking strength of wires taken in accordance with table 5 from each stranded conductor. The wire specimens shall not be straightened other than as needed to ensure a materially straight pull between clamps.

Amdt 3

Table 5 — Test specimens for breaking strength test

1	2	3	4	5	6
Number of wires in conductor	Number of specimens per layer				
	Centre wire	1st layer	2nd layer	3rd layer	4th layer
7	1	3	—	—	—
19	1	2	3	—	—
37	1	2	3	4	—
61	1	2	3	4	5

Discard the lowest result, and record the mean and the lowest of the remaining results as the mean and the minimum individual breaking strengths respectively of the wires of the stranded conductor.

7.5 Ductility

Use SANS 6282-3.

Amdt 3

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Appendix A²⁾

Applicable standards

Reference is made to the latest issues of the following standards:

EN 573-3:2003, *Aluminium and aluminium alloys – Chemical composition and form of wrought products – Part 3: Chemical composition.* **Amdt 4**

IEC 60889, *Hard-drawn aluminium wire for overhead line conductors.* **Amdt 4**

SANS 6281-1, *Test methods for impregnated paper-insulated electric cables – Part 1: Tests on insulating and semi-conducting paper.* **Amdt 3**

SANS 6282-1, *Test methods for bare conductors and conductors of insulated electric cables – Part 1: Conductor resistance.* **Amdt 3**

SANS 6282-3, *Test methods for bare conductors and conductors of insulated electric cables – Part 3: Mechanical tests.* **Amdt 3**

SANS 6283, *Test methods for armouring of insulated electric cables.* **Amdt 3**

SANS 10005, *The preservative treatment of timber.*

Appendix B

Notes to purchasers

The following requirements must be specified in tender invitations and in each order or contract:

- a) the reference area, in m², of the stranded conductors, (see 4.3.1 and table 3);
- b) when relevant, that conductors of specific length are required (see 4.6);
- c) when relevant, the conductor lengths of non-standard length that will be acceptable (see 4.6);
- d) the packing, if other than as specified (see 5.1.1); and
- e) when relevant, that wooden drums/reels on which the conductor is packed are to be resistant to biological attack (see 5.1.3(b)).

2) The information in the appendices is additional to that in the specification and has been included purely for information and guidance.

Appendix C

Standards for aluminium

C.1 Standards for hard-drawn aluminium

The following standard values, given in IEC 60889, have been taken as normal values for hard-drawn aluminium at a temperature of 20 °C: **Amdt 4**

- a) volume resistivity: 0,028 264 $\Omega \cdot \text{mm}^2/\text{m}$ (only aluminium in condition H9 used for overhead lines but the resistivity of all other tempers, except annealed, is the same);
- b) density: 2,703 g/cm³;
- c) coefficient of linear expansion between 0 and 30 °C: 23×10^{-6} per °C;
- d) coefficient of variation of the resistance with temperature, when measured between two potential points rigidly fixed to the wire, the metal being allowed to expand freely: 0,004 03 per °C;
- e) from (a) and (b) it follows that the mass resistivity of H9 hard-drawn aluminium is 0,076 397 6 $\Omega \cdot \text{g}$ per metre.

C.2 Basis for calculation of aluminium resistance

According to C.1(a), the volume resistivity of hard-drawn aluminium at 20 °C is 0,028 264 $\Omega \cdot \text{m}^2 / \text{m}$.

Therefore, the standard resistance per kilometre of a single wire at 20 °C is

$$\frac{35,987}{d^2} \Omega$$

where

d = diameter of a single straight wire, mm

The resistance of a stranded conductor is obtained by multiplying the above resistance by an appropriate constant (see table D.1).

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Table C.3 — Chemical composition of aluminium EN AW-1350 (99,5)

1	2	3
Element	Content %	
	min.	max.
Aluminium	99,5*	—
Copper	—	0,05
Silicon	—	0,10
Iron	—	0,40
Zinc	—	0,05
Manganese	—	0,01
Chromium	—	0,01
Gallium	—	0,03
Impurities, max.*		
NOTE Chemical composition values are derived from table 1 of EN 573-3:2003.		
* The aluminium content of unalloyed aluminium not made by a refining process is the difference between 100,00 % and the sum of all other metallic elements present in amounts of 0,010 % or more each, expressed to the second decimal place before determining the sum.		
+ Except that in aluminiums of designation other than EN AW-1350 other impurities shall be permitted provided that the content of an individual impurity does not exceed 0,03 %. In addition, in none of the aluminium shall any impurity that is not specifically limited be present in an amount that is generally accepted as having an adverse effect on the product.		

Amdt 4

Appendix D

Notes on the calculation of the properties of stranded aluminium conductors given in table 3

D.1 Effect of lay ratio on stranding

When straightened out, each wire (other than the central wire) in any particular layer of a stranded conductor, is longer than the stranded conductor by an amount depending on the lay ratio of that layer. This has a corresponding effect on the resistance and mass of the conductor.

In calculating the constants in table D.1 the mean lay ratio, i.e. the arithmetic mean of the relevant maximum and minimum values given in table 2, has been assumed for each layer.

D.2 Resistance of a stranded conductor

The resistance of any length of a stranded conductor is the resistance of the same length of any one wire multiplied by the appropriate constant given in column 3 of table D.1.

D.3 Mass of a stranded conductor

The mass of each wire (other than the central wire) in a length of stranded conductor will be greater than that of an equal length of straight wire by an amount depending on the lay ratio of the particular layer. The total mass of any length of conductor is obtained by multiplying the mass of an equal length of straight wire by the appropriate constant given in column 2 of table D.1.

Table D.1 — Stranding constants for aluminium conductors

1	2	3
Number of wires in conductor	Stranding constants	
	Mass	Electrical resistance
7	7,091	0,144 7
19	19,34	0,053 57
37	37,74	0,027 57
61	62,35	0,016 76

D.4 Calculated breaking strength of stranded conductor

Stranding reduces the breaking strength of a stranded conductor to below the sum of the strengths of the individual component wires. The strengths given in column 2 of table D.2 allow for the effects of stranding, and may, normally, be regarded as minimum values.

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Table D.2 — Breaking strengths of stranded conductors

1	2
Number of wires in conductor	Breaking strength, % of sum of breaking strengths of the component wires before stranding
7	92
19	90
37	90
61	88

NOTE If tests for the ultimate breaking strength of complete stranded conductors are agreed upon by the manufacturer and purchaser (before or at the time of placing the order) such tests should be carried out by securing a suitable fitting to each end of a sample of conductor (of length at least 5 m) and testing the assembly in a suitable testing machine. Because of certain factors inherent in such tests, results that are not less than 95 % of the value calculated as above should be regarded as confirmation of the validity of the calculated value.

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Railway applications — Fixed installations — Electric traction — Copper and copper alloy grooved contact wires

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3

National foreword

This British Standard is the UK implementation of EN 50149:2012. It supersedes BS EN 50149:2001 which is withdrawn.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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EUROPEAN STANDARD

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NORME EUROPÉENNE

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June 2012

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English version

**Railway applications -
Fixed installations -
Electric traction -
Copper and copper alloy grooved contact wires**

Applications ferroviaires -
Installations fixes -
Traction électrique -
Fil rainurés en cuivre et en cuivre allié

Bahnwendungen – Ortsfeste Anlagen –
Elektrischer Zugbetrieb – Rillenfahrdrähte aus
Kupfer und Kupferlegierung

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CENELEC

European Committee for Electrotechnical Standardization

Comité Européen de Normalisation Electrotechnique

Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

This document (EN 50149:2012) has been prepared by CLC/SC 9XC "Electric supply and earthing systems for public transport equipment and ancillary apparatus (Fixed installations)".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-04-30
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-04-30

This document supersedes EN 50149:2001.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

1 Scope

This European Standard specifies the characteristics of copper and copper alloy wires of cross sections of 80 mm², 100 mm², 107 mm², 120 mm² and 150 mm² for use on overhead contact lines.

It establishes the product characteristics, the test methods, checking procedures to be used with the wires, together with the ordering and delivery condition.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1655:1997, *Copper and copper alloys — Declarations of conformity*

EN 1977:1998, *Copper and copper alloys — Copper drawing stock (wire rod)*

EN ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature (ISO 6892-1)*

EN 10204:2004, *Metallic products — Types of inspection documents*

IEC 60468:1974, *Method of measurement of resistivity of metallic materials*

ISO 7801:1984, *Metallic materials — Wire — Reverse bend test*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

drawing stock or intermediate rod stock

wire generally of circular shape, whose cross section is larger than the wire cross section, from which the contact wire is then drawn

3.2

wire

electric conductor of an overhead contact line with which the current collector makes contact and is characterised by two clamping grooves

Note 1 to entry The wire herein after will be referred to as wire or wires.

4 Characteristics of wires

4.1 Wire designation system

The wire designation shall consist of

- denomination (Wire);
- number of this European Standard (EN 50149);

- configuration designation (see 4.5.4);
- material designation, either symbol or number (see Table B.1, or material as agreed between purchaser and manufacturer).

EXAMPLE:

Wire EN 50149 – AC-120 – CuMg0,5

or

Wire EN 50149 – AC-120 – CW128C

or

Wire EN 50149 – AC-120 – CuMg0,5 (high conductivity)

4.2 Material designation

The drawing stock or intermediate rod stock shall be a copper or copper silver alloy as defined in EN 1977:1998 or another copper alloy. Annex B gives the designations of the drawing stocks or intermediate rod stocks for some possible composition of the wire. At the time of tender the user shall specify explicitly the material(s) he wants or he is allowed to apply.

NOTE Copper cadmium alloys are not recommended for use for environmental reasons.

4.3 Appearance and condition

The wires shall not present any imperfections (roughness, sliver, seam, inclusion or cracks) liable to affect the mechanical and/or electrical properties specified in this European Standard or to cause difficulties during installation/operation.

The surface shall be clean and free of oxide inclusions or sulphide generated during the manufacturing process or foreign substances such as pickling residue.

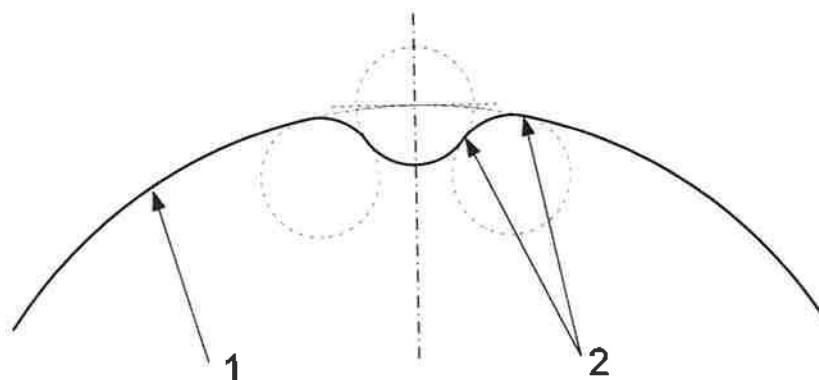
The colour of the metallic bright surface immediately after manufacturing may change due to atmospheric influence. This is acceptable.

4.4 Identification

4.4.1 General requirements

All wires manufactured from alloys shall be clearly identified. For normal and high strength copper and copper-silver, copper-cadmium, copper-magnesium and copper-tin alloys the method of identification shall be by identification grooves as shown below. For other alloys the identification method (whether grooves or other method) shall be agreed between purchaser and manufacturer.

Identification grooves shall be set out as shown in Figure 1. The centre of the middle circle shall be on the projected circle of the contact wire. The connection between two successive arcs shall be without a straight line.



Key

- 1 diameter of wire
- 2 tangential connection between successive arcs

Figure 1 - Set out of identification groove

4.4.2 Normal and high strength copper (CuETP, CuFRHC, CuHCP, CuOF)

Wires of copper have no identification grooves¹⁾.

4.4.3 Copper-silver alloy (CuAg 0,1)

Wires of copper alloy with silver shall incorporate two identification grooves on the upper lobe of the wire in accordance with Figure 2.

4.4.4 Copper-cadmium alloy (CuCd 0,7, CuCd 1,0)

Wires of copper alloy with cadmium shall incorporate one identification groove on the upper lobe of the wire in accordance with Figure 3¹⁾.

4.4.5 Copper-magnesium alloy (CuMg 0,2, CuMg 0,5)

Wires of copper alloy with magnesium shall incorporate three identification grooves on the upper lobe of the wire in accordance with Figure 4.

4.4.6 Copper-tin alloy (CuSn 0,2, CuSn 0,4)

Wires of copper alloy with tin shall incorporate one identification groove set at an angle of 24° on the upper lobe of the wire in accordance with Figure 5.

¹⁾ See Annex E, Special National Condition for United Kingdom.

Dimensions in millimetres

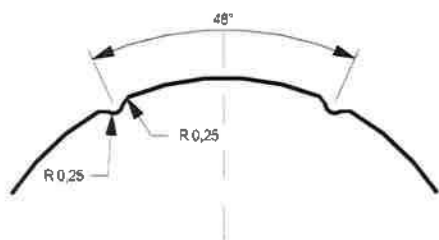


Figure 2 - Two identification grooves

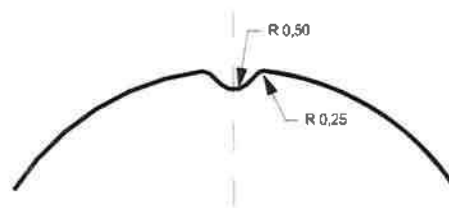


Figure 3 - One identification groove

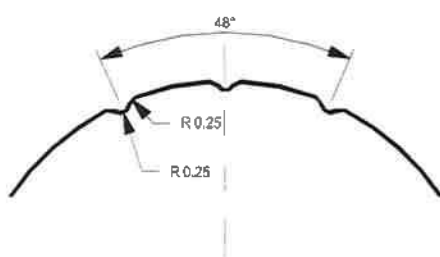


Figure 4 - Three identification grooves

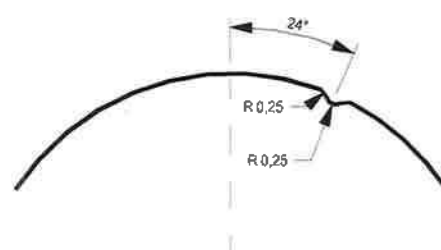


Figure 5 - One offset identification groove

4.5 Configuration, profile and cross sections

4.5.1 Clamping grooves

Whatever cross section of the wire is used, the dimensions of the clamping grooves shall be in accordance with either type A or type B as given in Figure 6.

Dimensions in millimetres

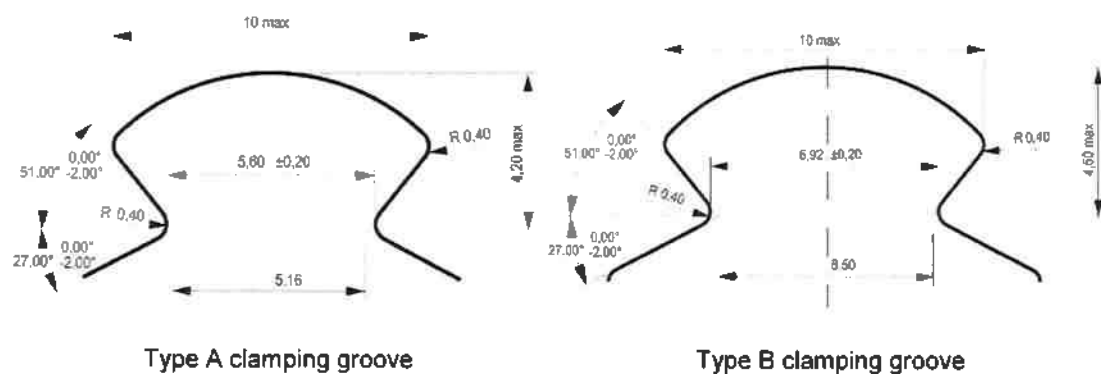


Figure 6 - Clamping groove types

4.5.2 Cross-section areas

This European Standard details the following nominal cross sections: 80 mm², 100 mm², 107 mm², 120 mm² and 150 mm².

4.5.3 Profiles

Profiles are of two main types, the circular profile and the flattened profile.

4.5.4 Configurations

The configurations of the wires shall be in conformance with Table 1 and are defined as combinations of the profile shape, the nominal cross section and the type of clamping groove.

The dimensions of each configuration are shown in Annex A.

Table 1- Configurations and cross sections

Nominal cross sections	Clamping groove Type A		Clamping groove Type B			
	Circular		Circular		Flat	
mm ²	Designation	Fig.No in Annex A	Designation	Fig.No in Annex A	Designation	Fig.No in Annex A
80	AC-80	1				
100	AC-100	2	BC-100	6	BF-100	10
107	AC-107	3	BC-107	7	BF-107	11
120	AC-120	4	BC-120	8	BF-120	12
150	AC-150	5	BC-150	9	BF-150	13

4.6 Electrical properties

4.6.1 Resistivity

The resistivity of the wire at 20 °C shall not exceed the values in Table 2 for alloys listed in Annex B. For other copper alloys the values shall be as agreed between purchaser and manufacturer.

Table 2 - Maximum resistivity

Material	Resistivity in 10^{-8} $\Omega\text{m max.}$
Cu-ETP	1,777
Cu-FRHC	1,777
Cu-HCP	1,777
Cu-OF	1,777
CuAg0,1	1,777
CuMg0,2 (Normal conductivity)	2,240
CuMg0,2 (High conductivity)	2,155
CuMg0,5	2,778
CuSn0,2 (Normal conductivity)	2,395
CuSn0,2 (High conductivity) ^a	2,155
CuCd0,7	2,005
CuCd1,0	2,155
^a CuSn0,2 (high conductivity) was previous denoted CuSn0,4	

4.6.2 Resistance per kilometre

The resistance per unit length at 20 °C shall not exceed the resistance value specified in Table 3 for alloys listed in Annex B. For other copper alloys the values shall be as agreed between purchaser and manufacturer.

The calculation used to determine the electrical resistance per kilometre at 20 °C is specified in C.1 and is based on the values of resistivity in Table 2.

The value of resistance at a join area shall be no greater than specified for the wire material.

Table 3 - Maximum resistance / kilometre

Nominal cross section mm ²	Material designation ^a						
	Cu-ETP Cu-OF Cu-FRHC Cu-HCP	CuAg0,1	CuMg0,2	CuMg0,5	CuSn0,2	CuCd0,7	CuCd1,0 CuSn0,2 (high conductivity) CuMg0,2 (high conductivity)
80	0,229	0,229	0,289	0,385	0,309	0,258	0,278
100	0,183	0,183	0,231	0,286	0,247	0,207	0,222
107	0,171	0,171	0,216	0,268	0,231	0,193	0,208
120	0,153	0,153	0,192	0,239	0,206	0,172	0,185
150	0,122	0,122	0,154	0,191	0,165	0,138	0,148

^a Values in Ω/km at 20 °C - Calculated on minimum cross sectional area.

^b CuSn0,2 (high conductivity) was previous denoted CuSn0,4

4.7 Mechanical properties

4.7.1 Tensile strength and percentage elongation after fracture

The tensile strength and percentage elongation after fracture of wire shall be in accordance with the values indicated in Table 4 for alloys listed in Annex B. For other copper alloys the values shall be as agreed between purchaser and manufacturer. Maximum percentage elongation values after fracture are recommended.

Table 5 shows the minimum values of calculated breaking load to be expected in tensile tests for alloys listed in Annex B, corresponding to the minimum tensile strength shown in Table 4.

The value of tensile strength and the values for the percentage elongation after fracture at a join area shall be in accordance with the specified values of the wire material.

Table 4 - Tensile strength and percentage elongation after fracture

Material	Designation	Nominal cross section mm ²	Percentage elongation after fracture A200		Minimum tensile strength MPa ^a
			min. %	max. %	
Normal strength copper	Cu-ETP	80	3	10	355
	Cu-FRHC	100	3	10	355
	Cu-HCP	107	3	10	350
	CuOF	120	3	10	330
		150	3	10	310
High strength copper and high strength copper-silver alloy	CuETP	80	3	8	375
	CuFRHC	100	3	8	375
	CuHCP	107	3	8	360
	CuOF	120	3	8	360
	CuAg0,1	150	3	8	360
Normal strength copper-silver alloy	CuAg0,1	80	3	10	365
		100	3	10	360
		107	3	10	350
		120	3	10	350
		150	3	10	350
Copper-magnesium alloy	CuMg0,2 CuMg0,2 (high conductivity)	80	3	10	460
		100	3	10	450
		107	3	10	440
		120	3	10	430
		150	3	10	420
Copper-magnesium alloy	CuMg0,5	80	3	10	520
		100	3	10	510
		107	3	10	500
		120	3	10	490
		150	3	10	470
Copper-tin alloy	CuSn0,2 CuSn0,2 (high conductivity) ^b	80	2	8	460
		100	2	8	450
		107	2	8	430
		120	2	8	420
		150	2	8	420
Copper-cadmium alloy	CuCd0,7	80	2	7	430
		100	2	7	430
		107	2	7	430
		120	2	7	430
		150	2	7	430
Copper-cadmium alloy	CuCd1,0	80	2	7	455
		100	2	7	445
		107	2	7	445
		120	2	7	445
		150	2	7	445
^a 1 MPa = 1 N/mm ²					
^b CuSn0,2 (high conductivity) was previous denoted CuSn0,4					

Table 5 - Breaking loads

Material	Designation	Nominal cross section mm ²	Minimum breaking load ^a kN
Normal strength copper	Cu-ETP	80	27,5
	Cu-FRHC	100	34,5
	Cu-HCP	107	36,3
	CuOF	120	38,4
		150	45,1
High strength copper and high strength copper-silver alloy	CuETP	80	29,1
	CuFRHC	100	36,4
	CuHCP	107	37,4
	CuOF	120	41,9
	CuAg0,1	150	52,4
Normal strength copper-silver alloy		80	28,3
	CuAg0,1	100	34,9
		107	36,3
		120	40,7
		150	50,9
Copper-magnesium alloy		80	35,7
	CuMg0,2	100	43,7
	CuMg0,2 (high conductivity)	107	45,7
		120	50,1
		150	61,1
Copper-magnesium alloy		80	40,4
	CuMg0,5	100	49,5
		107	51,9
		120	57,0
		150	68,4
Copper-tin alloy		80	35,7
	CuSn0,2	100	43,7
	CuSn0,2 (high conductivity) ^b	107	44,6
		120	48,9
		150	61,1
Copper-cadmium alloy		80	33,4
	CuCd0,7	100	41,7
		107	44,6
		120	50,1
		150	62,6
Copper-cadmium alloy		80	35,3
	CuCd1,0	100	43,2
		107	46,2
		120	51,8
		150	64,7

^a Calculated on minimum cross sectional area.

^b CuSn0,2 (high conductivity) was previous denoted CuSn0,4

NOTE 1 Because of a possible link between the creep of the wires and the maximum percentage elongation at fracture value (Table 4), the maximum elongation has been retained in this European Standard. These are indicative values only, unless otherwise agreed between purchaser and manufacturer.

NOTE 2 The calculations used to determine the figures in Table 5 are specified in C.2. The minimum cross section of the wire has been taken into consideration, see C.3.

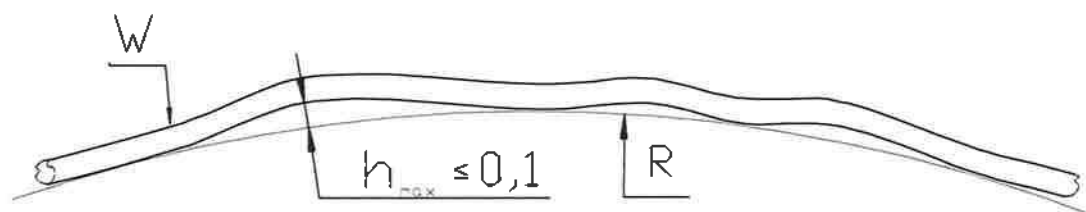
NOTE 3 The minimum specified breaking load corresponds to the maximum force (F_m) as defined in EN ISO 6892-1.

4.7.2 Additional requirements

The wire shall withstand reverse bend loads, torsional loads and winding loads. These requirements shall be tested in accordance with 5.5.2, 5.5.3 and 5.5.4 subject to agreement between purchaser and manufacturer.

4.7.3 Microwaves on longitudinal axis of wire

The wire longitudinal axis shall not show any inadmissible microwaves. After manufacturing, the vertical variation of the longitudinal axis of the wire should be not more than 0,1 mm as shown in Figure 7, subject to agreement between purchaser and manufacturer.



Key

- W wire
- R remaining bending radius under lower tension (up to 10 kN)
- h_{max} maximum variation of longitudinal axis in mm

Figure 7 – Limit on microwaves in wire

This requirement shall be tested in accordance with 5.5.5 subject to agreement between purchaser and manufacturer.

NOTE This problem appears mainly in high strength copper alloys (minimum tensile strength > 400 MPa).

4.8 Joining drawing stock or intermediate rod stock

Joins are allowed except where specified otherwise by the customer.

The type of join shall be agreed with the customer.

The join shall be made only on the drawing stocks or intermediate wire rod stocks.

5 Checking the characteristics of wires

5.1 Material composition

The manufacturer shall submit a certificate to confirm the material composition is in accordance with Annex B or the requirements agreed between purchaser and manufacturer.

5.2 Appearance and condition

The wire together with each sample which is subjected to other tests identified in this standard shall be examined with the naked eye (corrected to normal vision). The appearance shall comply with the requirements of 4.3.

5.3 Profiles and dimensions

Dimensional examination shall be performed either using a suitable micrometer or sliding calliper, or using a profile reflector with a minimum amplification of 10, or other appropriate methods.

5.4 Electrical properties

The resistivity or resistance per unit length measurements shall be made in conformity with IEC 60468:1974. The results shall be in accordance with 4.6.1 or 4.6.2 as appropriate.

NOTE 1 The coefficient of temperature for the measurement of resistance at temperatures other than shown in 4.6.1 and 4.6.2 should be:

For copper (Cu-ETP, hard drawn): $3,8 \times 10^{-3}/K$

For copper with silver (CuAg0,1): $3,8 \times 10^{-3}/K$

For copper with magnesium (CuMg0,2, CuMg0,2 high conductivity): $3,1 \times 10^{-3}/K$

For copper with magnesium (CuMg0,5): $2,7 \times 10^{-3}/K$

For copper with tin (CuSn0,2, CuSn0,2 high conductivity): $3,2 \times 10^{-3}/K$

For other copper alloys the values should be as agreed between purchaser and manufacturer.

NOTE 2 In a temperature range from $-50\text{ }^{\circ}\text{C}$ up to $100\text{ }^{\circ}\text{C}$ the coefficient of temperature for the resistance is constant. For this application of measurement of electrical properties, definition of temperature range is not necessary.

NOTE 3 Values are only a recommendation. Deviations may arise from different chemical compositions and manufacturing methods.

5.5 Mechanical properties

5.5.1 Breaking load and percentage elongation after fracture

This test is performed in accordance with the requirements of EN ISO 6892-1. The gauge length for percentage elongation measurement shall be 200 mm.

The original cross sectional area is calculated from the measured mass per unit length and the density appropriate to the material specified (see C.6). Values shall be in accordance with 4.7.1.

For the test on joined wire, the requirements of 4.7 and 4.8 shall be noted, and the tensile tests shall be carried out as follows:

- if the length in the joined wire is less than or equal to the length between reference marks, the join shall be placed at the middle of the reference marks;
- if the length of the join is greater than the length between reference marks, the method of testing shall be agreed between the customer and manufacturer.

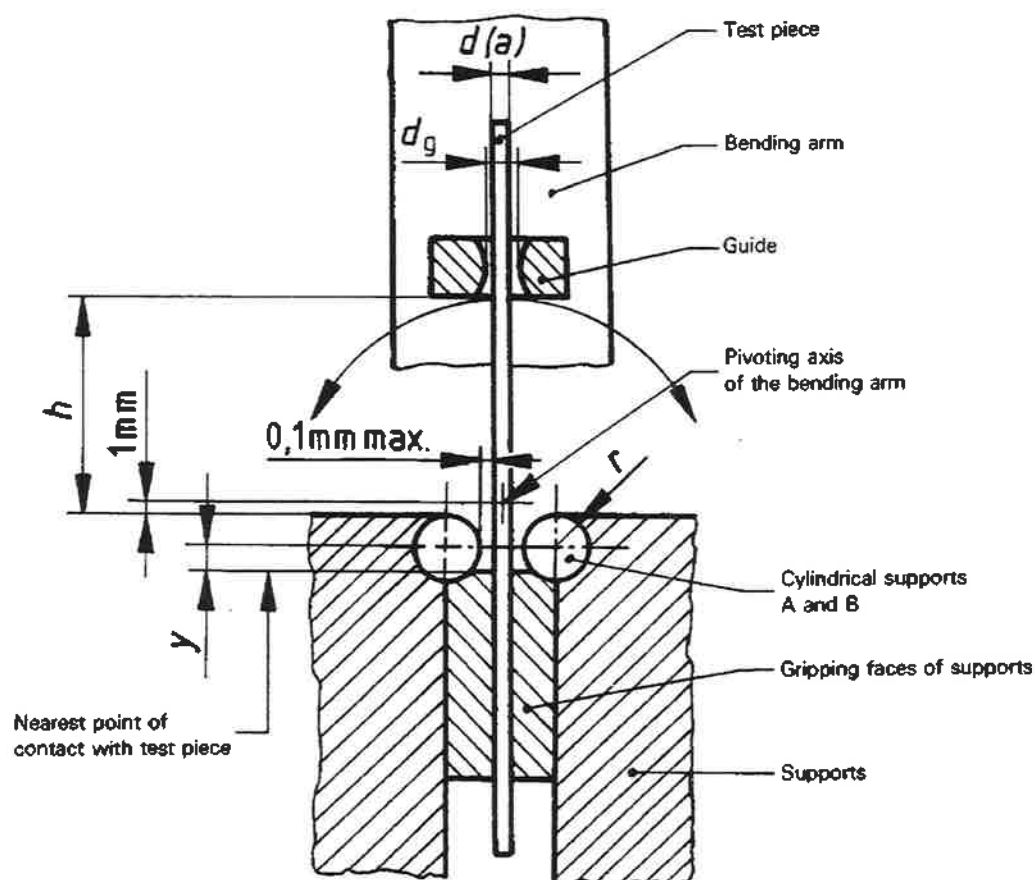
5.5.2 Reverse bend test

This test is optional and shall be carried out if requested by the purchaser. The test is performed using a method similar to that shown in ISO 7801:1984 and Figure 8. The Distance from the top tangential plane of cylindrical supports to the bottom face of the guide shall be 200 mm max. The wire has to be placed so that the bottom and the head of the wire are tangential to the gripping faces of the support (as shown in Figure 9). For the first bending the bottom of the wire has to be inside and the head of the wire outside.

The wire shall be subjected to a number of bends, through 90° in opposite directions, around a mandrel with a radius of 30 mm. One bend consists of bending the free end of the test specimen through 90° and returning it to its original position, in accordance with Figure 9. The bends may be made by hand.

The wire shall withstand a minimum of 6 bends without complete fracture.

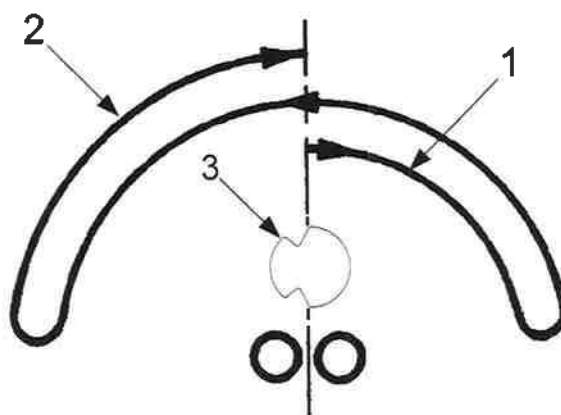
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Symbol	Designation	Unit
d	Diameter of round wire	mm
a	Minimum thickness of wire of non-circular section capable of being held between parallel grips	mm
r	Radius of cylindrical supports (mandrel)	mm
h	Distance from the top tangential plane of cylindrical supports to the bottom face of guide	mm
d_g	Diameter of guide hole	mm
y	Distance from a plane, defined by the axes of the cylindrical supports, to the nearest point of contact with the test piece	mm
Nb	Number of reverse bends	

[ISO 7801:1984, Figure 1 and Table 1]

Figure 8 – Reverse bend test – Test rig



Key

- 1 first bend
- 2 second bend
- 3 orientation of wire

[ISO 7801:1984, Figure 3, modified]

Figure 9 - Reverse bend test - Method

5.5.3 Torsional strength test

This test is optional and shall be carried out at the request of the purchaser.

A wire sample shall be selected and clamped between two sets of jaws, 250 mm apart which is measured without mechanical tension. The sample is then held by the set of longitudinal moving jaws. The other set of jaws has only a rotating movement around the wire axis.

The rotating speed of the jaw shall be between 15 and 20 rotations per min. The sample shall be submitted to 5 rotations in the same direction.

On completion of the test the samples shall be examined with the naked eye (corrected to normal vision) and present no crack, scale, fissure or incipient break. In the case of the joined wire no separation of the join is acceptable.

5.5.4 Winding property test

This test is optional and shall be carried out if requested by the purchaser.

A sample of wire shall be wound, with the contact running face side, in contact with the mandrel, for three successive 360° turns. For copper and silver copper the mandrel shall be a maximum of the same diameter as the sample wire. For other copper alloys the mandrel shall be a maximum of twice the diameter of the sample wire.

On completion of the test the sample shall be examined with the naked eye (corrected to normal vision) and present no crack, scale, fissure or incipient break.

5.5.5 Microwaves on longitudinal axis of wire

This test is optional and shall be carried out if requested by the purchaser.

The vertical variation of the longitudinal axis of the wire shall be measured by appropriate control methods, for example by use of an optical or mechanical control system. The control of the variation should be performed during the manufacturing process before coiling the wire on the wire drum.

5.6 Mass per unit length

This consists of measuring the mass of a unit length sample at ambient temperature between 10 °C and 30 °C. The precision of the measurement shall be better than 0,5 % error.

5.7 Joining of wire

The customer may, on placing an order, ask for the joining process to be tested. If the wire contains joins and if agreed between purchaser and manufacturer, the manufacturer shall include one join in the last ten metres of wire section reeled on the drum in order to allow one of these two tests to be performed in the proportion of one drum in twenty with a minimum of one join. This drum with its join shall be easily identifiable.

The quality of the join in the drawing stock or intermediate rod stock may be checked in the finished wire using the tensile test described in 5.5.1, and either the torsion tests described in 5.5.3, the reverse bend test described in 5.5.2 and measurement of electrical properties described in 5.4.

5.8 Integrity of wire

The internal and surface integrity of the wires may be checked by electro-magnetic methods if agreed between purchaser and manufacturer. The test should be performed during the manufacturing process, before coiling the wire on the wire drum.

6 Ordering and delivery conditions

6.1 Conditions and specification of the order

At the time of placing the order, the customer shall specify the following requirements to the manufacturer:

- a) the designation system in accordance with 4.1;
- b) the nominal length on each drum and the type of drum to be used;
- c) if joins are unacceptable, or otherwise which type of join is acceptable (see 4.8);
- d) the specific tests and test options required, viz.:
 - 1) the method of stating electrical properties of the wire (see 5.4);
 - 2) type and testing of joins in wire (see 4.7, 4.8, 5.5.1, 5.7);
 - 3) requirement for reverse bend test (see 5.5.2);
 - 4) requirement for torsional tests (see 5.5.3);
 - 5) requirement for the checking of winding property (see 5.5.4);
 - 6) requirement for tests for microwaves on longitudinal axis of wire;
- e) whether it is the customers intention to inspect the material at the manufacturers works (see 7.3);
- f) format of certification of compliance and /or test results (see 7.1).

6.2 Packaging

The wires shall be delivered on wire drums in compliance with the customer requirements. Each drum shall carry only one continuous length of wire.

The design of drum shall be agreed between the customer and manufacturer and defined on a drawing. The wire shall be carefully coiled in layers with the contact side facing the centre of the drum. Each coil shall be contiguous and well packed, particularly near the flanges of the wire drum, such that it will not be possible for the coil lay to be disturbed during transit. The ends of the wire are to be firmly secured to the flanges.

6.3 Tolerance on wire length

The tolerance on the length of wire supplied is + 30 m, - 0 m. The measurement of this length is taken from the indication of a length meter mounted on the wire drawing bench.

6.4 Wire drum markings

Every wire drum shall bear a permanently marked number, assigned either by the customer or the manufacturer, clearly visible on each flange, together with an arrow and the words "take off" indicating the direction of take-off of the wire.

A label, resistant to deterioration and indelibly marked, shall be attached to one flange, bearing the following information:

- the name of the manufacturer;
- the wire designation in accordance with 4.1;
- the wire nominal length;
- the net mass of the wire;
- the gross mass (wire drum plus wire);
- a manufacturing number with at least the number of the week of drawing and the year of manufacture (if required by the customer);
- the customer order or reference number (if required by the customer);

The above information shall be supplied separately to the customer at his request.

7 Verification of compliance

7.1 Certification of compliance and test results

The customer and manufacturer shall agree the clauses selected from EN 10204:2004 or EN 1655:1997 relevant to the certificate of compliance and/or test results.

7.2 Selection of sample and tests by manufacturer

Manufacturers shall select and test samples from each drum of wire produced.

7.3 Inspection by customer

The customer will have the opportunity of selecting samples and witnessing tests in accordance with Table 6.

Table 6 - Guide for selection of samples

Order size	Sample size
Number of drums	Number of drums
$N \leq 10$	1
$10 < N \leq 25$	2
$25 < N \leq 90$	3
$90 < N \leq 150$	5
$150 < N \leq 280$	8

The order is accepted if all the results of specific tests (and optionals if required) are in accordance with the requirements of this standard and additional requirements agreed between purchaser and manufacturer. If one or more samples do not satisfy this standard, a second random sampling of the same quantity as the first sampling shall be selected and subjected to the tests which were not originally satisfied.

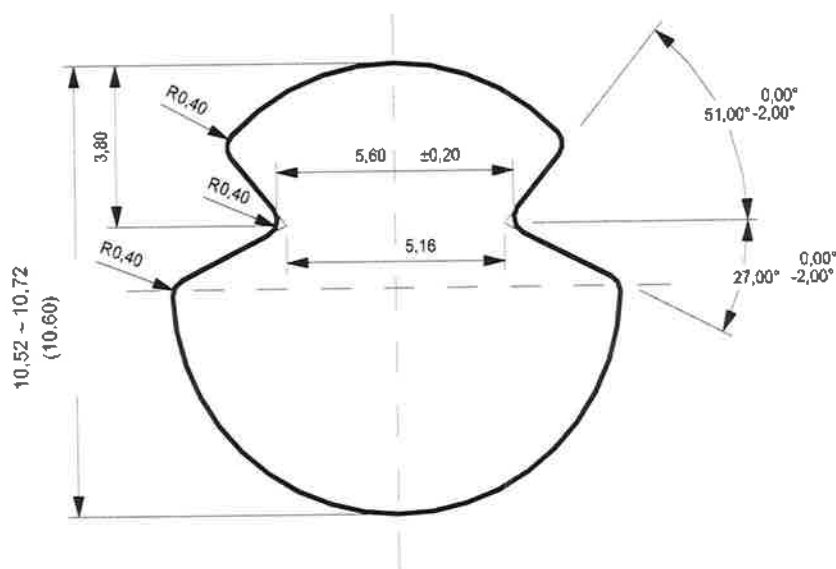
The failed drums may be sampled and tested by the manufacturer and if satisfactory resubmitted for acceptance by the customer.

If the obtained results on the second sampling are in accordance with the standard, the order is accepted. Otherwise the order is rejected.

Annex A (normative)

Standardised configurations

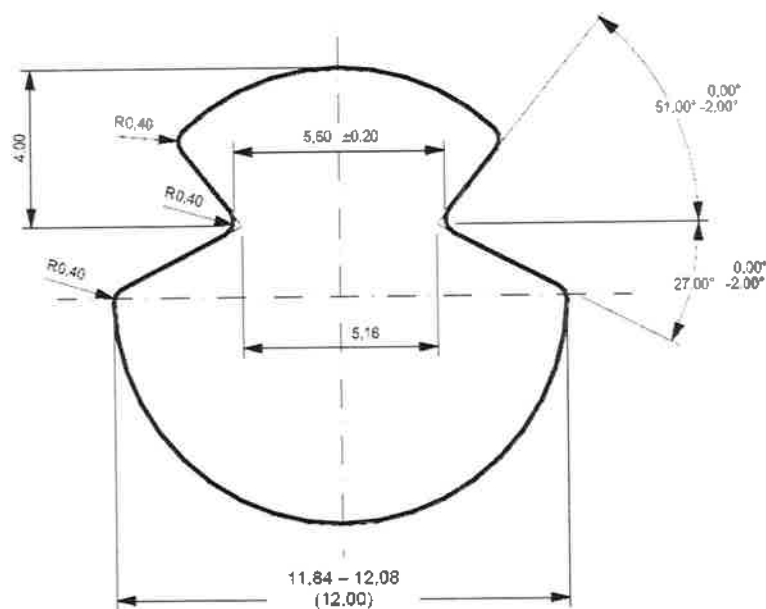
Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.1 - Configuration of AC-80 contact wire

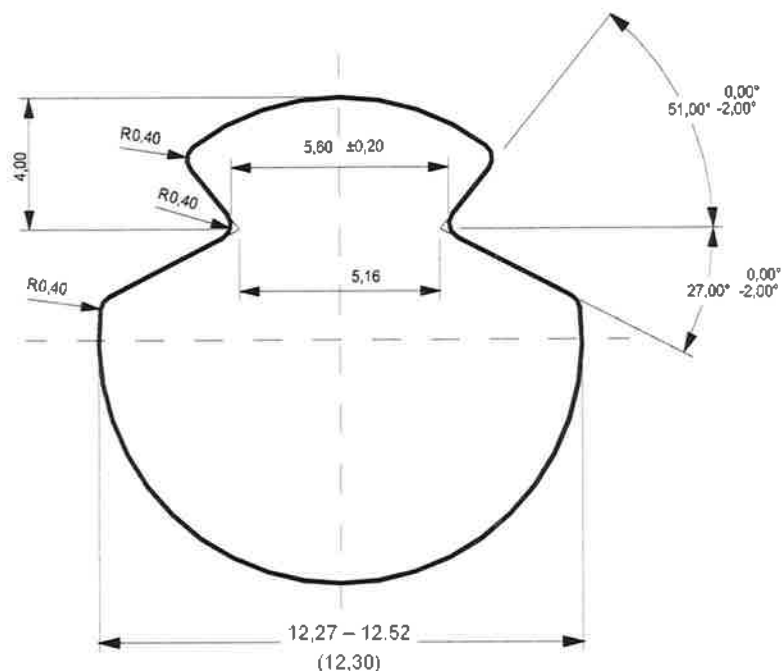
Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.2 - Configuration of AC-100 contact wire

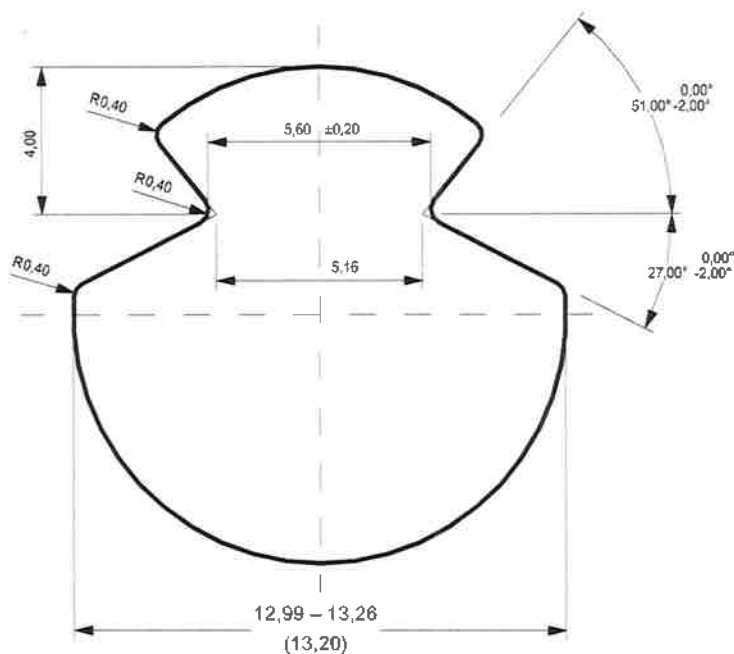
Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.3 - Configuration of AC-107 contact wire

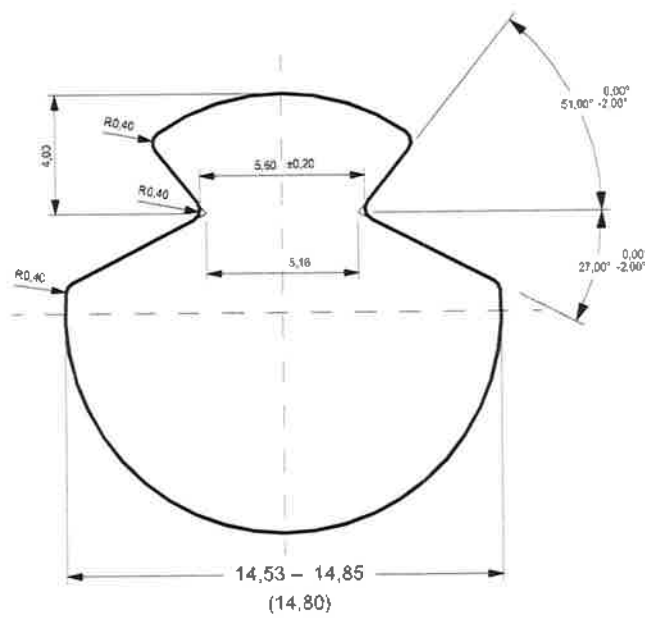
Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.4 - Configuration of AC-120 contact wire

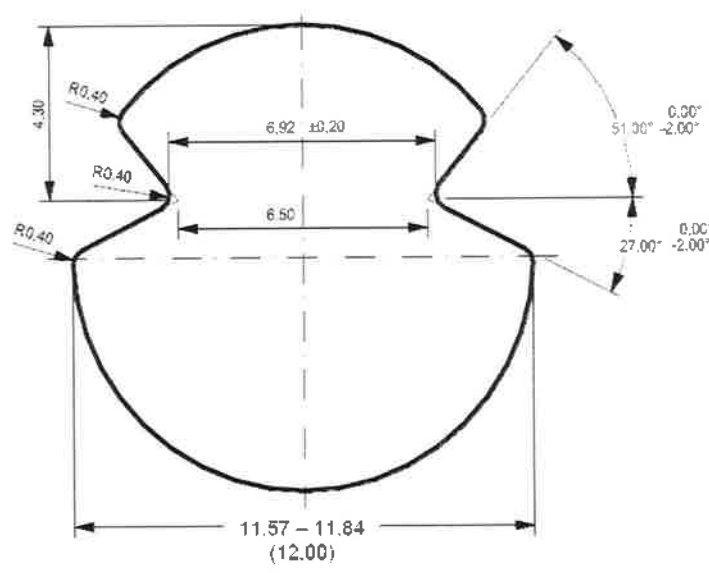
Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.5 - Configuration of AC-150 contact wire

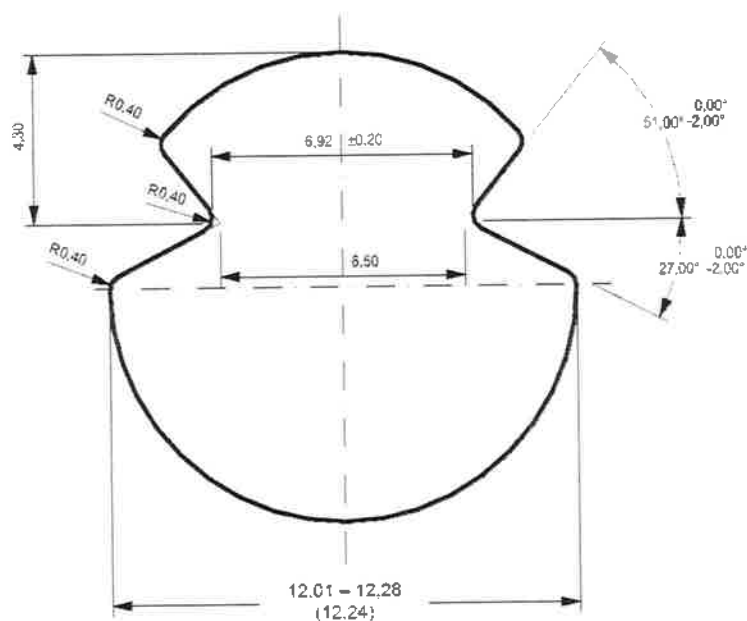
Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.6 - Configuration of BC-100 contact wire

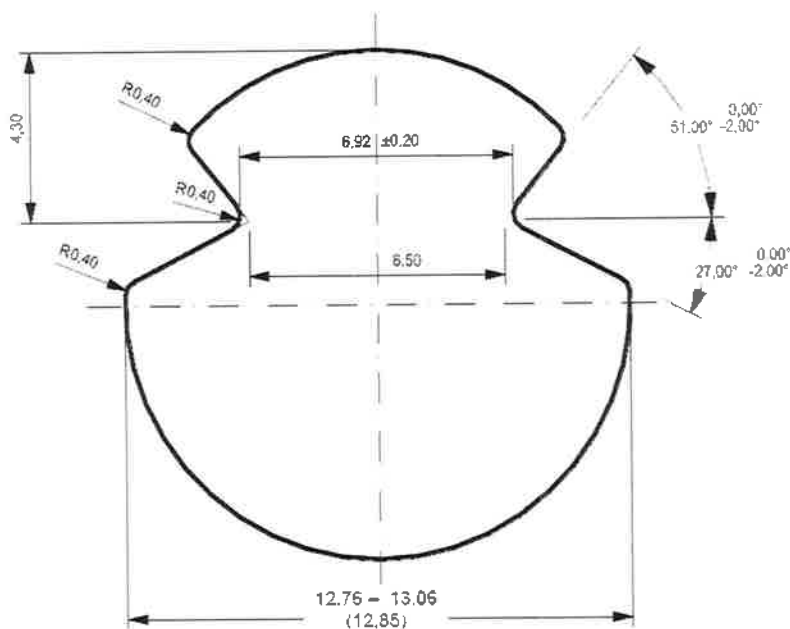
Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.7 - Configuration of BC-107 contact wire

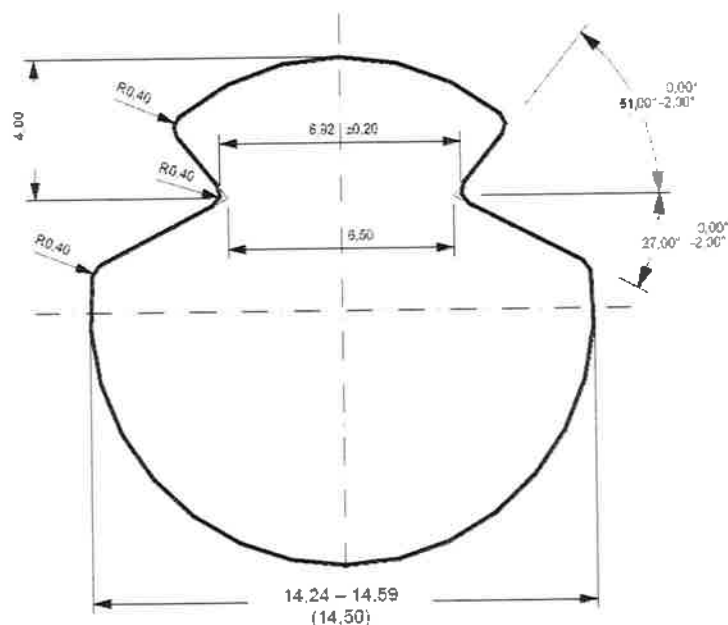
Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.8 - Configuration of BC-120 contact wire

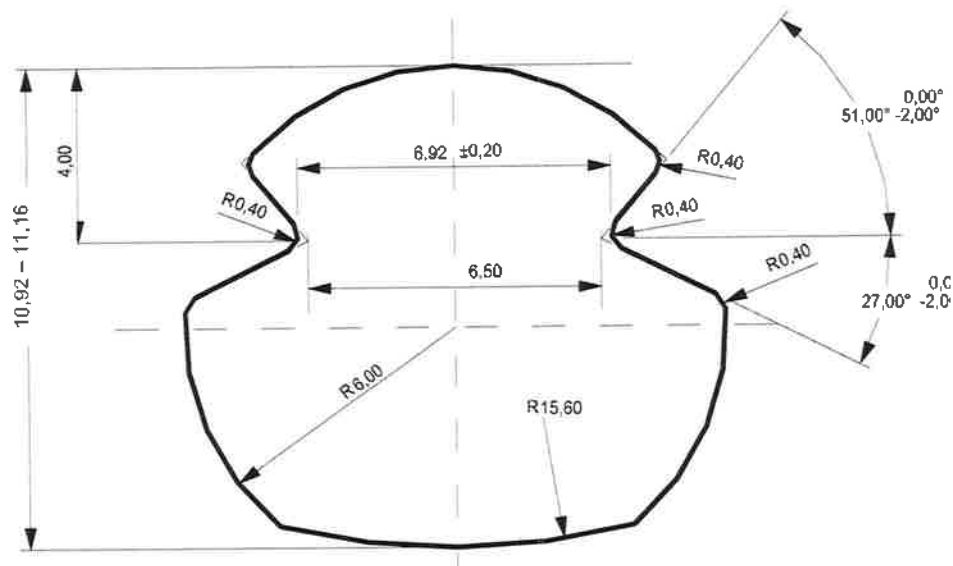
Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

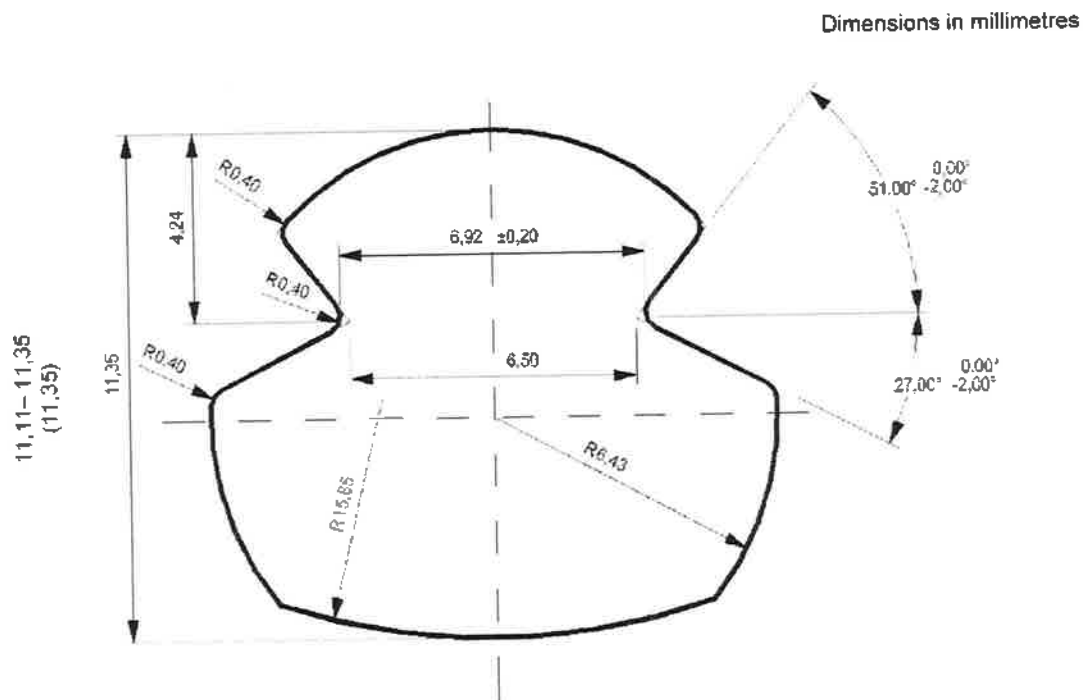
Figure A.9 - Configuration of BC-150 contact wire

Dimensions in millimetres



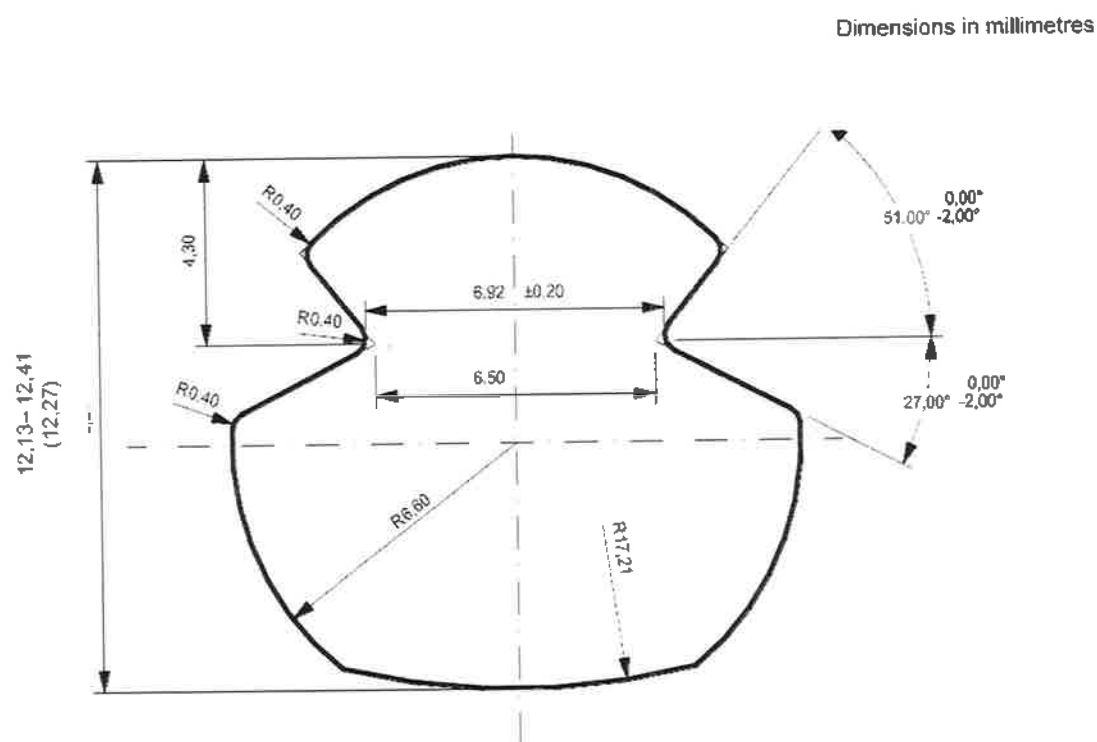
NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.10 - Configuration of BF-100 flat bottom contact wire



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

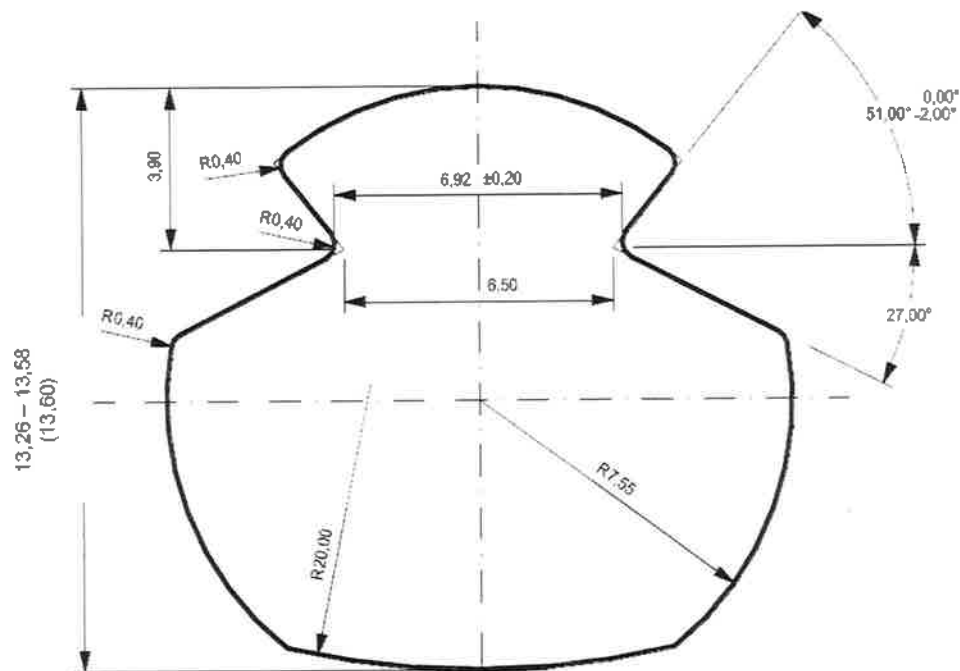
Figure A.11 - Configuration of BF-107 flat bottom contact wire



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.12 - Configuration of BF-120 flat bottom contact wire

Dimensions in millimetres



NOTE Dimensions given without tolerances or ranges are for guidance only. Dimensions in brackets are nominal only.

Figure A.13 - Configuration of BF-150 flat bottom contact wire

Annex B
(informative)

Common alloy compositions and designations

Table B.1 – Some possible material compositions and designations

Material designation			Composition in %							
			Element							Other elements
Material group	Symbol	Number		Cu	Bi	O	P	Pb	Total	Excluding
Normal and high strength copper	Cu-ETP	CW004A	min. max.	99,90 ^a -	- 0,0005	- 0,040 ^b	- -	- 0,005	- 0,03	Ag, O
	Cu-FRHC	CW005A	min. max.	99,90 ^a -	- -	- 0,040 ^b	- -	- -	- 0,04	Ag, O
	Cu-OF	CW008A	min. max.	99,95 -	- 0,0005	- ^c	- -	- 0,005	- 0,03	Ag
	Cu-HCP	CW021A	min. max.	99,95 -	- 0,0005	- ^c	0,002 0,007	- 0,005	- 0,03	Ag, P
				Cu	Bi	O		Ag	Other elements	
									Total	Excluding
Normal and high strength copper-silver-alloy	CuAg 0,1	CW013A	min. max.	Rest -	- 0,0005	- 0,040	- -	0,08 0,12	- 0,03	Ag, O
				Cu	Mg	Sn	Cd	P	Other elements	
									Total	Excluding
Copper-magnesium alloy	CuMg 0,2	CW127C	min. max.	Rest -	0,1 0,3	- -	- -	- 0,01	- 0,1	Mg, P
	CuMg 0,5	CW128C	min. max.	Rest -	0,4 0,7	- -	- -	- 0,01	- 0,1	Mg, P
Copper-tin alloy	CuSn 0,2	CW129C	min. max.	Rest -	- -	0,15 0,55	- -	- -	- 0,1	Sn
Copper-cadmium-alloy	CuCd 0,7	CW130C	min. max.	Rest -	- -	- -	0,5 0,8	- -	- 0,1	Cd
	CuCd 1,0	CW131C	min. max.	Rest -	- -	- -	0,8 1,2	- -	- 0,1	Cd

^a Including silver, up to a maximum of 0,015 %.

^b Oxygen content up to 0,060 % is permitted, subject to agreement between the purchaser and the supplier.

^c The oxygen content shall be controlled by the manufacturer so that the material conforms to the hydrogen embrittlement requirements.

NOTE 1 Composition of all copper types are in accordance with EN 1977:1998.

NOTE 2 The total of other elements (than copper) is defined in EN 1977:1998 as the sum of Ag, As, Bi, Cd, Co, Cr, Fe, Mn, Ni, O, P, Pb, S, Sb, Se, Si, Sn, Te and Zn, subject to the exclusion of any individual elements indicated.

NOTE 3 In many countries, national regulations impose restrictions on the use of copper cadmium alloys. See Annex D.

Annex C (informative)

Physical properties

C.1 Electrical resistance per kilometre

The values of the maximum resistance per unit length at 20 °C are calculated from the following formula:

$$\frac{R_{\max}}{L} = \frac{\rho_{\max}}{A_{\min}}$$

where

- $R_{\max}$ is the resistance at 20 °C, in Ω ;
- $\rho_{\max}$ is the maximum resistivity of the metal at 20 °C, in Ωm ;
- $A_{\min}$ is the minimum cross section of the wire, in m^2 ;
- L equal to 1 000 m.

C.2 Minimum breaking load

The values of the minimum breaking load given in Table 5 are calculated from the following formula:

$$F_{\min} = A_{\min} \times R_m$$

where

- $A_{\min}$ is the minimum cross section of the wire, in mm^2 ;
- R_m is the minimum tensile strength of the wire, in MPa.

The value of the minimum proof strength ($R_{p0.2}$) on plain wire is taken conventionally equal at 0,85 times the value of the minimum tensile strength.

C.3 Tolerance on diameter and cross sectional area

The minimum and maximum wire diameters shown in Annex A are calculated on the basis of a tolerance on the manufactured cross sectional area of $\pm 3\%$ of the nominal cross sectional area.

C.4 Mass per kilometre of the wire

The following minimum and maximum masses are equal to 0,97 and 1,03 times the nominal mass for alloys listed in Annex B. For other copper alloys the values should be as agreed between purchaser and manufacturer.

Table C.1 - Wire mass

Material	Nominal cross section mm ²	Minimum mass kg/km	Maximum mass kg/km
CuETP			
CuFRHC	80	690	733
CuHCP	100	862	916
CuOF	107	923	980
CuAg0,1	120	1 035	1 099
CuMg0,2	150	1 293	1 374
CuMg0,5			
CuCd0,7	80	694	737
CuCd1,0	100	868	921
	107	928	986
	120	1 041	1 106
	150	1 301	1 382
CuSn 0,2	100	865	919
	107	926	983
	120	1 038	1 103
	150	1 298	1 378

The nominal mass has been calculated on the following basis:

- the nominal section areas given in 4.5.2;
- density of wire.

The density of the copper, of copper with silver and of copper with magnesium is 8 890 kg/m³ at 20 °C.

The density of the copper with tin is 8 920 kg/m³ at 20 °C.

The density of the copper with cadmium is 8 945 kg/m³ at 20 °C.

C.5 Wire coefficients

The temperature coefficient of linear expansion is taken equal to $1,7 \times 10^{-5}/K$.

The longitudinal elastic modulus is taken equal to $1,2 \times 10^5$ MPa.

C.6 Calculating the cross sectional area of wire

The cross sectional area of a sample of wire is calculated by determining the mass per unit length in accordance with 5.6, and dividing by the density as defined in C.4.

$$A = \frac{m \times 1000}{d}$$

where

A = cross sectional area (mm²)

m = mass per unit length (kg/km)

d = density (kg/m³)

Annex D (informative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN/CENELEC member.

This European Standard does not fall under any Directive of the EC.

In the relevant CENELEC countries these A-deviations are valid instead of the provisions of the European Standard until they have been removed.

<u>Clause</u>	<u>Deviation</u>
General	Austria (Bundesgesetzblatt Nr. 855/1993 vom 16.12.1993 (Kadmiumverordnung))
	Denmark (Ministry of Environment instruction No 858 of 5 September 2009)
	Switzerland (Regulation SR 814.81)
	Copper-cadmium alloys are prohibited for use as wires.

Annex E (normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. If it affects harmonization, it forms part of the European Standard or Harmonization Document.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

Clause Special national condition

United Kingdom

4.4 Identification grooves

To retain identity of present conductors used on the railway infrastructure, with future applications, the existing identification system used in the United Kingdom shall be maintained: i.e:

- normal and high strength copper wires (CuETP, CuFRHC, CuHCP, CuOF) shall incorporate one identification groove on the upper lobe of the wire in accordance with Figure 2.
- copper-cadmium alloy wires (CuCd0,7; CuCd1,0) shall have no identification grooves.

Austria

4.5 Configuration and cross sections

4.5.1 Clamping groove

The following clamping groove type C is permissible for use in Austria in accordance with Figure E.1, when used with profiles CF-100 and CF-120 only.

Dimensions in millimetres

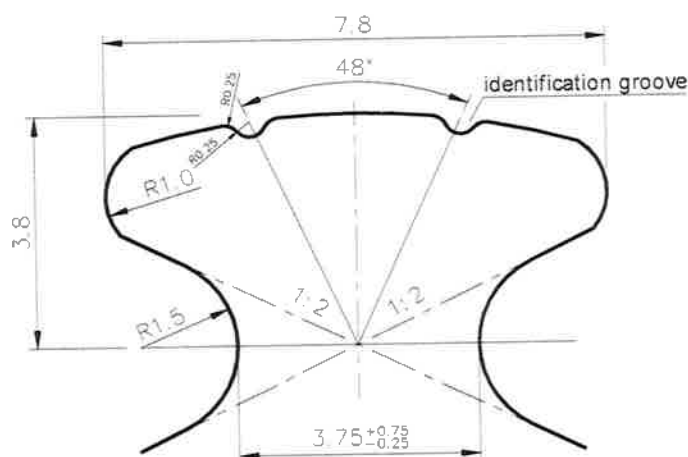


Figure E.1 - Clamping groove types

4.5.4

Configurations

For use in Austria the additional configurations CF-100 and CF-120 are permitted. The dimensions of each configuration are shown in Figure E.2.

Dimensions in millimetres

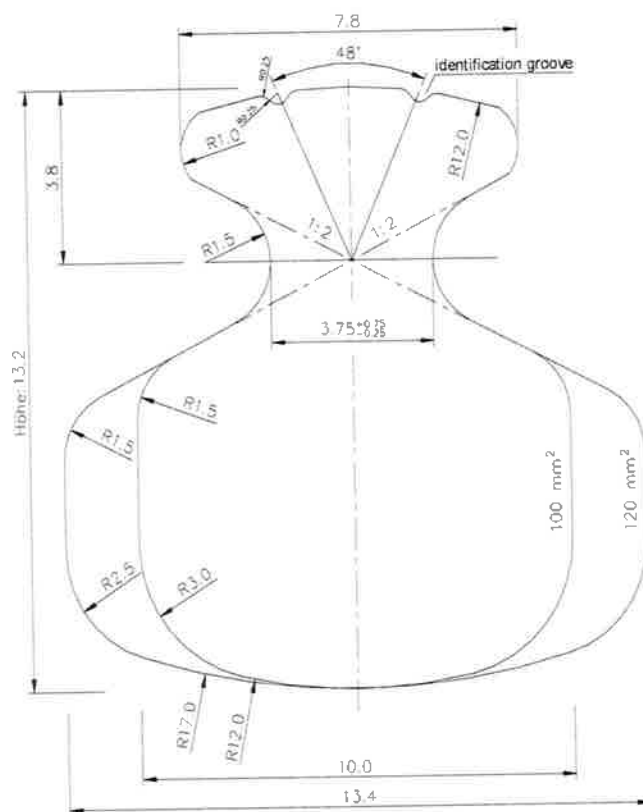


Figure E.2 – Configuration of CF-100 and CF-120 contact wire

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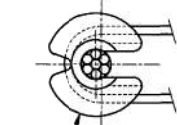
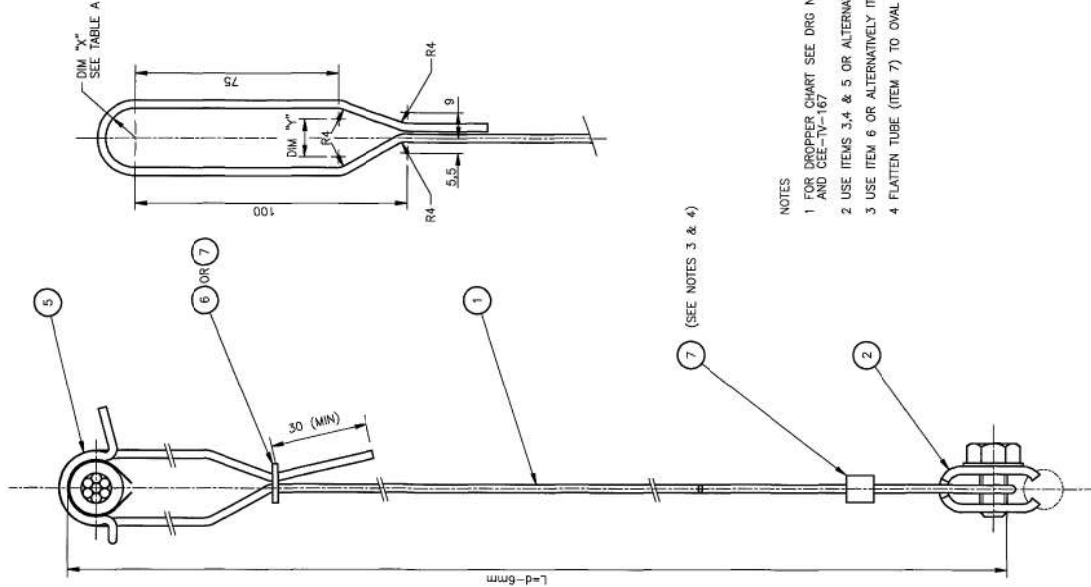
BSI

ITEM	DESCRIPTION	QTY	STORES ITEM NO	DRG NO CEE-
1	DROPPER, HD COPPER #4mm OR STAINLESS STEEL #4mm	•	61/1357 61/139888	
2	CONTACT WIRE CLIP	1	54/17312	TND-16
3	SADDLE	1		TMHF-98
4	INDUSTRIAL HOSE (CONPLEX 7004 BLACK) 12.5 ID x 80L	1		
5	SPRING CLIP	1		TN-251
6	RETAINING RING, STAINLESS STEEL (TO SPEC BS 970 PART 4 CR 316S16 S02T)	2		
7	COPPER TUBE #10 O.D. x 1 WALL THK x 10L TO SPEC SABS 460 TABLE 2 CLASS 3	2		
8	DROPPER CLIP 100mm ² Cu CATENARY	1	54/16861	TND-5

* SEE TABLE A

CATENARY SIZE	DIM "X"	DIM "Y"	QTY
80mm ²	R11	14	L+260
100mm ²	R11	14	L+260
160mm ²	R14	20	L+270
250mm ²	R18	28	L+280
530mm ²	R25	42	L+310

- NOTES
- 1 FOR DROPPER CHART SEE DRG NO CEE-TV-166
AND CEE-TV-167
 - 2 USE ITEMS 3, 4 & 5 OR ALTERNATIVELY ITEM 8
 - 3 USE ITEM 6 OR ALTERNATIVELY ITEM 7
 - 4 FLATTEN TUBE (ITEM 7) TO OVAL SHAPE



ALTERNATIVE NYLON TYPE
CLIP-ON DROPPER CLIP

8

3 TO BE BENT AROUND ITEM 4 AS INDICATED.

5

100mm² CATENARY WIRE

4

6 OR 7

1

2

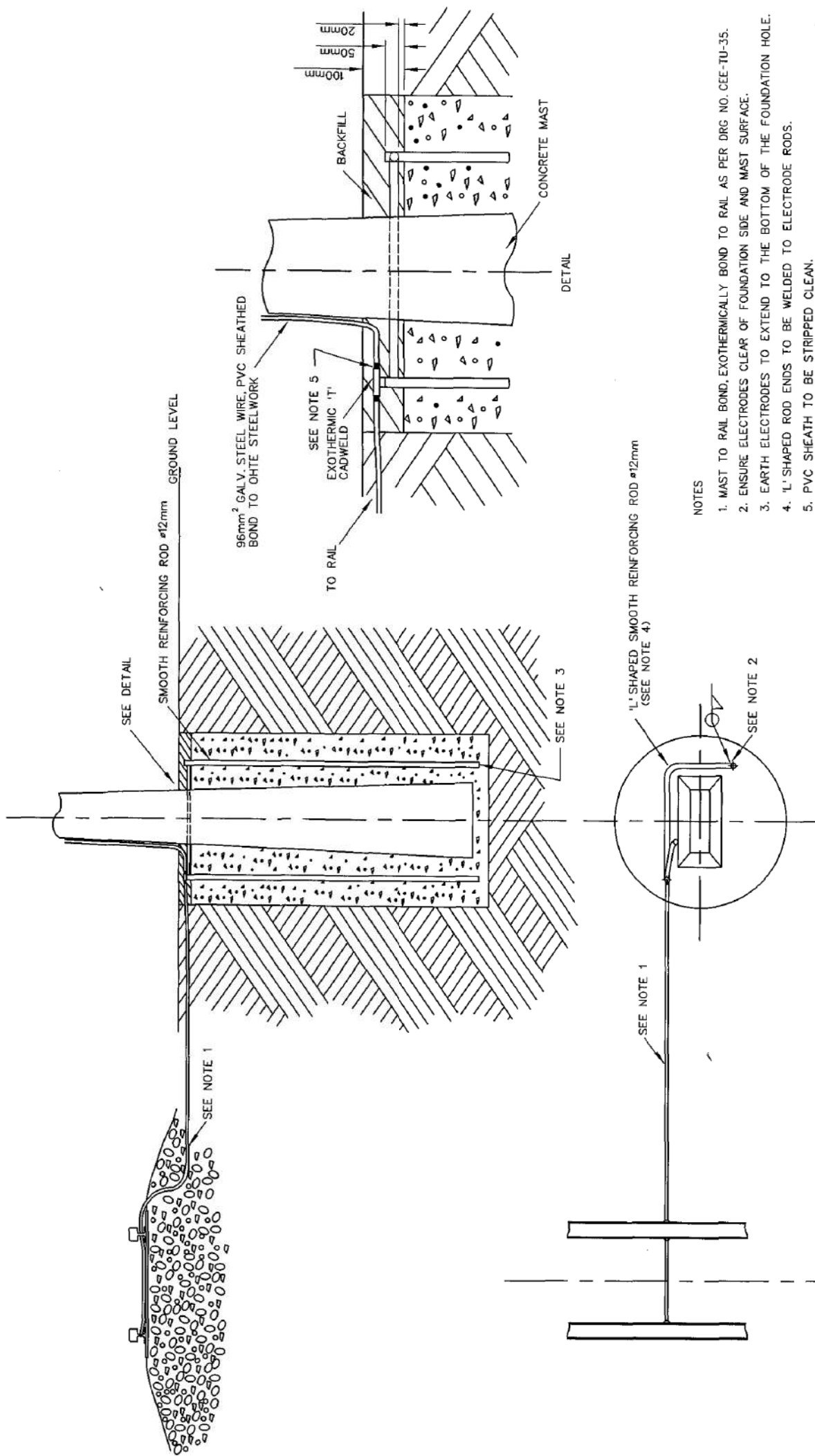
DROPPER LENGTH 'D' (SEE DRG NO CEE-TV-166 & CEE-TV-168)

6 OR 7

2

161mm² Cu CONTACT WIRE

30 (MIN)



NOTES

1. MAST TO RAIL BOND, EXOTHERMICALLY BOND TO RAIL AS PER DRG NO. CEE-TU-35.
2. ENSURE ELECTRODES CLEAR OF FOUNDATION SIDE AND MAST SURFACE.
3. EARTH ELECTRODES TO EXTEND TO THE BOTTOM OF THE FOUNDATION HOLE.
4. 'L' SHAPED ROD ENDS TO BE WELDED TO ELECTRODE RODS.
5. PVC SHEATH TO BE STRIPPED CLEAN.

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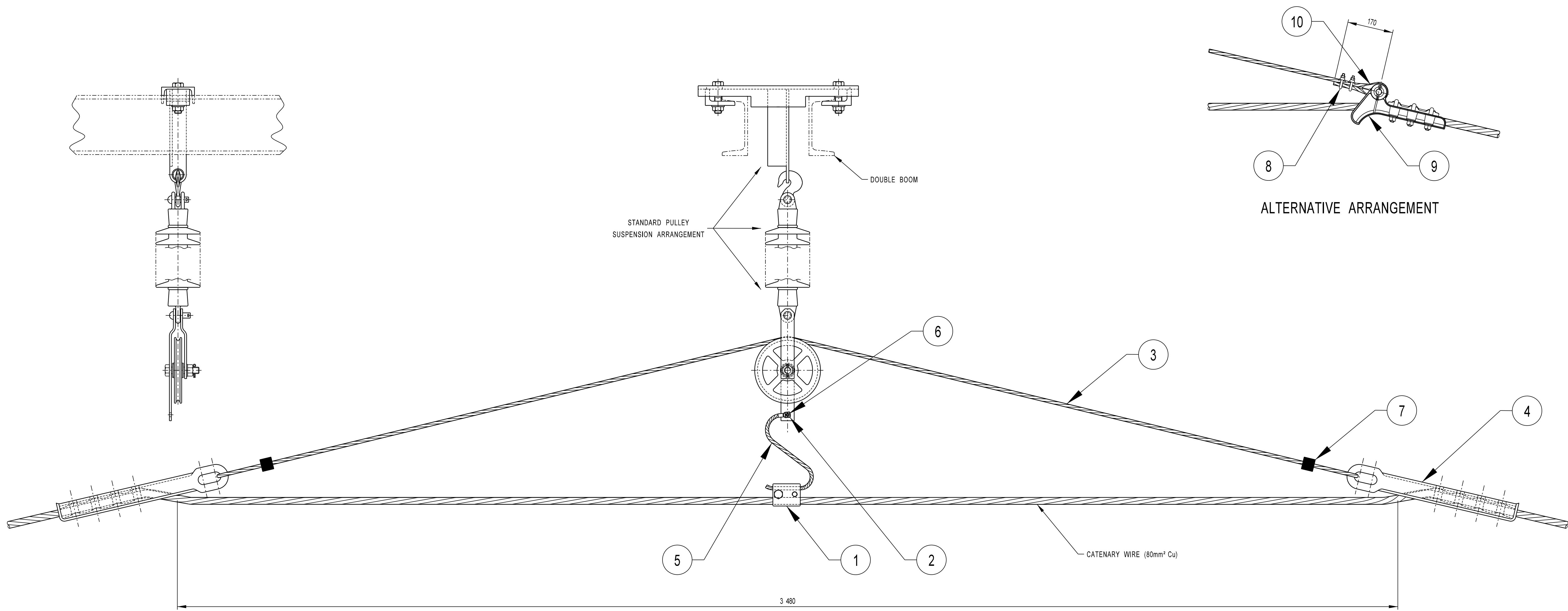
SCALE : NTS
TOLERANCE : LINA - ANG1 -
MATERIAL :
CP REF :
VERSION INFO :
ITEM No : -

CDO REF : CDO/436
DRAWN : M SITHOLE
DESIGNED : B R J van RENSBURG
CHECKED : L E WOOD

DATE : 2000-02-15
APPROVED :
AUTHORISED :

CENTRAL DRAWING OFFICE (INFRASTRUCTURE)

EARTH ELECTRODE ARRANGEMENT FOR CONCRETE MASTS
KIMBERLEY - DE AAR 25kV AC ELECTRIFICATION



- NOTES
- 1) MAKE-UP OF ITEM 4 AS FOLLOWS:-
- | | |
|--------|-----------|
| CORE | 18 / 0,70 |
| 1 x 19 | 1 / 0,82 |
| OUTER | 9 / 0,76 |
| 6 x 19 | 9 / 0,43 |
| | 1 / 0,89 |
- 2) FOR CRIMPING USE DIE-SET BICCON U654 AND COMPRESSION HEAD 12 TON "G" SHAPED TYPE.

ONLY USED WITH
ALTERNATIVE ARRANGEMENT

• AS REQUIRED			
10	THIMBLE	2	54/005264 CEE-TNB-85
9	STRAIN CLAMP, PISTOL GRIP	2	- BB81790
8	CROSBY CLIP, Ø10	4	- -
7	Cu FERRULE (CRIMP TYPE) (SEE NOTE 2)	2	- -
6	BOLT AND NUT, HEX. HEAD, STEEL, GALV. M12 x 30L	1	- -
5	19 / 1,83mm² Cu JUMPER CABLE (50mm²)	+	- -
4	STRAIGHT LINE CLAMP (SIMILAR TO ELC TYPE A17)	2	- -
3	STAINLESS STEEL WIRE 44mm² (SEE NOTE 1)	+	- -
2	TERMINAL LUG	1	55/021055 CEE-PA-14 SHT 1
1	PARALLEL CLAMP 100mm² / 80mm² - 50mm²	1	54/000766 CEE-TNB-55
ITEM NO	DESCRIPTION	QTY	STORES ITEM NO DRAWING NO

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DIMENSIONS : mm SCALE : NTS
TOLERANCE : LIN ± 5 ANG ± - ITEM NO : -
MATERIAL : -
VERSION INFO : REDRAWN AND REVISED. ALTERNATIVE ARRANGEMENT ADDED.

DO REF : CD0/6757
ECP REF : BBD6447
DRAWN : C L BUCKLE
DESIGNED : -
CHECKED : J VAN DYK

Digitally signed by Willem Mans
Date: 2009.08.07 11:38:54 +02'00'
APPROVED
Digitally signed by Ludwig Borchard
Date: 2009.08.07 11:56:07 +02'00'
AUTHORISED

CATENARY SUSPENSION ARRANGEMENT: DOUBLE BOOMS.
3KV DC AUTO-TENSIONED CONSTRUCTION.

TRANSNET
freight rail
CEE-TP-168
AMENDMENT 3

ITEM	DESCRIPTION	QTY	STORES	ITEM NO	DRG NO	AMENDMENTS	
						NO	NAME
1	BRACKET, STAY WIRE ATTACHMENT	1			TMFB-57		
2	GUSSET PLATE	2			TMHF-16		

FINISH
ZINC COAT TO SPEC SABS 763.

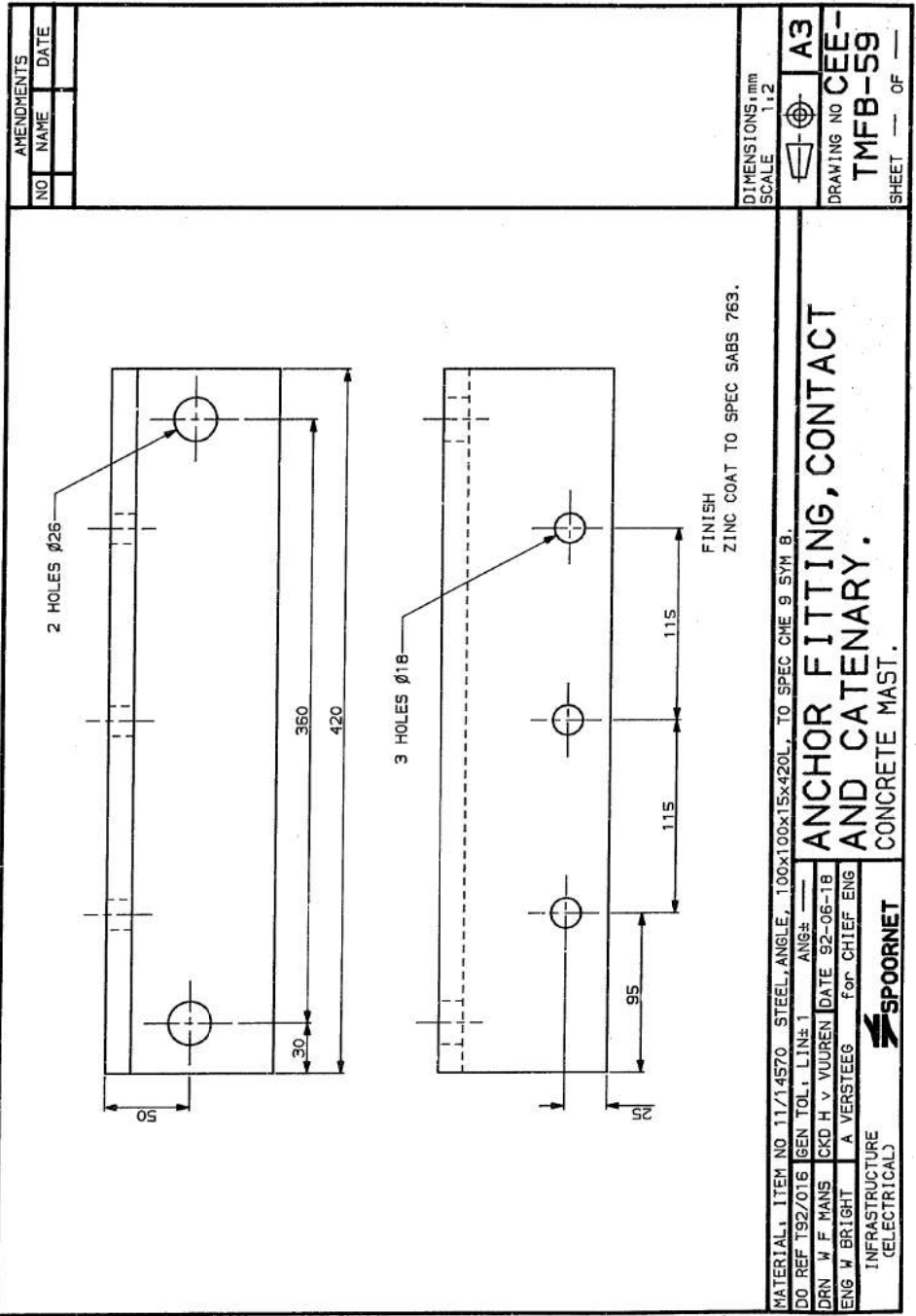
DO REF T92/016 GEN TOL: LIN# 1 ANG# — DRN W F MANS CKD H v VUUREN DATE 92-06-18 ENG W BRIGHT A VERSTEEG for CHIEF ENG	ATTACHMENT, STAY WIRE CONCRETE MAST.
INFRASTRUCTURE (ELECTRICAL)	SPOORNET

DIMENSIONS: mm SCALE 1:2		A3	DRAWING NO CEE- TMFB-58 SHEET — OF —
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2
3
4

2
3
4

2
3
4



Δ 2
Δ 3
Δ 4

Δ 2
Δ 3
Δ 4

Δ 2
Δ 3
Δ 4

DO REF: Y78/54			GEN TOL: LIN± -		ANG± -	
DRN: A VORSTER			CKD: J JACKSON		DATE: 79-02-12	
ENG: I DE VILLIERS			F PIENAAR for CHIEF ENG			
CENTRAL DRAWING OFFICE			SPOORNET			

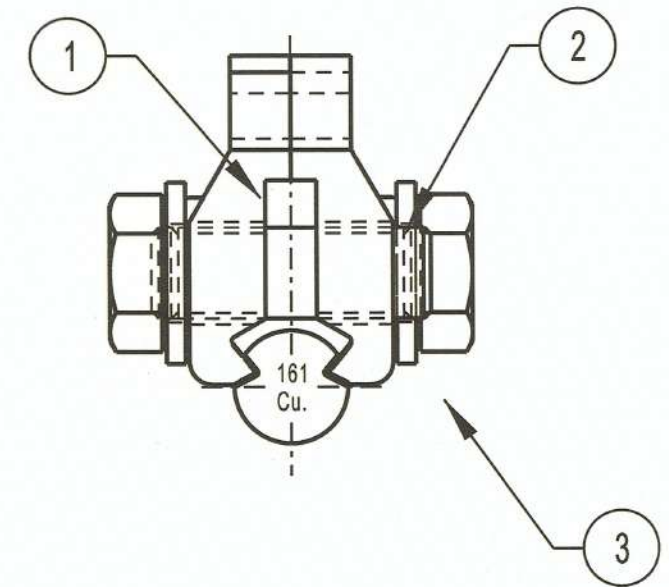
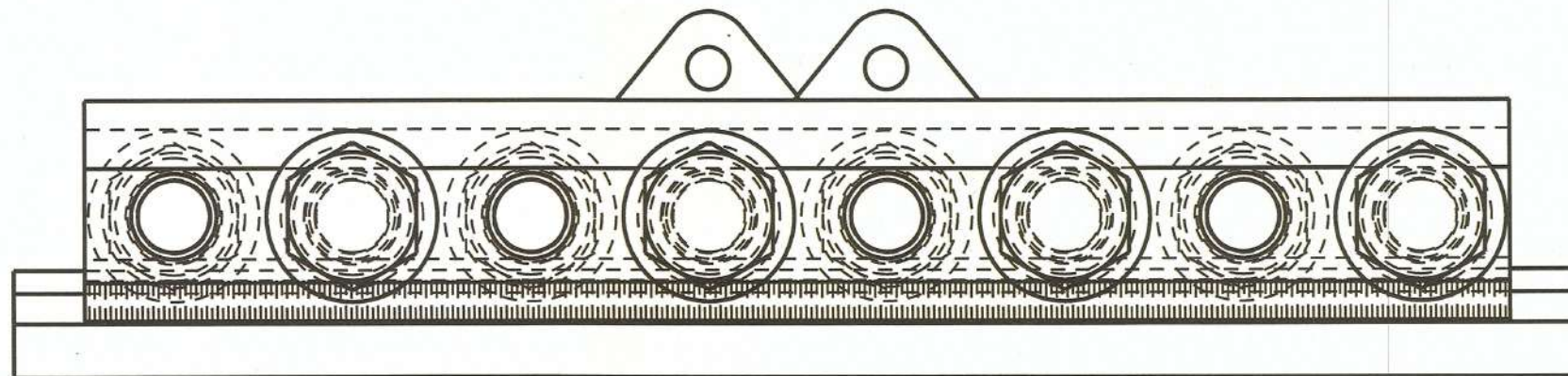
CLAMP, ELECTRICAL CONDUCTOR, STRAIN.		
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ITEM	STORES ITEM NO	USE FOR CONDUCTOR:
1	-	50mm² AL
2	54/8560	250mm² AL
3	54/9706	80mm² Cu
4	54/5506	160mm² AL

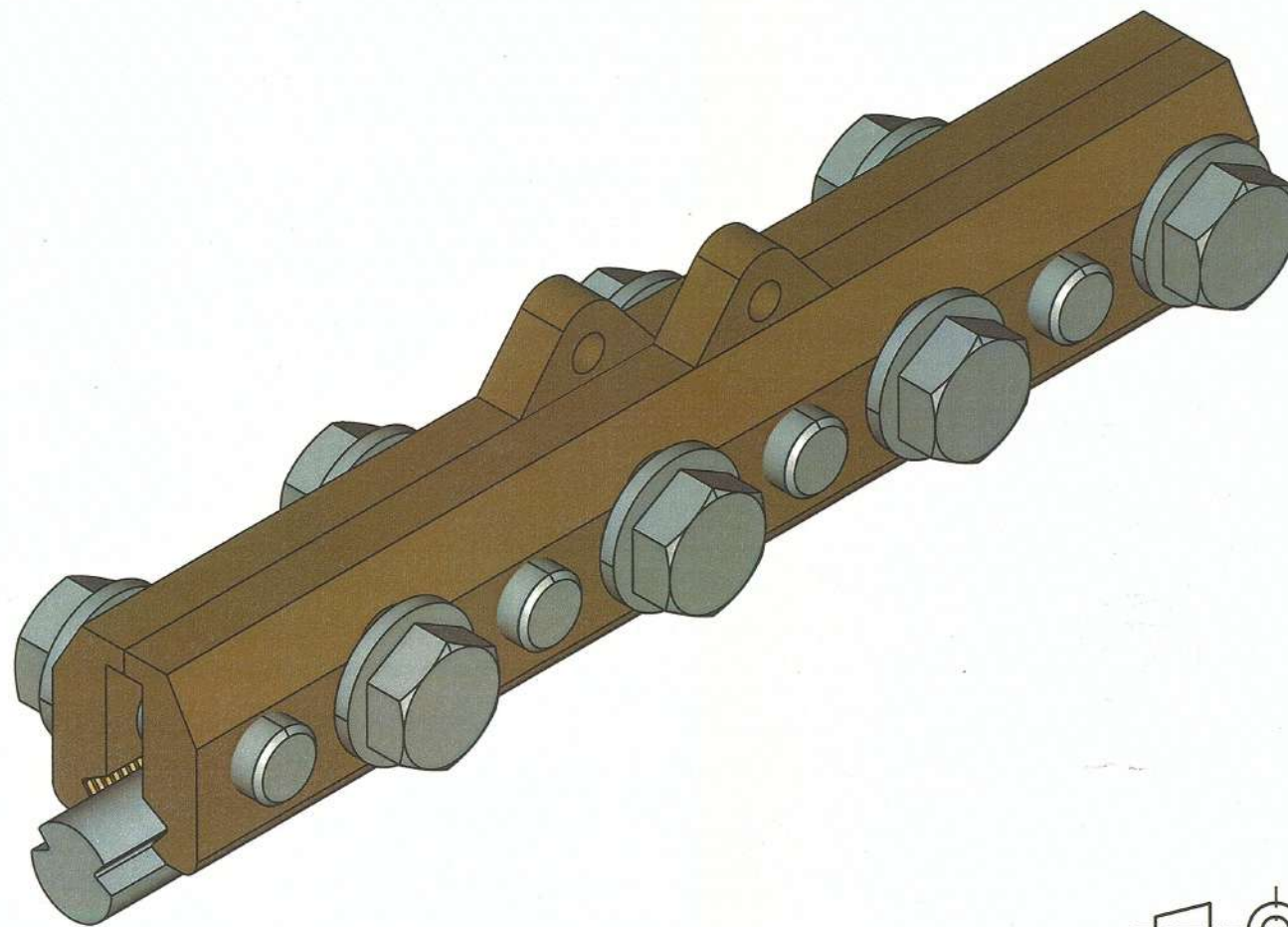
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AMENDMENTS		
NO	NAME	DATE
1	JVT	97-09-05
REVISED, DRAWING NO WAS TN-143. DO REF: T96/021		
2	09/03/05	
STORES ITEM NO'S REVISED. ECP REF: BBB8549 DO REF: CDO/4013		

STORES ITEM NO.		
A4		
DRG NO CEE- TNB-77		
SHT - OF -		



- NOTE
1. CONTACT WIRE SPLICE TO SPECIFICATION CEE 0063.
 2. THE FOLLOWING PERMANENT MARKINGS MUST APPEAR ON THIS ARTICLE:
 - a) TRANSNET LOGO.
 - b) MANUFACTURERS IDENTIFICATION.
 - c) DATED BATCH NUMBER.
 - d) CONTACT WIRE SIZE.
 - e) TORQUE = 3 x 67Nm
 3. WHERE CONDITIONS PERMIT, THE SPLICE MUST BE SUSPENDED FROM THE CATENARY WITH A DROPPER.



3	BOLT, HEXAGON HEAD, STAINLESS STEEL TO SPEC. CEE 0063, M12 x 35 LONG	8	-	-
2	WEDGE LOCK WASHER, STAINLESS STEEL TO SPEC. CEE 0063, M12	8	-	-
1	CHEECK, Cu-Ni-Si TO SPEC. CEE 0063	2	-	BBH2139 SHT 1
ITEM NO	DESCRIPTION	QTY	STORES ITEM NO	DRAWING NO

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DIMENSIONS : mm SCALE : 1:1
 TOLERANCE : LIN± 0,5 ANG± 1° ITEM NO : 54000754
 MATERIAL : -

VERSION INFO : -

17-04-2019

APPROVED : S SMIT

17-04-2019

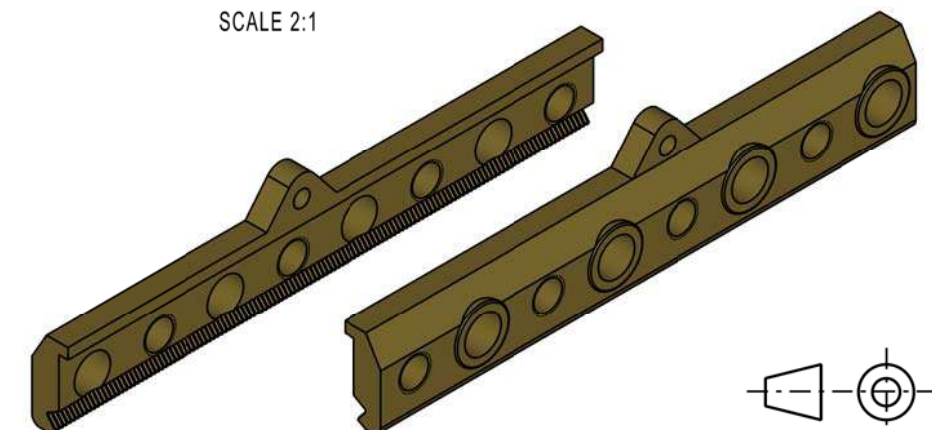
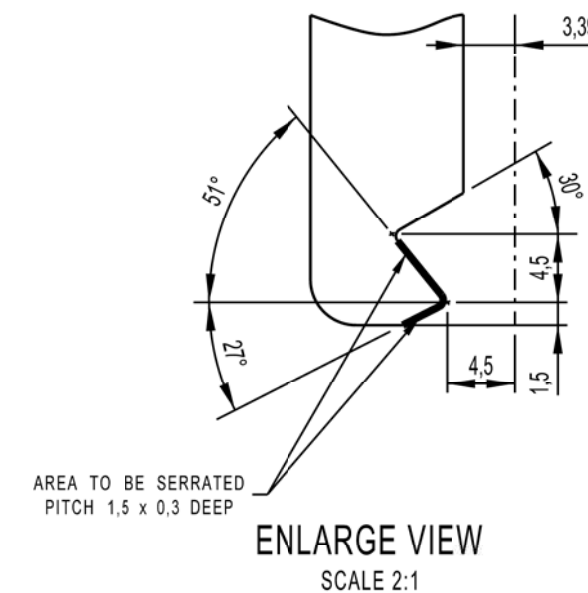
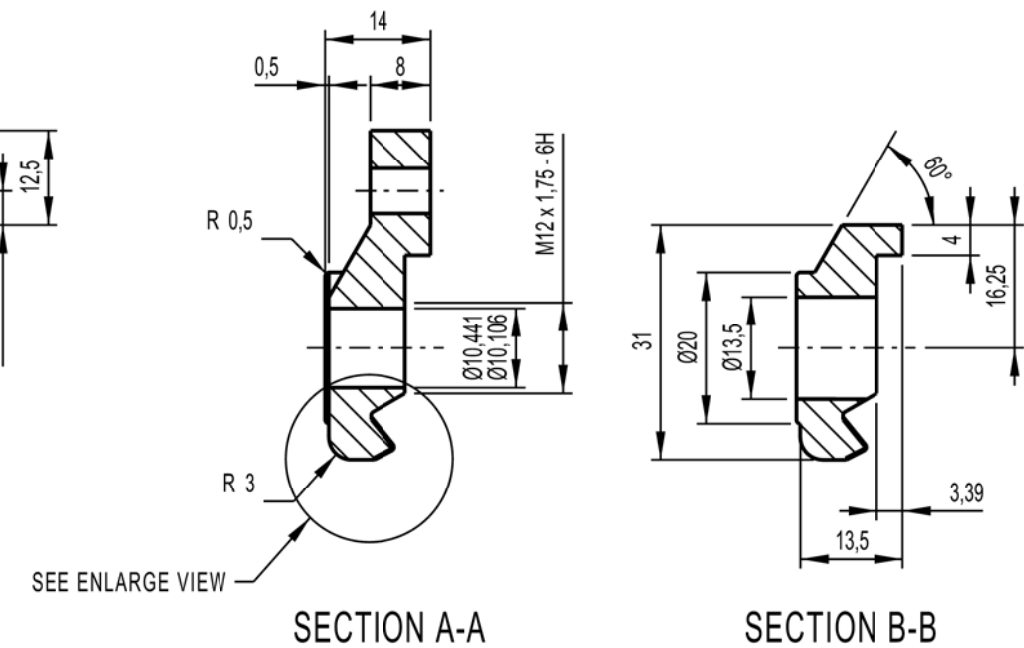
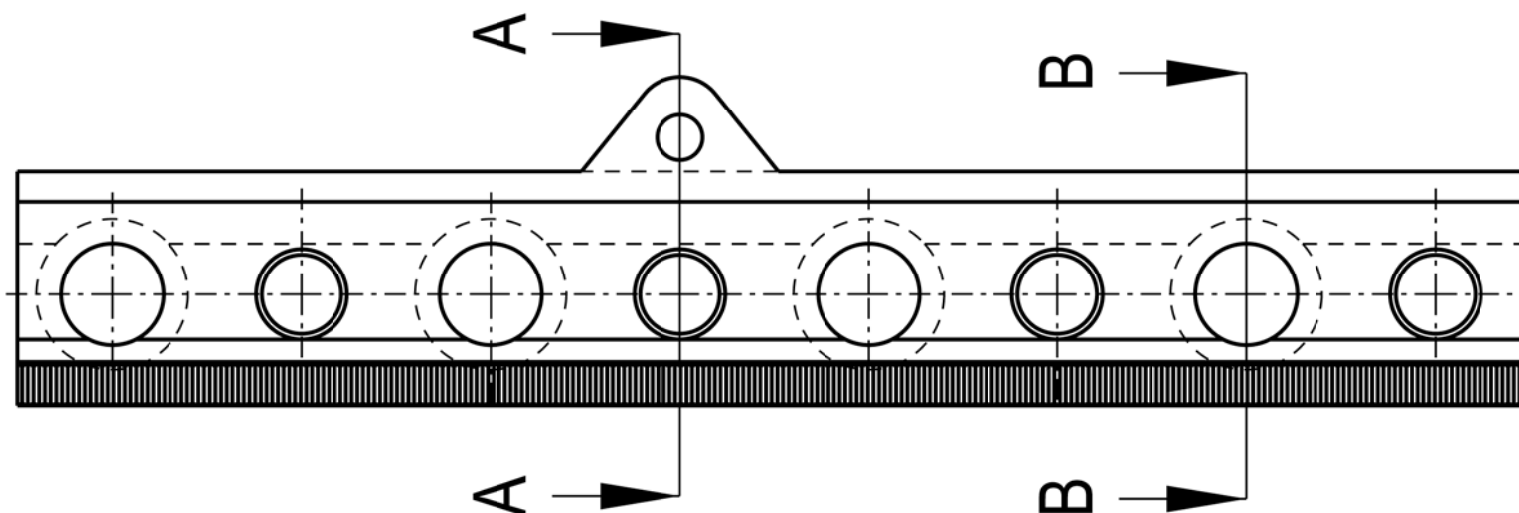
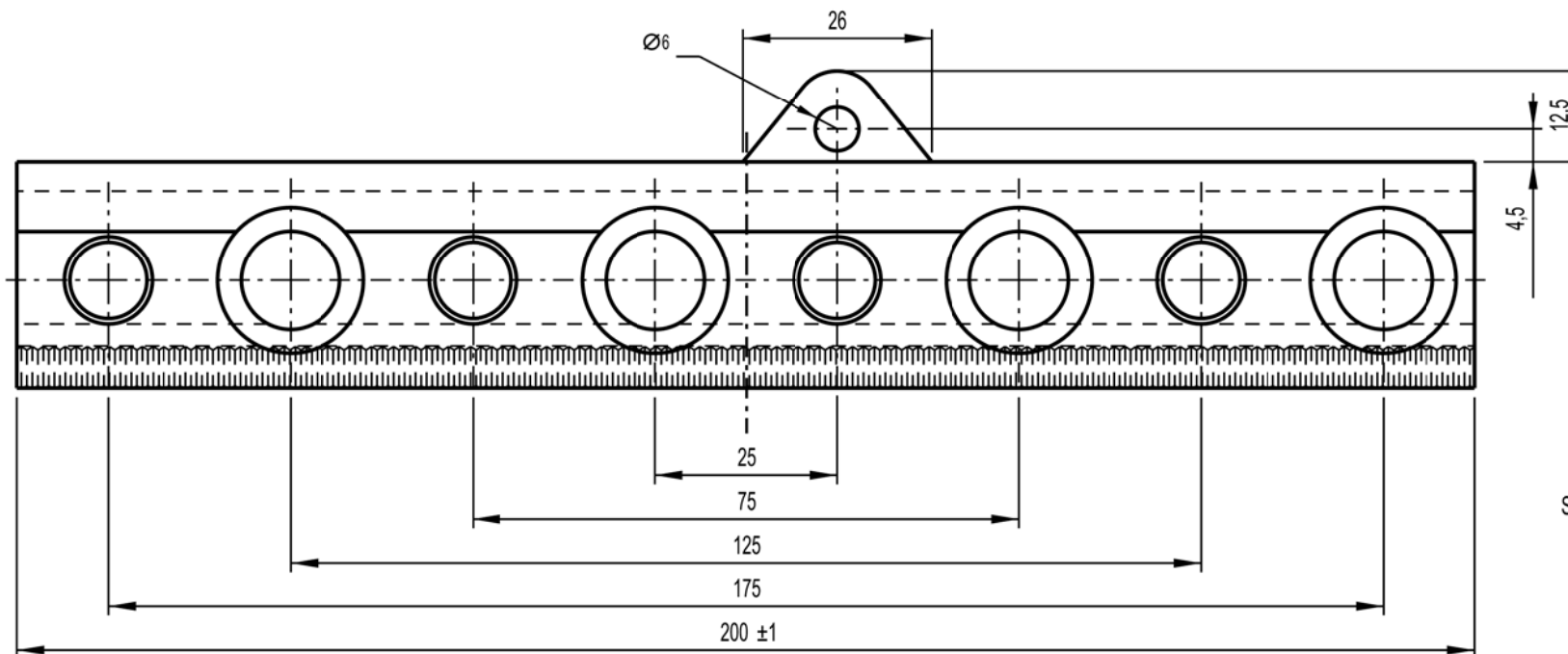
AUTHORISED : L O BORCHARD

CONDUCTOR SPLICE ASSEMBLY
 161mm² Cu. CONTACT WIRE

TRANSNET
 freight rail

BBH2139
 VERSION 1

A3



NOTE

1. CONTACT WIRE SPLICE TO SPECIFICATION CEE 0063.
2. THE FOLLOWING PERMANENT MARKINGS MUST APPEAR ON THIS ARTICLE:
 - a) TRANSNET LOGO.
 - b) MANUFACTURERS IDENTIFICATION.
 - c) DATED BATCH NUMBER.
 - d) CONTACT WIRE SIZE.
 - e) TORQUE = 3 x 67Nm

DIMENSIONS	: mm	SCALE	: 1 : 1
TOLERANCE	: LIN ± 0,5 ANG ± 1°		
MATERIAL	: Cu-Ni-Si TO SPEC CEE 0063		
DRAWN	: D HATTINGH	CHECKED	: D HATTINGH

CHEEK, SPLICE
161mm² Cu. CONTACT WIRE

QUALITY ASSURANCE TESTING

In this RFP, the recommended Respondent is required to provide a pre-production sample(s) or prototype(s) for Quality Assurance testing purposes.

1. The recommended bidder will be issued with a letter of intent in which they will be requested to provide the pre-production sample(s) or prototype(s).
2. Quality assurance testing shall be witnessed and inspection carried out by Transnet's Technology department.
3. The supplied materials shall be tested at the Original Equipment Manufacturer's factory (i.e. Factory Acceptance Tests).
4. The supplier shall ensure that calibration certificate of any equipment used in tests is valid during the period of testing.
5. The minimum design requirements are specified in the Transnet specifications and drawings and applicable SANS. The equipment shall be tested for compliance against the design requirements.
6. The supplier shall provide test certificates of the minimum design requirements listed in the Transnet specifications.
7. The following quality assurance tests shall be done by Transnet Freight Rail in addition to any other tests specified in drawings, specifications and standards;
8. All material types shall be verified.
9. All galvanizing shall be tested to SANS 121.
10. Critical dimensions shall be measured and verified. Tolerances are specified in drawings.
11. Functionality of items shall be tested (e.g. moveable parts, sliding parts)
12. Transnet's Technology department will issue the bidder and the Transnet end-user with an inspection certificate if the recommended bidder's pre-production sample(s) or prototype(s) pass all the quality assurance tests mentioned above.
13. Should Transnet's Technology department fail the recommended bidder's pre-production sample(s) or prototype(s) the bidder will be afforded two (2) weeks to submit new pre-production sample(s) or prototype(s). If the new (second) pre-production sample(s) or prototype(s) also fail the quality assurance tests Transnet will notify the bidder of the non-compliance and cancel the letter of intent issued to the bidder. Transnet will then continue to request the second ranked bidder to submit pre-production sample(s) or prototype(s) to be tested.
14. The below table contain the quantity of each item that will be require for pre-production sample(s) or prototype(s) testing.

Item No	Description of Item	Specification	Unit	Estimated Quantity for 36 months	Quantity required for testing
1	Wire Flex 50mm ² Jumper CU 19/1,85mm, 45kg/m	SANS 182-1	Metre	117	2 metre
2	Wire 19/4mm Stay Galvanized Steel, 479MPA	CEE-TPB-2	Metre	10 425	2 metre
3	Wire 50mm ² Ali 6/1/3,50mm AAC, Un-Greased	SANS 182-2	Metre	16 200	2 metre

 Respondent's Signature

 Date & Company Stamp

Item No	Description of Item	Specification	Unit	Estimated Quantity for 36 months	Quantity required for testing
4	Wire 250 ACC HD Conductor	SANS 182-2	Metre	5125	2 metre
5	Wire flex 160mm ² CU 61/1,8mm Annealed	SANS 182-1	Metre	1772	2 metre
6	Wire catenary 80mm ² 7/3, 75mm Hard Drawn	SANS 182-2	Metre	4519	2 metre
7	Contact wire 161mm ² CU Hard Drawn 1830M on drum.	BS EN 50149	Metre	4390	2 metre
8	Wire dropper 4mm CU solid	CEE-TN-0265/ SANS 182-1	Metre	14941	2 metre
9	Cable steel 97mm ² 49/1,6mm Galvanized-PVC-Cover	BBB0784	Metre	11 221	2 metre
10	Cable 70mm PVC Insulated	BBB0784	Metre	26	2 metre
11	Bond composite 50mm ² X 610mm		Metre	12	2 metre
12	Stainless wire for auto tension pulley 44mm ²	CEE-TP-168	Metre	1388	2 metre
13	Stay wire attachment concrete mast single wire 3CR12 360crs	CEE-TMFB-058	Each	194	1 each
14	Anchor Contact and Catenary wire CONC S/S 360CRS, 100X15 ANG M26 hole	CEE-TMFB-59	Each	2	1 each
15	Splice line tension Pre-form 50mm ² Ali Hazel QPO	SANS 182-2/3	Each	6	1 each
16	Dead end PREFORM STRAIN 19/4 GI	CEE-TNB-77	Each	4512	1 each
17	Splice PREFORM 250mm ² Cu Catenary Wrap On	SANS 182-2/3	Each	1	1 each
18	Splice Preform 80mm ² Cu Catenary Wrap On	SANS 182-2/3	Each	106	1 each
19	Preform repair kit 80mm ² Catenary	SANS 182-2/3	Each	503	1 each
20	Splice Contact Wire 161mm ² CU	BBH2139	Each	166	1 each

Respondent's Signature

Date & Company Stamp