

Page: 1 of 1

SL. NO	COMPONENT	CHARACTERISTICS	TYPE OF CHECK	QUANT/AM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	INSPECTION AGENCY	REMARKS
				TP	TP/A					
1)	Raw material TC	a) Mechanical properties b) Electrical properties c) Chemical properties	Record review	100%	100%	As per drawing & specification	As per drawing & specification	MTC	BHEL/TP/A	TEST LAB NABL/EQUIVALENT ACCREDITED/SOURCE MILL /Supplier to get the raw material correlated with material TC
2)	Dimension	Dimension	TC verification & Measurement	100%	20%	As per drawing & specification	As per drawing & Specification	Supplier record	BHEL/TP/A	Witness
3)	Stack Height	Height	TC verification & Measurement	100%	20%	As per drawing & specification	As per drawing & Specification	Supplier record	BHEL/TP/A	Witness
4)	Identification vendor name, PO & job serial no.,	Visual	Visual	100%	10%	As per drawing & specification	As per drawing & Specification	Supplier record	BHEL/TP/A	Witness
5)	Packing to avoid transit damage	Visual	Visual	100%	20%	As per drawing & specification	As per drawing & specification	Packing list for each kit box	BHEL/TP/A	Packing to be such that no damages should occur during transit & kit items should be placed in on 1 box

Approved By

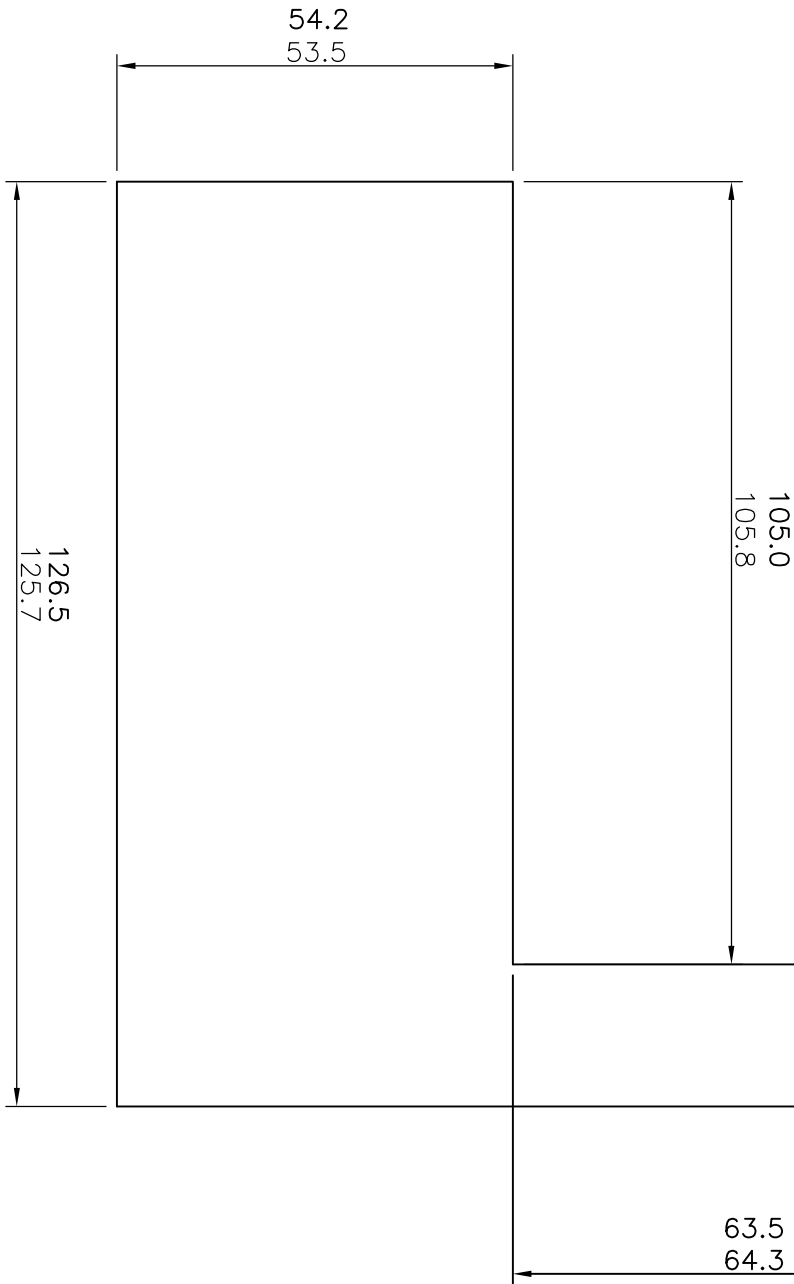
Generated for: Police Officer Shalendra Kumar Yadav, MANAGER (SKY)XINX2690-HEP, MANAGER-HEP-HEAT/ELECTRICIALS PLANT (HEP) 08/20/2024 06:22:26 03:14 pm

34394241001

DRG. NO.

TOOL LIST		
IT.NO.	TOOL NO.	DESCRIPTION
001	1451569	PRESS.DIE

STYLE LIST		
VAR.NO.	IT.NO.	DESCRIPTION
	001	BP9064760179




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1.143 NOMINAL THICKNESS ON FINISHED COMMUTATOR. (REF.)

NOTES:-


1. INSULATION PLATES TO BE STACK GAUGED IN BATCHES OF 29 AT 70.3KG/SQ CM. STACK GAUGED HIGHT 34.80/35.10
2. INSULATION PLATE SHOULD BE WITH AA25014 ALKYD VINYL BOND UNLESS STATED ON THE ORDER OTHERWISE.
3. THICKNESS TOLERANCE
±0.025 (AVG. OF 10 READINGS).
±0.050 (ON SINGLE READING)


001	SEE NOTES	001	INSULATION PLATE 1.16THK.X118X125.75						KG.	0.02				
59	64 65	75 76 79 25	27 29	58	59 60	77	79 — 37 17 NO.1	34	45	56 — 57 A	58	UNIT WT.	65	72
VAR 00	REMARKS	VAR NO.	ITEM NO.	DESCRIPTION	STD.	DRAWING NO.	VAR	MATL. CODE	54	C	LINE	QTY.	SS	ZONE
28 —————→ CARD TYPE-3				28 —————→ CARD TYPE-1				28 —————→ CARD TYPE-2						

ADDITION INFORMATION		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	
STATUS OF DRAWING		TM4601BX, TM4603BZ, TM4605BZ	
DISTRIBUTION OF PRINT TME-1 TXM-3 TNX-1		 BHARAT HEAVY ELECTRICALS LTD. BHOPAL	
		DRN	73
		NAME	NO. OF
		R.R.PATHAK	VAR
		SIGN	DATE
		-Sd-	15.9.88
		CKD	SGD
		-Sd-	16.9.88
		APPD	SKB/AKD
		-Sd-	25.9.88
			01

REV	DATE	ALTERED	REV	DATE	ALTERED
07	04.03.19	CHECKED B.K.T. <i>BKT</i>	06	17.02.09	-SD-
	APPROVED B.K.T. <i>BKT</i>			CHECKED	-SD-
				APPROVED	-SD-

[illegible]

	CORPORATE PURCHASING SPECIFICATION		AA 250 14		
			REV. No. 01		
			PAGE 1 OF 3		
<p align="center">MICANITE SHEETS / SEPARATORS FOR COMMUTATORS OF TRACTION MACHINES (TEMPERATURE INDEX 155)</p> <p>1.0 GENERAL:</p> <p>This specification governs the quality requirements of alkyd vinyl bonded micanite sheets or separators made from muscovite mica splittings free from metallic and foreign inclusion and cut to sizes as per drawing. The material shall have a temperature index of at least 155.</p> <p>2.0 APPLICATION:</p> <p>Used in the manufacture of commutators for electrical machines.</p> <p>3.0 COMPLIANCE WITH NATIONAL STANDARDS:</p> <p>There is no National Standard covering this type of material. However, assistance has been derived from the following National Standard.</p> <p>IEC 371-3-1 : Specification For Rigid Mica Materials For Type 5 : Commutator Separators.</p> <p>4.0 DIMENSIONS AND TOLERANCES:</p> <p>4.1 Sizes:</p> <p>As stated in BHEL order / drawing.</p> <p>4.2 Standard Thickness And Tolerances:</p> <p>4.2.1 For Sheets:</p> <p>Unless otherwise specified in BHEL order/drawing, the thickness shall be as given in clause 4.1.3 of IEC 371-3-1 and the tolerance should be of close tolerance as per clause 4.1.4 of IEC 371-3-1.</p> <p>4.2.2 For Segments :</p> <p>To be stack gauged as given in the order/drawing or as per clause 4.2 of IEC 371-3-1. Stack gauge dimension to be marked on each batch.</p> <p>4.3 Other Dimensions:</p> <p>Shall be checked as per clause 5.1 of IEC 371-3-1 and the tolerance shall be as given in clause 5.2 of IEC 371-3-1.</p>					
Revision: Lr:TME/300 dt:27.08.2005 from BP			Approved: INTERPLANT MATERIAL RATIONALISATION COMMITTEE – MRC (E)		
Rev. No. 01	Amd.No.	Reaffirmed	Prepared	Issued	Dt. of 1st Issue
Dt. 15.10.2005	Dt.	Year:	BHOPAL	CORP. R&D	JULY, 1995

AA 250 14	CORPORATE PURCHASING SPECIFICATION	
REV. No. 01		
PAGE 2 OF 3		

5.0 FINISH:

Shall be smooth with trimmed edges. Bond shall be uniformly distributed and also shall be free from hard patches through holes, foreign inclusions etc. The sheets shall be specially ground to size.

6.0 TEST SAMPLES:

Three sheets of ordered thickness of size 300 X 300 mm, prepared from the same Batch shall be supplied for testing and approval.

7.0 PROPERTIES :

Unless otherwise specified, when tested in accordance with the relevant methods of IEC 371–2 : Methods Of Test For Insulating Materials Based On Build Up Mica, the test sample shall show the following values:

7.1 Physical:

7.1.1 Bond Content :

4% ±1%

Note:

The type of bonding material used shall be disclosed by the suppliers. The composition of the binder may be determined by infra-red spectrography or thin layer chromatography or any other suitable method.

7.1.2 Stability At Temperature 260°C ± 5°C And Pressure 60 N/mm²:

No oozing of bond and slippage of mica shall be observed. Area of segments used shall be between 15 and 40 cm². In case slight oozing of bond is observed in the form of traces at the edges of the test pieces, another sample may be tested. No oozing shall be observed on the second sample.

7.2 Mechanical :

Flexural Strength (As per AA 085 17 01):

50 to 100 N/mm²

Tests shall be carried out on five specimens.

7.3 Electrical

Electrical strength (BDV) at room temperature

10 KV/mm minimum

The test shall be carried out on 5 specimens.


8.0 TYPE TEST:

Elastic Compression At 200 ± 3° C

1.2% to 4% when measured as per clause 4 of IEC 371–2

9.0 TEST CERTIFICATES:

Unless otherwise stated, three copies of certificates shall be supplied along with each consignment giving the following information.

	CORPORATE PURCHASING SPECIFICATION	AA 250 14
REV. No. 01		
PAGE 3 OF 3		

In addition, the supplier shall ensure to enclose one copy of test certificate along with their despatch documents to facilitate quick clearance of the material.

AA 25014, Rev 01 : Micanite Sheet / Separators For Commutator Of
: Traction Machines – Temperature Index 155.

BHEL order no.
Manufacturer's / supplier's name.
Trade mark, if any.
Batch / lot no.
Quantity Supplied.
Test results of clause 4.0, 7.0 and 8.0.

10.0 PACKING AND MARKING:

Identification slip shall be pasted suitably on corner of each board giving the size and manufacturer's code number / grade. The stacks shall be adequately packed with moisture proof polythene sheets and placed suitably in wooden cases.

Each consignment shall be legibly marked or labeled with the following information.

AA 25014 : Micanite Sheet / Separators For Commutator Of
: Traction Machines – Temperature Index 155.


BHEL order no.
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Batch / lot no.
Trade mark, if any.
Sizes and quantity Supplied.
Date of manufacture.


11.0 REJECTION AND REPLACEMENT:

If the material does not comply with the requirements of this specification during receipt inspection at BHEL or if any defect is found during further processing of the material, BHEL reserves the right to reject the whole consignment notwithstanding any previous certification of satisfactory testing and / or inspection. The supplier shall undertake to replace the rejected material at his own cost and the rejected material shall be taken back by the supplier after fulfilling all the commercial terms and conditions.

12.0 REFERRED STANDARDS (LATEST PUBLICATIONS INCLUDING AMENDMENTS):

1. IEC 371–2 2. IEC 371-3-1 3. AA 0851701

	CORPORATE PURCHASING SPECIFICATION		AA 250 14		
			REV. No. 01		
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Rev. No. 01	Amd.No.	Reaffirmed	Prepared	Issued	Dt. of 1 st Issue
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AA 250 14	CORPORATE PURCHASING SPECIFICATION	
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AA 25014, Rev 01 : Micanite Sheet / Separators For Commutator Of
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Trade mark, if any.
Batch / lot no.
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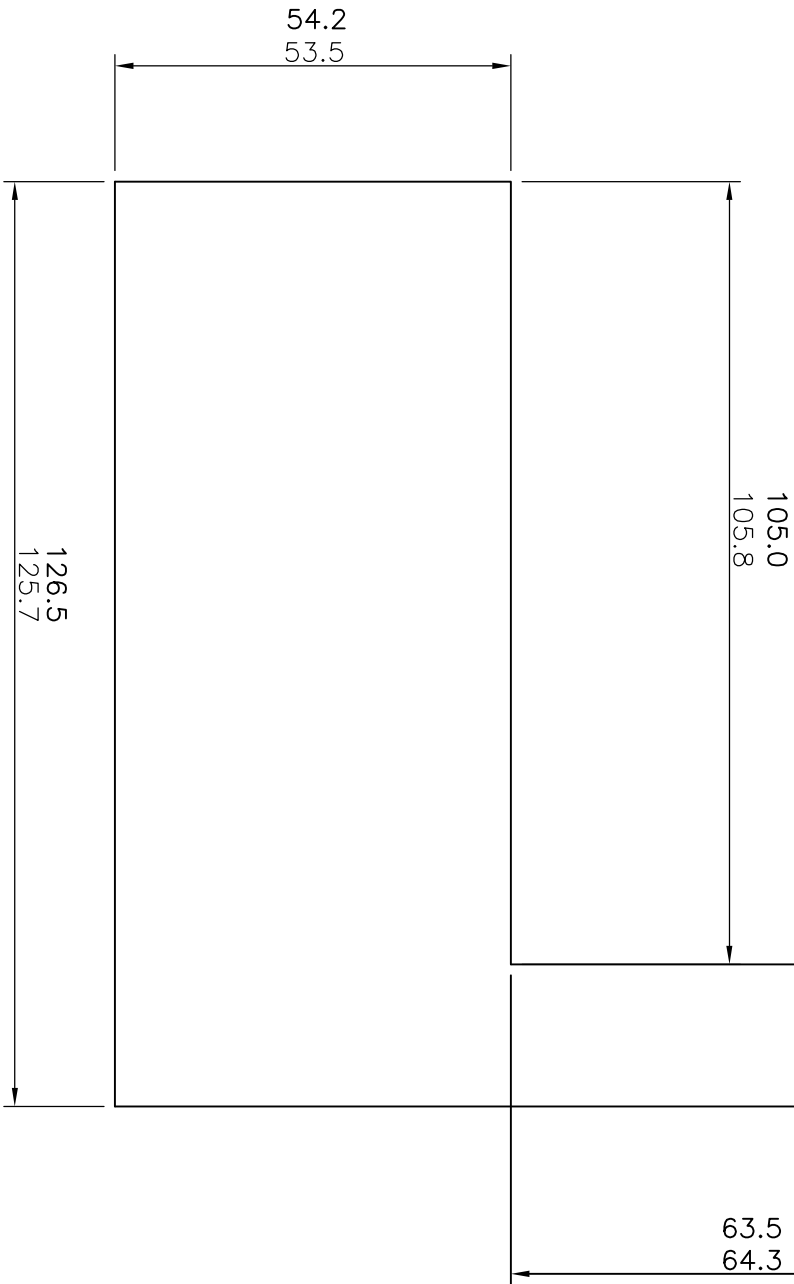
1. IEC 371–2 2. IEC 371-3-1 3. AA 0851701

34394241001

DRG. NO.

TOOL LIST		
IT.NO.	TOOL NO.	DESCRIPTION
001	1451569	PRESS.DIE

STYLE LIST		
VAR.NO.	IT.NO.	DESCRIPTION
	001	BP9064760179




1.143 NOMINAL THICKNESS ON FINISHED COMMUTATOR. (REF.)

1. INSULATION PLATES TO BE STACK GAUGED IN BATCHES OF 29 AT 70.3KG/SQ CM. STACK GAUGED HIGHT 34.80/35.10
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±0.025 (AVG. OF 10 READINGS).
±0.050 (ON SINGLE READING)

NOTES:-

001	SEE NOTES	001	INSULATION PLATE 1.16THK.X18X125.75					KG.	0.02						
VAR 00	REMARKS	VAR NO.	ITEM NO.	DESCRIPTION	STD.	DRAWING NO.	[29 — 37] [LT NO.]	34	45	56 — 57 A	58	UNIT WT.	65	72	
59	64 65	75 76 79 25	27 29	58	59 60	77	52 VAR	33 46	54	C	59 — 60 LIN	[66 — 77] QTY.		SG	ZONE
28 —————→ CARD TYPE-3				28 —————→ CARD TYPE-1				28 —————→ CARD TYPE-2							

ADDITION INFORMATION		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	
STATUS OF DRAWING		TM4601BX, TM4603BZ, TM4605BZ	
DISTRIBUTION OF PRINT TME-1 TXM-3 TNX-1		 BHARAT HEAVY ELECTRICALS LTD. BHOPAL	
		DRN	R.R.PATHAK
		CKD	SGD
		APPD	SKB/AKD
		SIGN	-Sd -
		DATE	15.9.88
			16.9.88
			25.9.88
			01

REV	DATE	ALTERED	REV	DATE	ALTERED
07	04.03.19	CHECKED B.K.T.	06	17.02.09	-SD-
	APPROVED B.K.T.	<i>[Signature]</i>			-SD-
					-SD-

[illegible]