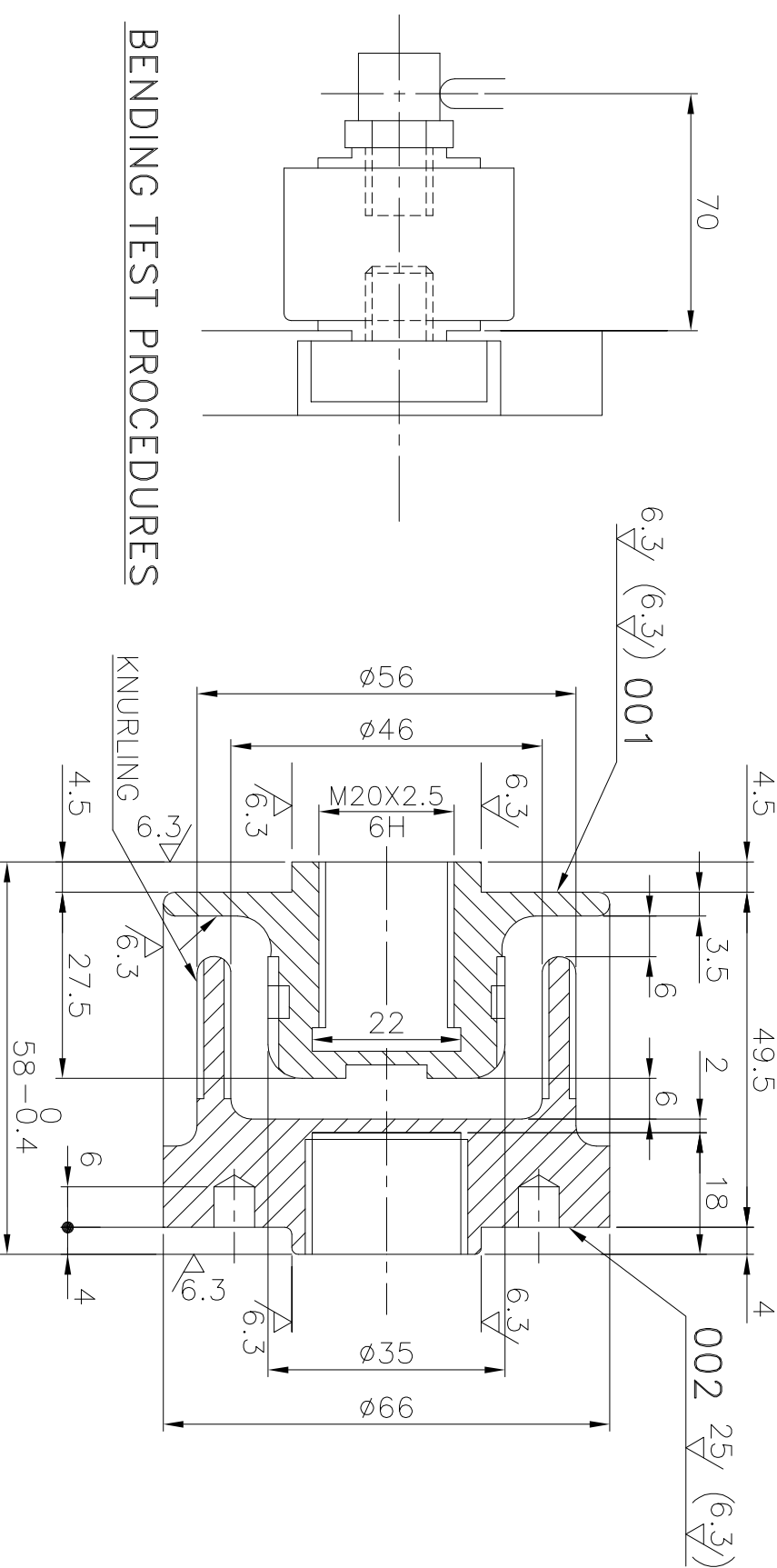


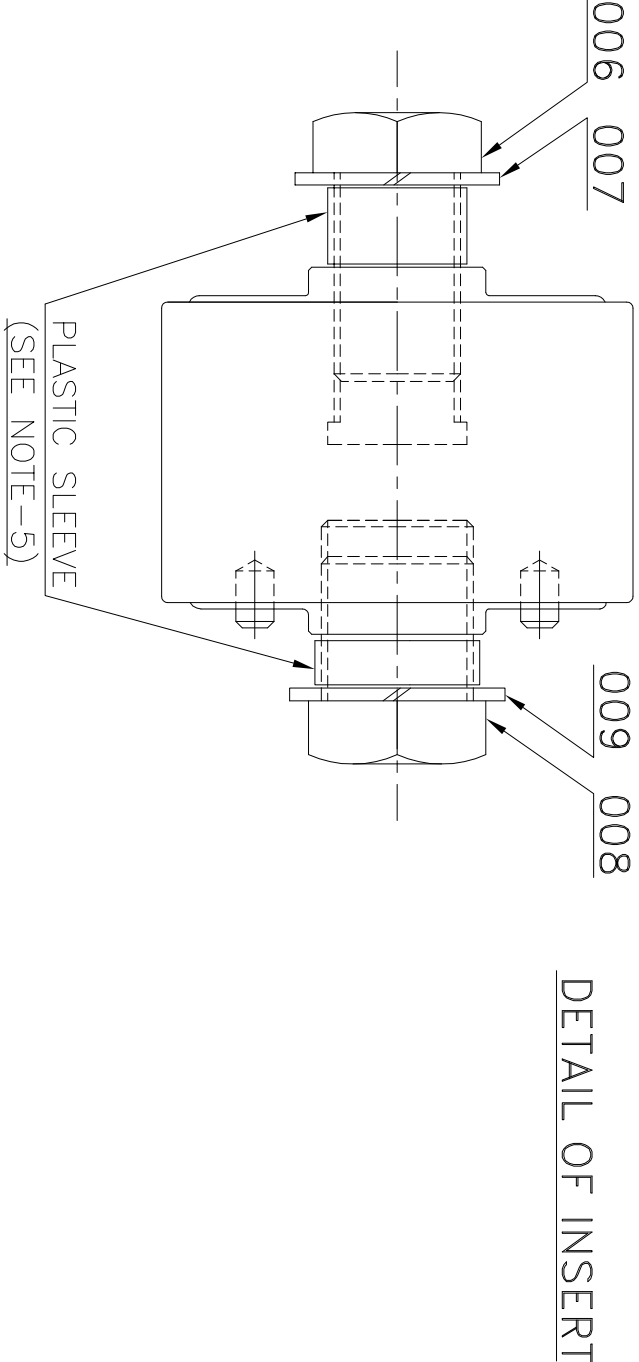
DRG. NO. 24392060059

NOTES:-

-
- SEE NOTE-7
- 6.3
- 6.3
- 6.3
- TOLERANCE OF CONCENTRICITY
ON STEEL FITTINGS REF. 001 & 002
SHALL BE 0.05 MM (MAX.)
1. DIMENSION OF TEFLON SLEEVE IT.004 BEFORE ASSY. O/D=73mm AND I/D=64.5mm. HEAT THE SLEEVE AT 250°C TO 280°C FOR ASSY.
 2. THE INSULATOR (SPECIALY THE BINDER) SHALL BE SUITABLE FOR CONTINUOUS WORKING TEMPERATURE OF 150°C & ALSO OCCASIONAL OVER HEATING AT 200°C FOR LONG DURATION FOR 16 TO 24 HOURS WITHOUT LOSS OF PROPERTIES. THEY SHOULD ALSO COMPLY WITH THE MECHANICAL & ELECTRICAL REQUIREMENTS MENTIONED BELOW.
 3. TOLERANCE ± 0.2 WHERE NOT SPECIFIED.
 4. ACCEPTANCE TESTS:-
 - a- ULTIMATE TENSION NOT LESS THAN 6000 KGS. (TYPE TEST FOR EACH LOT)
 - b- ROUTINE TENSILE TEST 2500 KGS.
 - c- BENDING STRENGTH TEST SHOULD BE MORE THAN 1000KGSx70mm.
 - d- TORSIONAL STRENGTH SHOULD BE MORE THAN 40KGF-m (AT FRACTURE)
 - e- COMPRESSIVE STRENGTH SHOULD BE MORE THAN 7000 KGS.
 - f- INSULATION RESISTANCE SHOULD BE MORE THAN 2000 MEGA-OHM.
 - g- ALL INSULATORS SHOULD WITH STAND 15KV 50 HZ FOR ONE MINUTE IN AIR.
 - h- ONE NO. INSULATOR FROM EACH LOT SHALL WITH STAND 32KV. 50 HZ FOR ONE MINUTE IN OIL.
 - i- ALL SHARP CORNERS ARE TO BE ROUNDED OFF.
 - j- PARALLELISM OF DIMENSION 28x8x4mm OF IT.002 WITH RESPECT TO DIMENSION 28x8x4.5mm OF IT.001 SHALL NOT EXCEED 0.05mm.
 5. THE PLASTIC SLEEVES ARE TO BE INSERTED ON TO THE BOLT TO PREVENT RATTLING OF SPRING WASHERS.
 6. FIRST THE INSULATOR IS TO BE COVERED WITH CORRUGATED PAPER INDIVIDUALLY AND THEN 6 NOS. OF SUCH INSULATORS PER MOTOR SET OF MATERIAL ARE



BENDING TEST PROCEDURES



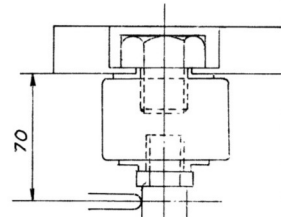
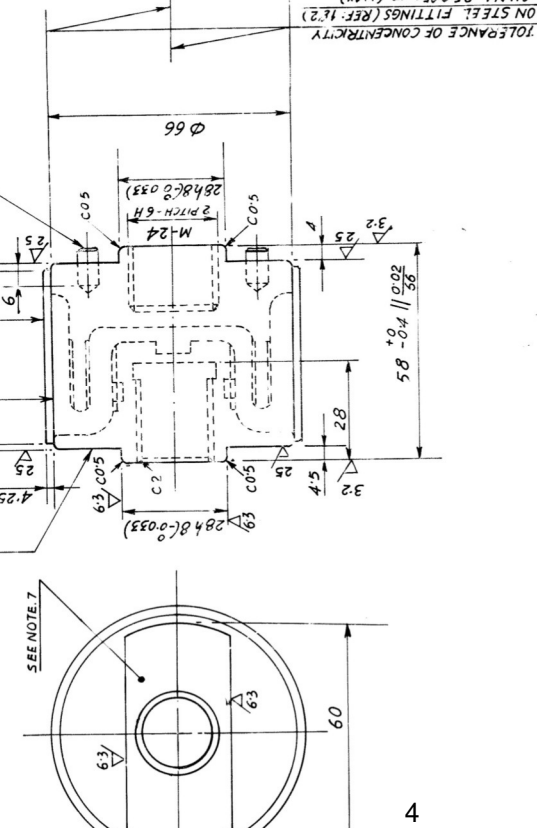
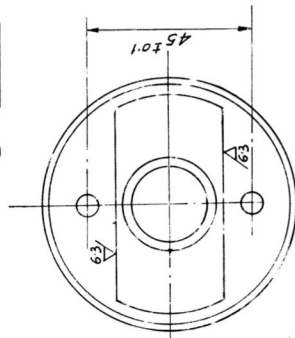
001			009	SPRING WASHER B24					IS-3063 94 (PHOSPHATED)																												
001			008	HEX. HD. SCREW SIZE M24x30x2 PITCH-6g	44392060067		001																														
001			007	SPRING WASHER B-20					IS-3063 94 (PHOSPHATED)																												
001			006	HEX. HD. SCREW SIZE M20x45L.25 PITCH-6g	44392060068		001																														
002			005	DOWEL PIN STL. COLD DRAWN BAR Ø6x10																																	
001			004	PTFE SLEEVE					ASIS-410																												
001			003	INSULATION					PTFE																												
001			002	ROD (INSERT) Ø66x45.0 SL. STEEL					GLASS BONDED MICA																												
001			001	ROD (INSERT) Ø66x33 SL. STEEL																																	
59	64	65	75	78	79	25	27	29	58	59	60	77	29	31	34	45	55	56	58	65	72																
VAR00	REMARKS			VAR NO.	ITEM NO.	DESCRIPTION			STD	DRAWING NO.			ITL NO.	32	33	46	54	A	57	68	UNIT WT.	71	SS														
																						28	CARD TYPE-1			28			CARD TYPE-2			28			ZONE		

ADDITIONAL INFORMATION		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		HS 15250 A 25 KV AC LOCO	
SKBL 4440 CLW2 TWD 095-052					
STATUS OF DRAWING					
DISTRIBUTION OF PRINTS					
TWE-1					
TXM-4					
TNX-1					
		BHARAT HEAVY ELECTRICALS LTD. BHOPAL			
DRN.	NAME	SIGN.	DATE	NO. OF	
CKSB		Sd/-	15.09.10	VAR.	
CKD		Sd/-	15.09.10	01	
APPD.	S.PAL	Sd/-	15.09.10		

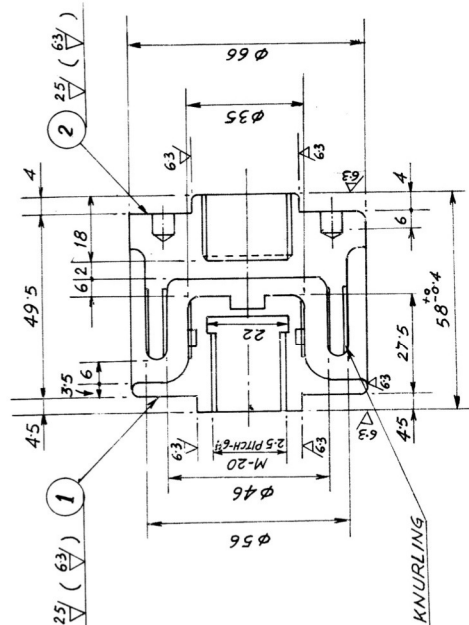
REV.	DATE	ALTERED CHECKED APPROVED	REV.	DATE	ALTERED CHECKED APPROVED	REV.	DATE	ALTERED CHECKED APPROVED	ZONE
									ZONE
DRAWING DIGITIZED & UPDATED.									
			REV.	DATE	ALTERED CHECKED APPROVED	REV.	DATE	ALTERED CHECKED APPROVED	ZONE
			02	28.10.15		01	21.10.10		
IN BOM IT. NO. 006 TO 009 VAR.00 QTY. WERE NOT ON.									
TITLE									
INSULATING ROD									
(FOR MODIFIED BRUSH HOLDER)									
DRAWING NO.		24392060059		REV.		02			
SHT NO.		01		NO. OF SHT		01			
DEF. TIME		GRADE OF UN. TOL.		SCALE		WEIGHT (K.G.)		REF. TO ASSY.	
DIM. & M/F				NTS		1.4:1		04392060051	
CODE 405								ITEM NO. 015	
								ITEM 009	

—

NOTE



BENDING TEST PROCEDURES



DETAIL OF INSERT ①②

SURFACE ROUGHNESS SYMBOL IS : 2073	GRADE NUMBER											
	N 1	N 2	N 3	N 4	N 5	N 6	N 7	N 8	N 9	N 10	N 11	N 12
	$R_a \mu m$	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25
SYMBOL												

[illegible]



BHARAT HEAVY ELECTRICALS LIMITED, BHOPAL
QUALITY ASSURANCE PLAN FOR BRUSH HOLDER SUPPORT PIN & INSULATING ROD TO BHEL ORDERING SPECIFICATION/DRAWING AS PER PO

QUALITY PLAN NO. – QAP/QTM/VENDOR QAP/2024-25/ BRUSH HOLDER SUPPORT PIN & INSULATING ROD DTD 11.11.2024 REV 00
Reference Document- PO DRAWING/SPECIFICATION

Page : 1 of 1

SL. NO	COMPONENT	CHARACTERISTICS	TYPE OF CHECK	QUANTAM OF CHECK		REFERENC E DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	INSPECTION AGENCY	REMARKS
				TP	TP/A					
1)	Raw Material (all items)	Test	TC Verification	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 & invoice
2)	Dimension	Dimension	TC Verification & Measurement	100%	5%	As per drawing & specification	As per drawing & Specification	Supplier record	BHEL/TP/A	Supplier internal report for 100 % to be reviewed and 5 % to be Witness by TP/A
3)	Testing	Type test	TC Verification	100%	100%	As per drawing & specification	As per drawing & specification	Supplier record	BHEL/TP/A	Supplier internal report for 100 % to be reviewed and 5 % to be Witness by TP/A
		Routine test	TC Verification & testing	100%	5 %	As per drawing & specification	As per drawing & specification	Supplier record	BHEL/TP/A	Supplier internal report for 100 % to be reviewed and 1 % to be Witness by TP/A
4)	Zinc coating	Coating thickness	TC Verification & testing	100%	1 %	As per drawing & specification	As per drawing & specification	Supplier record	BHEL/TP/A	Supplier internal report for 100 % to be reviewed and 1 % to be Witness by TP/A
5)	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

Prepared By


गुणता नियंत्रण / VELMURGAN
सहायक अभियंता ग्रेड-II
गुणता नियंत्रण-क्यू टी.एम.विभाग
बी.एच.ई.एल., भोपाल

Approved By


गोवर्धन सिंह राजौरा/G.S. RATHORE
प्रबंधक/Manager
क्यू टी.एम. विभाग/QTM Division
बी.एच.ई.एल., भोपाल/BHEL, Bhopal



BHARAT HEAVY ELECTRICALS LIMITED, BHOPAL
QUALITY ASSURANCE PLAN FOR BRUSH HOLDER SUPPORT PIN & INSULATING ROD TO BHEL ORDERING
SPECIFICATION/DRAWING AS PER PO

QUALITY PLAN NO. – QAP/QTM/VENDOR QAP/2024-25/ BRUSH HOLDER SUPPORT PIN & INSULATING ROD DTD 11.11.2024 REV 00
Reference Document- PO DRAWING/SPECIFICATION
Page : 2 of 1

5)	Packing to avoid transit damage	Visual	Visual	100%	20%	As per drawing & specification	As per drawing & specification		BHEL/TP/A	Packing to be such that no damages should occur during transit
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Prepared By

Prepared By
VELMURGAN /VELMURGAN
सहायक अभियंता ग्रेड-II
गुणता नियंत्रण-क्यू.टी.एम. विभाग
बी.एच.ई.एल, भोपाल

Approved By

Approved By
गजेन्द्र सिंह राठौर/G.S. RATHORE
प्रबंधक/Manager
क्यू.टी.एम. विभाग/QTM Division
बी.एच.ई.एल, भोपाल/BHEL