

TECH. CONDITIONS

1. FOR SOLDERING, USE SOLDER JCCy 40-2 GOST-21930-76 WITH FLUX Φ KCT OCT 4. Γ 0.033.200
3. PUT TUBING, REF. NO. 18, ON THE LEAD, MARK THE TUBING AT THE LEAD END WITH LETTERING 4 USING THE TYPE-WRITER RIBBON GOST-6048- 7.
5. SECURE SCREWS, REF, NO. 13, WITH BUTVAR-PHENOLIC ADHESIVE Φ 4 GOST-12172-74.

* This dwg has been prepared based on AHSP dng.

VETTED
22 JUN 2006
JWM/STD-CELL

इन आरेखणों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

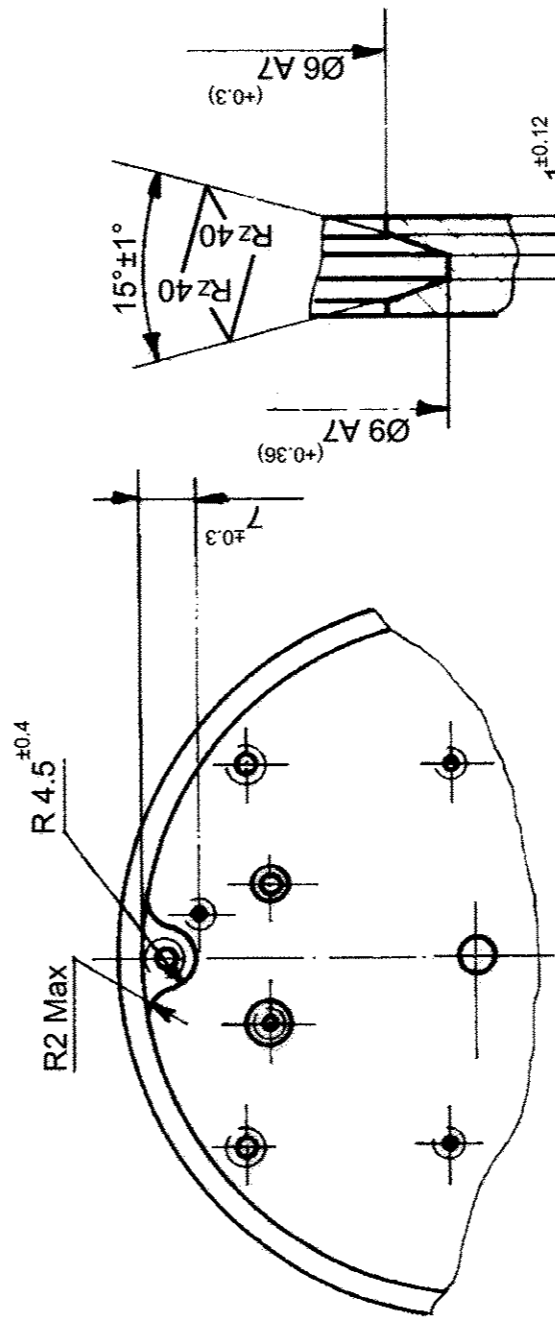
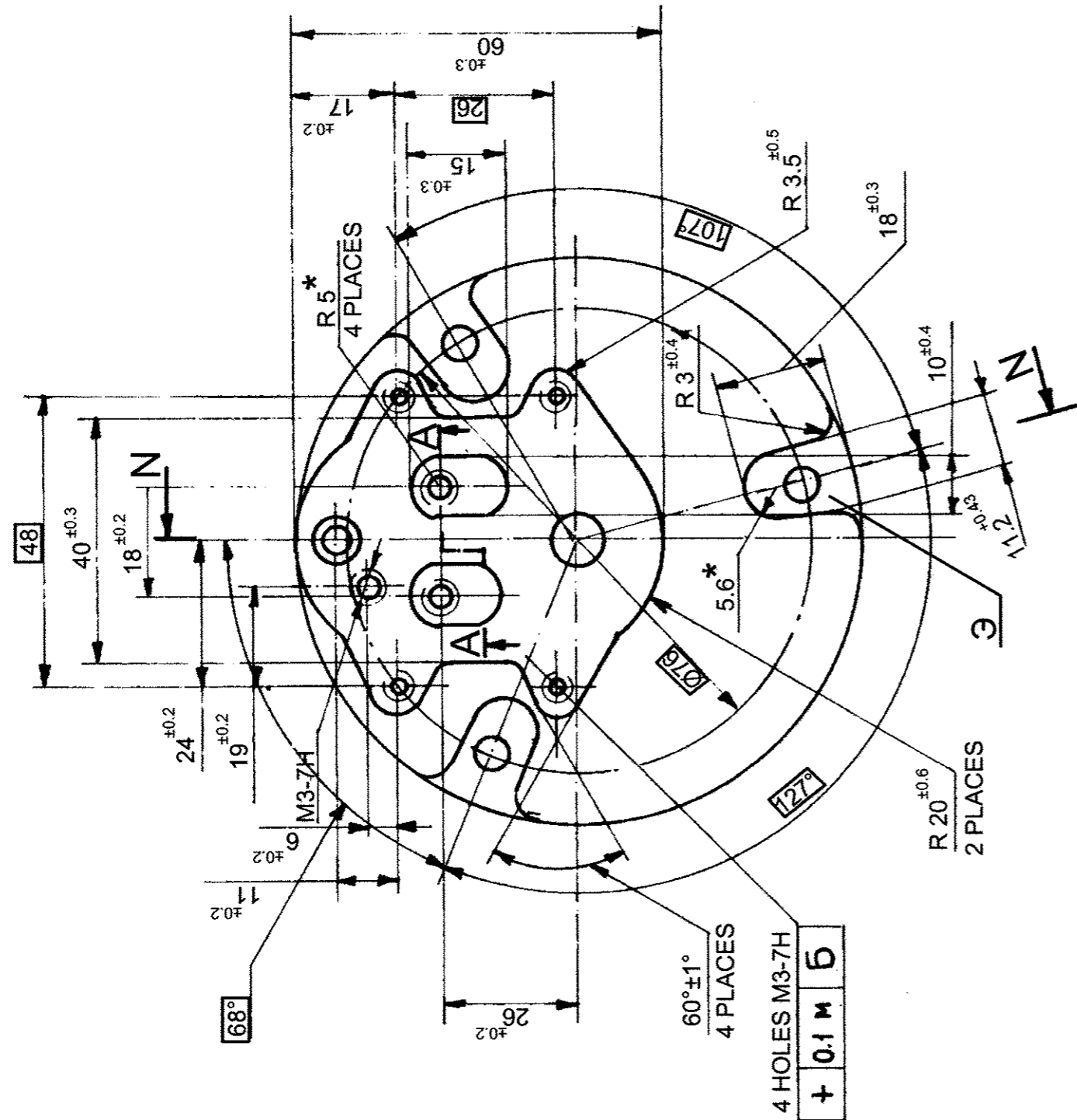
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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

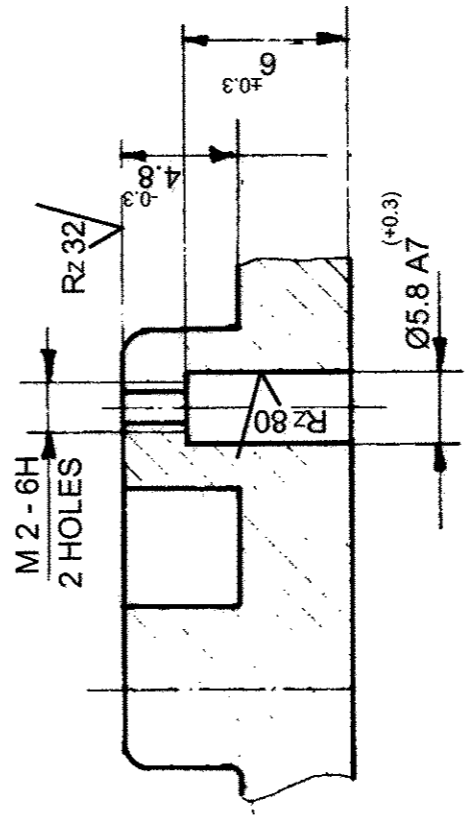
विचलन
DEVIATION

X	X	X	X			WT=0.14
संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्युक्ति REMARKS
सामान्य सहिष्णुता GENERAL TOLERANCE						
रेखिक परिमाण LINEAR DIMENSION						
0-6	±0.1					
6-30	±0.2					
30-120	±0.3					
120-315	±0.5					
315-1000	±0.8					
1000-2000	±1.2					
कोणिक परिमाण ANGULAR DIMENSION						
1-10	±1°	संख्या NO. OFF	संबंधित पुर्जा क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE
10-50	±30'					2006
50-100	±20'					
>100	±10'					
मापक 'म्यू एम' में VALUE IN 'μm'						
-	>25					
▽	8-25					
▽▽	1.6-8					
▽▽▽	0.025-1.6					
▽▽▽▽	<0.025					
COVER				ASSEMBLY DRAWING		मापमान SCALE
ELECTROMAGNET B.M.P.- II				2006		आरेखित DRAWN
मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ				कार्यालय OFFICE		जाँचा CHECKED
MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH				D.O.		अनुमोदित APPROVED
						द्वारा बदला REPLACED BY
						हेतु बदला REPLACED FOR
						आरेखण क्र. DRAWING NO.
						EM46-010SB

AP-2



VIEW - K



DETAIL - I
SCALE 2 : 1

SEC - A = A
SCALE 2 : 1

- TECHNICAL CONDITIONS**
1. CASTING RADIUS 3 mm. UNLESS OTHERWISE SPECIFIED.
 2. THE CASTING SLOPE GRADIENTS FOR INNER AND OUTER SURFACES ARE 1°30' Max. IN DECREASING ORDER OF SIZES. FOR BOSSES, UP TO 3° IN INCREASING ORDER OF SIZES.
 3. NO CAVITIES ARE ALLOWED ON SURFACES B AND K.
 4. RADIUS 0.5 mm. UNLESS OTHERWISE SPECIFIED.
 5. THE COATING OF OUTER SURFACES: ELECTROLESS OXIDIZING FOLLOWED BY FLOURINE TREATMENT (ENAMEL M.JI- 165, GRAY, GOST 12034-77) THE COATING OF INNER SURFACES A, B, K AND OF HOLES: ELECTROLESS OXIDIZING FOLLOWED BY FLOURINE TREATMENT.
 6. * SIZES FOR REFERENCE.

This drg. has been prepared based on AHSP drg.

इस आरेखणी तथा इसके साथ की समस्त सामग्री को स्वतंत्रिकार भारत सरकार राा शैल्य की भारतीय आरुध निर्माणों के पास है. भारतीय आरुध निर्माणों के महानिदेशक की लिखित अनुमति के बिना इसकी नकल या किसी भी रूप में इसके उद्धरण या इसमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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CHEMICAL COMPOSITION

GRADE	AL	Mg	Si	Mn	Cu	Zn	Sn	Pb	Be	Zr	Fe	Ni	Ti
AJ2D GOST 2685-75	Base	0.10	10.0	0.50	0.60	0.30	---	---	---	---	0.10	1.50	0.10
	Max	13.0											

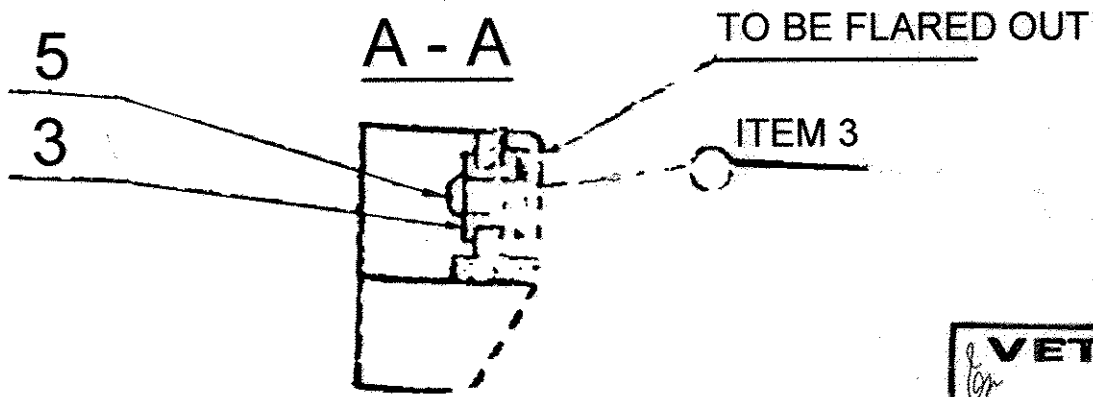
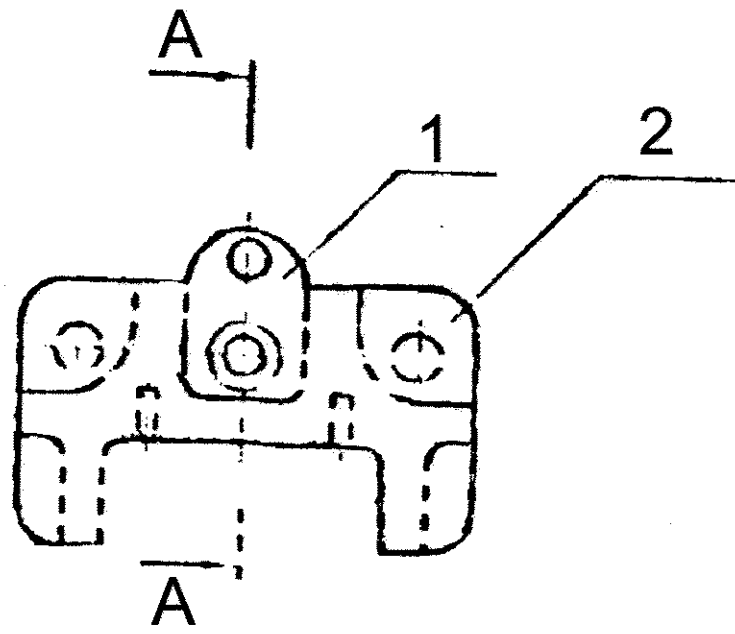
MECHANICAL PROPERTIES

GRADE	TENSILE STRENGTH Min	SPECIFIC ELONGATION% Min	HARDNESS HB Min
AJ2D GOST 2685-75	16 Kgr/mm ²	1 Min	50

VETTED
8 AUG 2006
JWM/STD-CELL

* CASTING I-OCT 3-4227-79
AJ2D GOST-2685-75

संख्या NO. OFF	विवरण DESCRIPTION	सूची नं. PART NO.	वर्णन MATERIAL	मानक STANDARD	परिमाणु DIMENSIONS	अवशिष्ट REMARKS
संख्या NO. OFF	संबंधित पुस्तिका आरेखण नं. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	2006	2006	WT=0.13 Kg
COVER						
ELECTROMAGNET						
B.M.P. II						
मशीनी औजार आदिरूप फैक्टरी, अम्बर्नाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH						
क्याबल्य ड्राफ्टिंग D.O.						



VETTED
 22 JUN 2006
 JWM/STD-CELL

TECHNICAL CONDITIONS

1. NO CRACKS ARE ALLOWED.
2. WHEN FLARING OUT, NO MORE THAN THREE RADIAL RUPTURES ARE ALLOWED.
3. SOLDER LOC 61 GOST-21930-76

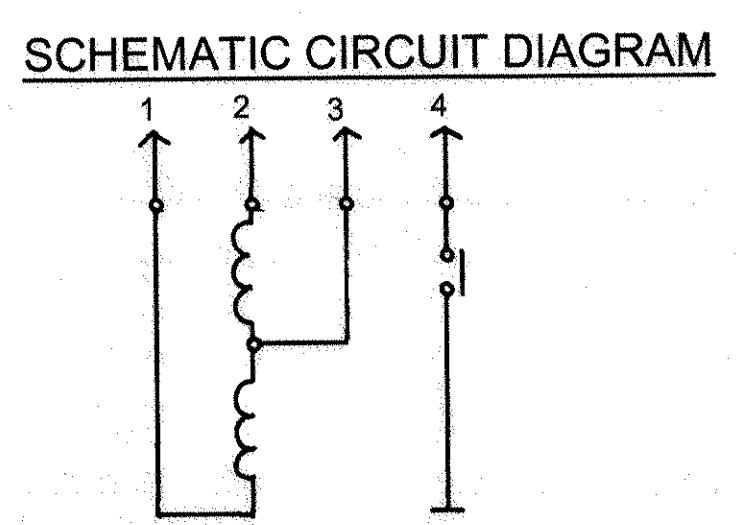
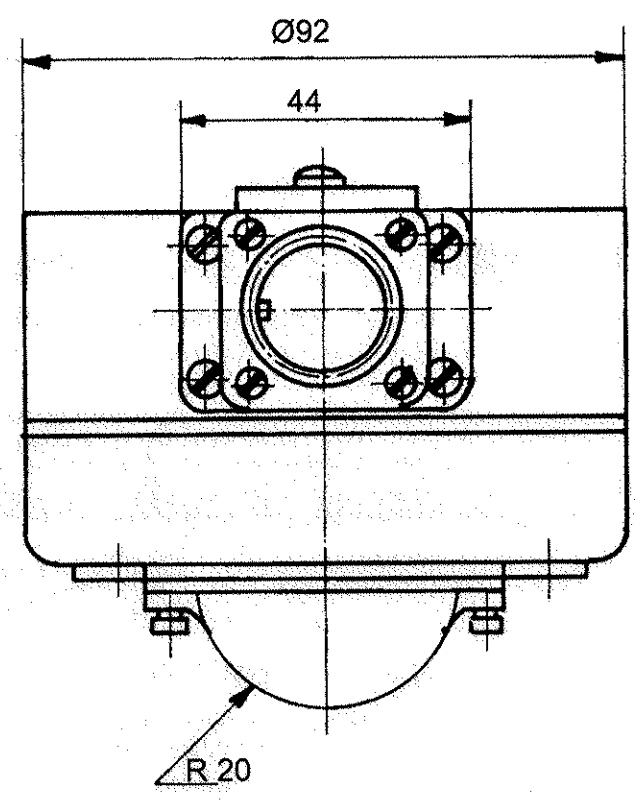
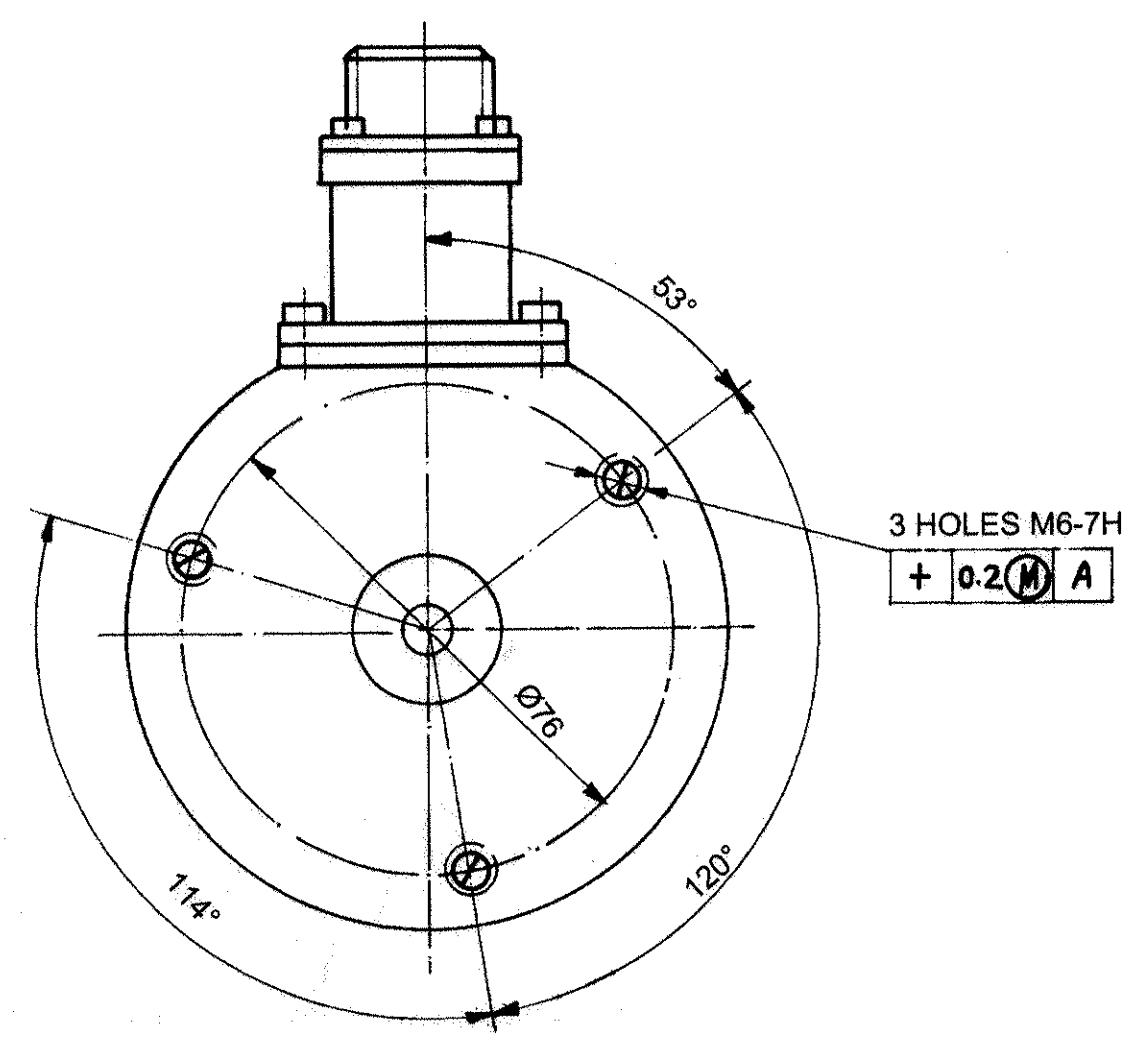
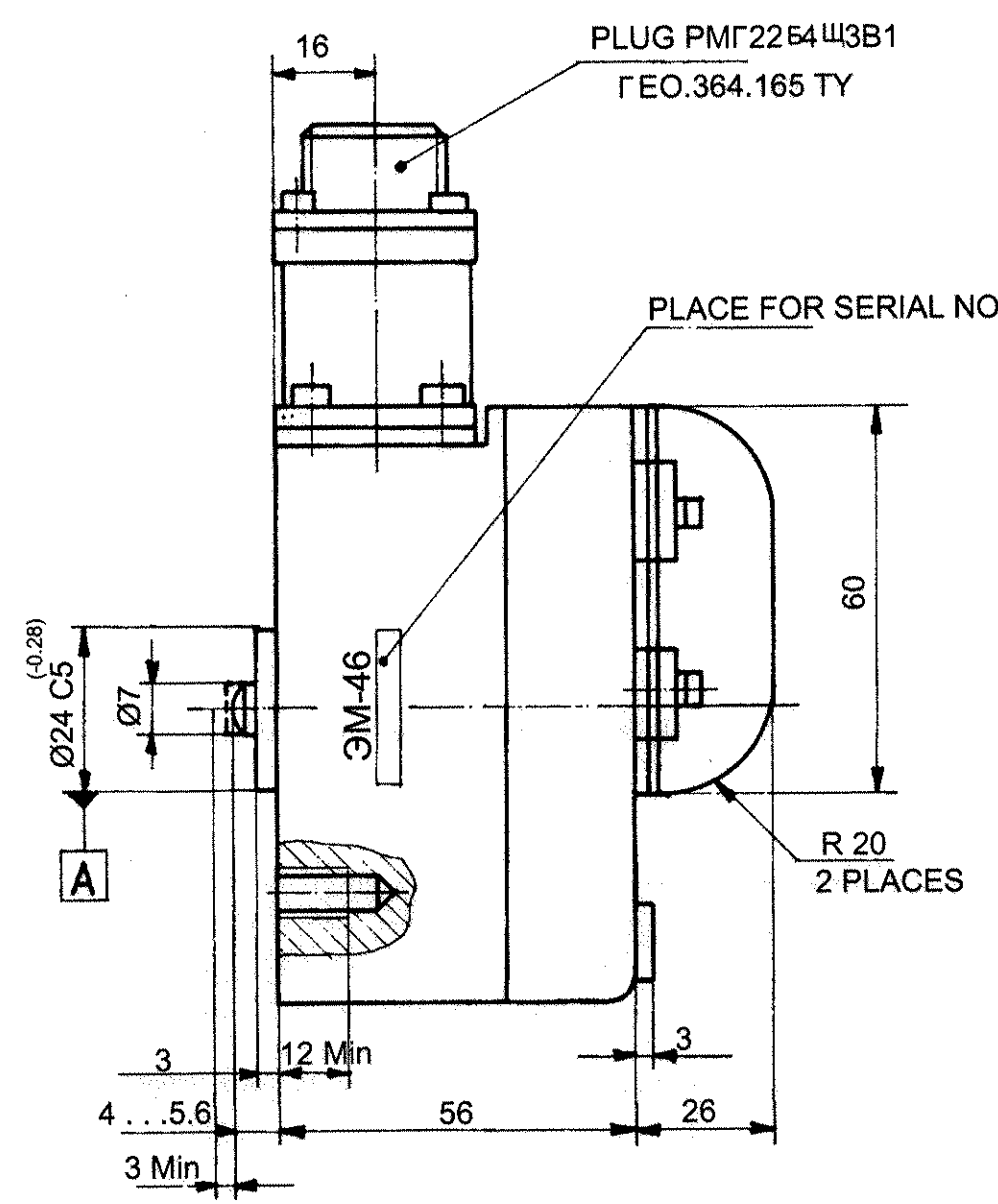
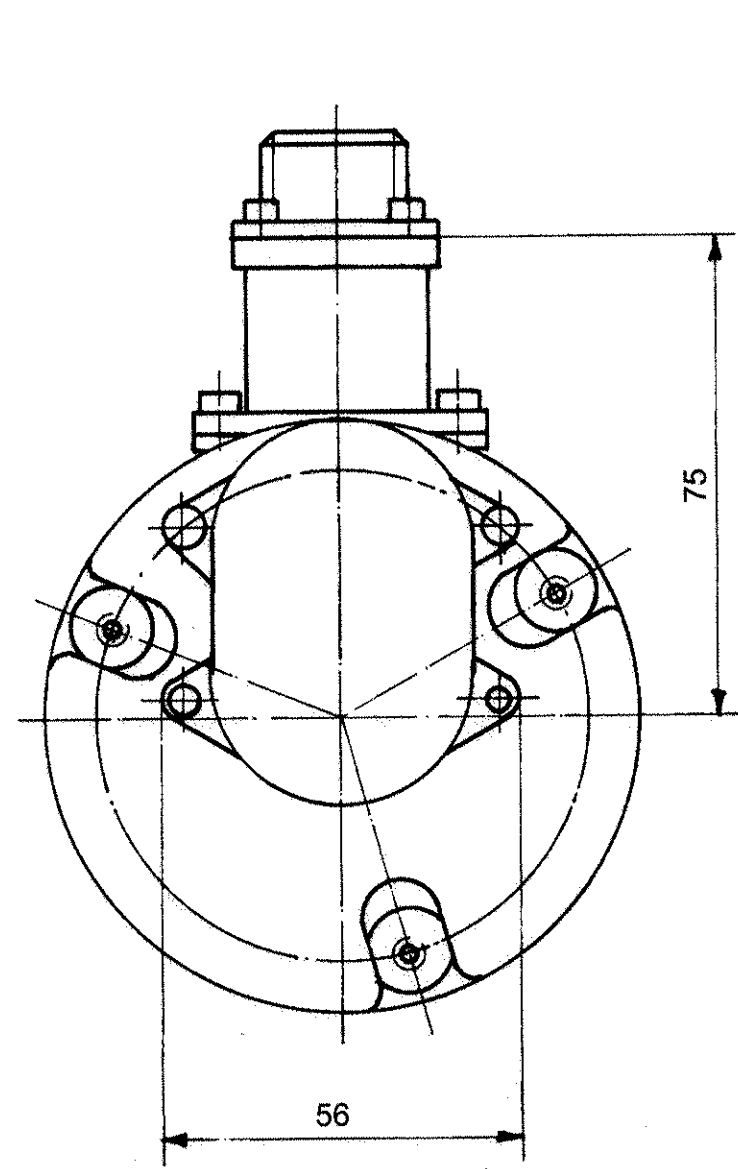
** This drg has been prepared based on AHSP drg **

							WT=0.0021	
संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाणु DIMENSIONS	अभ्यक्ति REMARKS		
सामान्य सहिष्णुता GENERAL TOLERANCE रेखिक परिमाण LINEAR DIMENSION 0-8 ±0.1 8-30 ±0.2 30-120 ±0.3 120-315 ±0.5 315-1000 ±0.8 1000-2000 ±1.2								
कोणिक परिमाण ANGULAR DIMENSION 1-10 ±1° 10-50 ±30° 50-100 ±20° >100 ±10°		संख्या NO. OFF	संबंधित पुर्जाका आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE	नाम NAME	
मापक 'म्यू एम' में VALUE IN 'um' ~ >25 ▽ 8-25 ▽▽ 1.6-8 ▽▽▽ 0.025-1.6 ▽▽▽▽ <0.025		POST ASSEMBLY DRAWING ELECTROMAGNET B.M.P.-II				मापमान SCALE NTS	आरेखित DRAWN 22-6-06 जाँचा CHECKED अनुमोदित APPROVED	
		मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH			कार्यालय OFFICE D.O.	द्वारा बदला REPLACED BY हेतु बदला REPLACED FOR	आरेखण क्र. DRAWING NO. EMT76M-060SB	
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विचलन DEVIATION							

File Path: D:/KHAN/BMP-II(R)/EMT76-060SB

This drg has been prepared based on AHSP drg

AP-2



VETTED
8 AUG 2006
JWM/STD-CELL

TECH. CONDITIONS

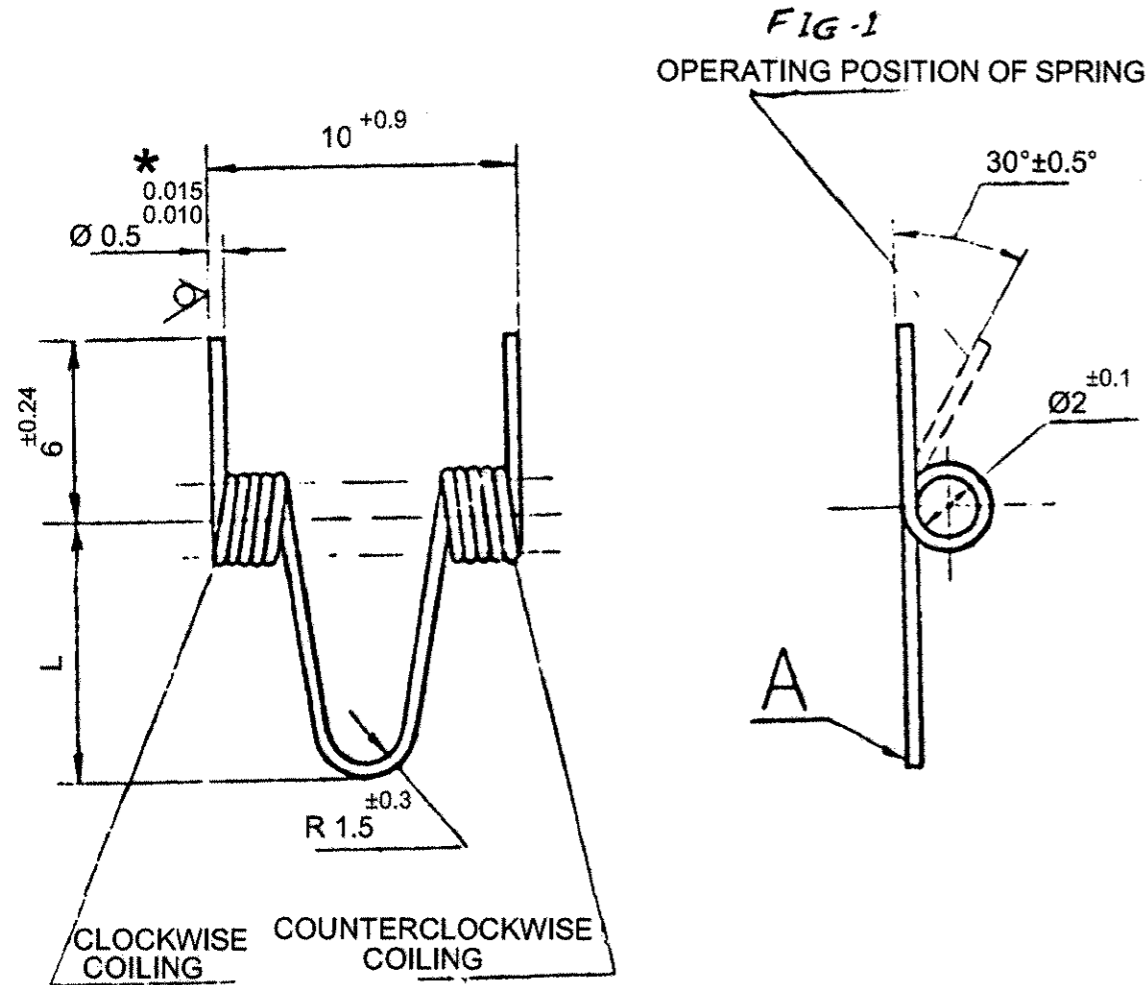
1. THE ELECTROMAGNET IS SUPPLIED WITH THE TRANSPORTATION CAP. THE TRANSPORTATION CAP IS NOT SHOWN CONVENTIONALLY.
2. PROTECTION OF THE ELECTROMAGNET AGAINST DUST AND SPLASHES ON THE SIDE OF THE ROD WILL BE PROVIDED BY THE USER.
3. PLACE FOR STAMPS OF THE QCD AND CUSTOMER'S REPRESENTATIVE

This dwg. has been Prepared based on AHSP dwg.

इन आरेखों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्व अधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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संख्या NO. OFF		विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS	WT=2.20 Kg	
सामान्य सहिष्णुता GENERAL TOLERANCE									
रेखिक परिमाण LINEAR DIMENSION									
0-6		±0.1							
6-30		±0.2							
30-120		±0.3							
120-315		±0.5							
315-1000		±0.8							
1000-2000		±1.2							
कोणिक परिमाण ANGULAR DIMENSION		संख्या NO. OFF		संबंधित पुर्जा का आरेखण क्र. DRG. NO. OF ASSOCIATED PART		सूचक INDEX		संशोधन ALTERATION	
1-10		±1'		2006		दिनांक DATE		नाम NAME	
10-50		±30'		ELECTROMAGNET		मापमान SCALE		आरेखित DRAWN	
50-100		±20'		E M-46		जाँचा CHECKED		अनुमोदित APPROVED	
>100		±10'		OUT LINE DRAWING		द्वारा बदला REPLACED BY		हेतु बदला REPLACED FOR	
मापमाप 'यू एम' में VALUE IN 'mm'		-		±25		Mशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		कार्यालय OFFICE	
∇		8.25		D.O.		आरेखण क्र. DRAWING NO.		E M46-000 GCH	
▽▽		1.6-8							
▽▽▽		0.025-1.6							
▽▽▽▽		±0.025							
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT		विचलन DEVIATION							



- TECHNICAL CONDITIONS**
1. TOTAL NUMBER OF TURNS, 11: ARRANGEMENT OF TURNS, SYMMETRICAL.
 2. WINDING: THE COILS TOUCHING.
 3. FOR THE FORCE OF THE SPRING IN THE OPERATING POSITION AT SURFACE A, REF. THE TABLE.
 4. LOW-TEMPERATURE TEMPERING.
 5. * SIZE FOR REFERENCE.
 6. COATING: ELECTROLESS OXIDIZING (VARNISHГФ-95 (2) GOST-8018-70
 7. * STAMP Kk ON THE PACKAGE SEAL.

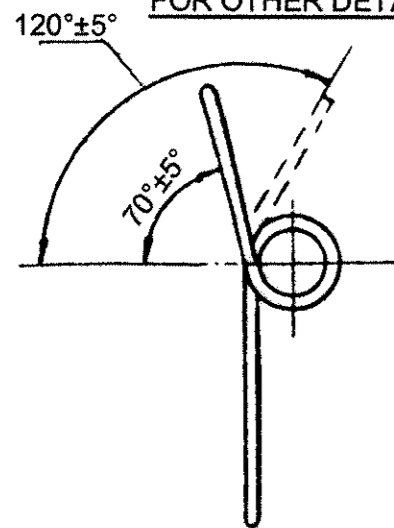
DESIGNATION	FIG.	SPRING FORCE, H (Kgf)	L. mm
ВД8.385-002	1	1.57±0.2 (0.160 ±0.02)	8.5±0.2
ВД8.385-002-01	2	1.50±0.2 (0.153±0.02)	13.5 ±0.2

CHEMICAL PROPERTIES	WIRE I-1 TY14-4- 823-77
CARBON	0.86 - 0.91 ✓
SILICON	0.17 - 0.37 ✓
MANGANESE	0.20 - 0.40 ✓
CHROMIUM	0.05 Max ✓
PHOSPHORUS	0.020 Max ✓
SULPHUR	0.020 Max ✓
NICKEL	0.05 Max ✓
COPPER	0.10 Max ✓

MECHANICAL PROPERTIES
ULTIMATE TENSILE STRENGTH Kg/mm ²
265 - 300 ✓
NUMBER OF TWISTS, Min
16 ✓



FOR OTHER DETAILS, REFER TO FIG-1



@ WIRE I-0.5TY-14-4-823-77 CHEMICAL COMPOSITION KT-2 GOST-9389-75

संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS																												
						WT=0.0002																												
<table border="1"> <thead> <tr> <th>सामान्य सहिष्णुता GENERAL TOLERANCE</th> <th>रेखिक परिमाण LINEAR DIMENSION</th> <th>कोणिक परिमाण ANGULAR DIMENSION</th> <th>मापक 'म्यू एम' में VALUE IN 'um'</th> </tr> </thead> <tbody> <tr> <td>0-8</td> <td>±0.1</td> <td>1-10</td> <td>>25</td> </tr> <tr> <td>6-30</td> <td>±0.2</td> <td>10-50</td> <td>8-25</td> </tr> <tr> <td>30-120</td> <td>±0.3</td> <td>50-100</td> <td>1.6-8</td> </tr> <tr> <td>120-315</td> <td>±0.5</td> <td>>100</td> <td>0.025-1.6</td> </tr> <tr> <td>315-1000</td> <td>±0.8</td> <td></td> <td><0.025</td> </tr> <tr> <td>1000-2000</td> <td>±1.2</td> <td></td> <td></td> </tr> </tbody> </table>							सामान्य सहिष्णुता GENERAL TOLERANCE	रेखिक परिमाण LINEAR DIMENSION	कोणिक परिमाण ANGULAR DIMENSION	मापक 'म्यू एम' में VALUE IN 'um'	0-8	±0.1	1-10	>25	6-30	±0.2	10-50	8-25	30-120	±0.3	50-100	1.6-8	120-315	±0.5	>100	0.025-1.6	315-1000	±0.8		<0.025	1000-2000	±1.2		
सामान्य सहिष्णुता GENERAL TOLERANCE	रेखिक परिमाण LINEAR DIMENSION	कोणिक परिमाण ANGULAR DIMENSION	मापक 'म्यू एम' में VALUE IN 'um'																															
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315-1000	±0.8		<0.025																															
1000-2000	±1.2																																	
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						जाँचा CHECKED																												
						अनुमोदित APPROVED																												
						द्वारा बदला REPLACED BY																												
						हेतु बदला REPLACED FOR																												
						आरेखण क्र. DRAWING NO.																												
						VD8.385-002																												

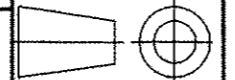
* This drg has been prepared based on AHSP drg

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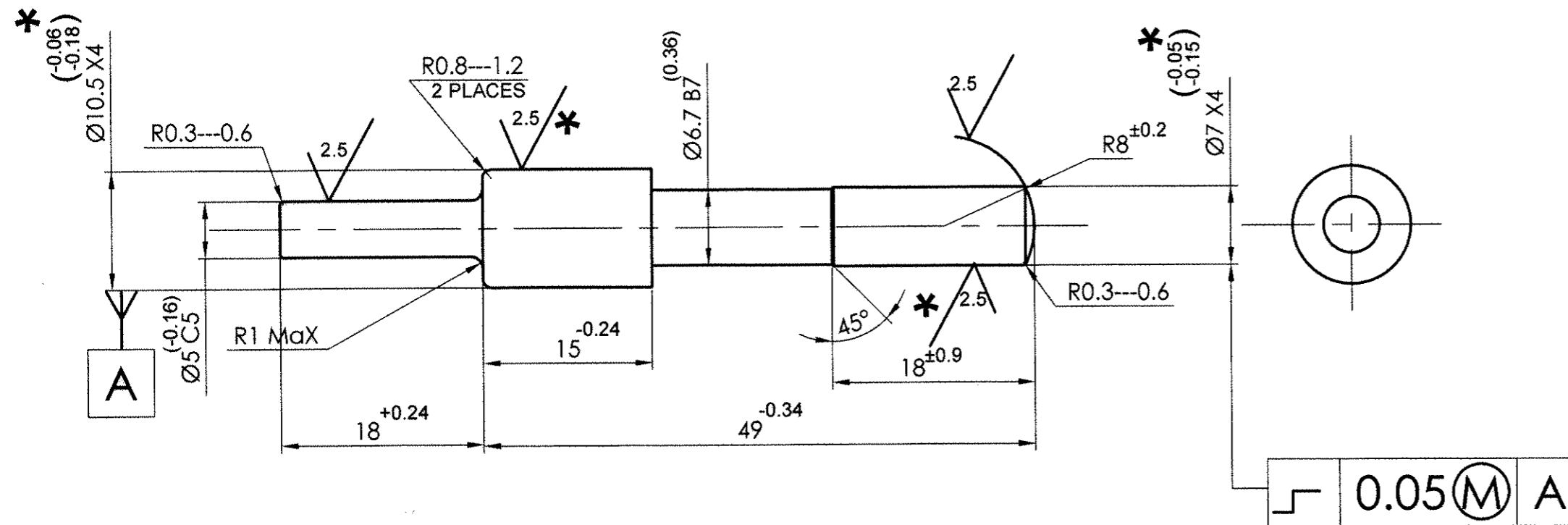
मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION



मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ
MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH

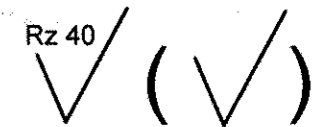
कार्यालय
OFFICE
D.O.



CHEMICAL COMPOSITION	BRONZE БР1АМЦ9-2 GOST-18175-78
ALUMINIUM	8.0 - 10.0
MANGANESE	1.5 - 2.5
COPPER	THE REST
TIN	0.1 Max
SILICON	0.1 Max
LEAD	0.03 Max
PHOSPHORUS	0.01 Max
IRON	0.5 Max
ZINC	1.0 Max
TOTAL	1.5 Max

TECHNICAL CONDITIONS

1. COATING : HARD CHROMIUM PLATING 18
2. SIZES AND ROUGHNESS OF SURFACES AFTER COATING.
3. CYLINDRICAL SITE NOT EXCEEDING 1.5 mm DIA. IS ALLOWED ON THE SPHERE.
4. RADII 0.3 mm UNLESS OTHERWISE SPECIFIED.



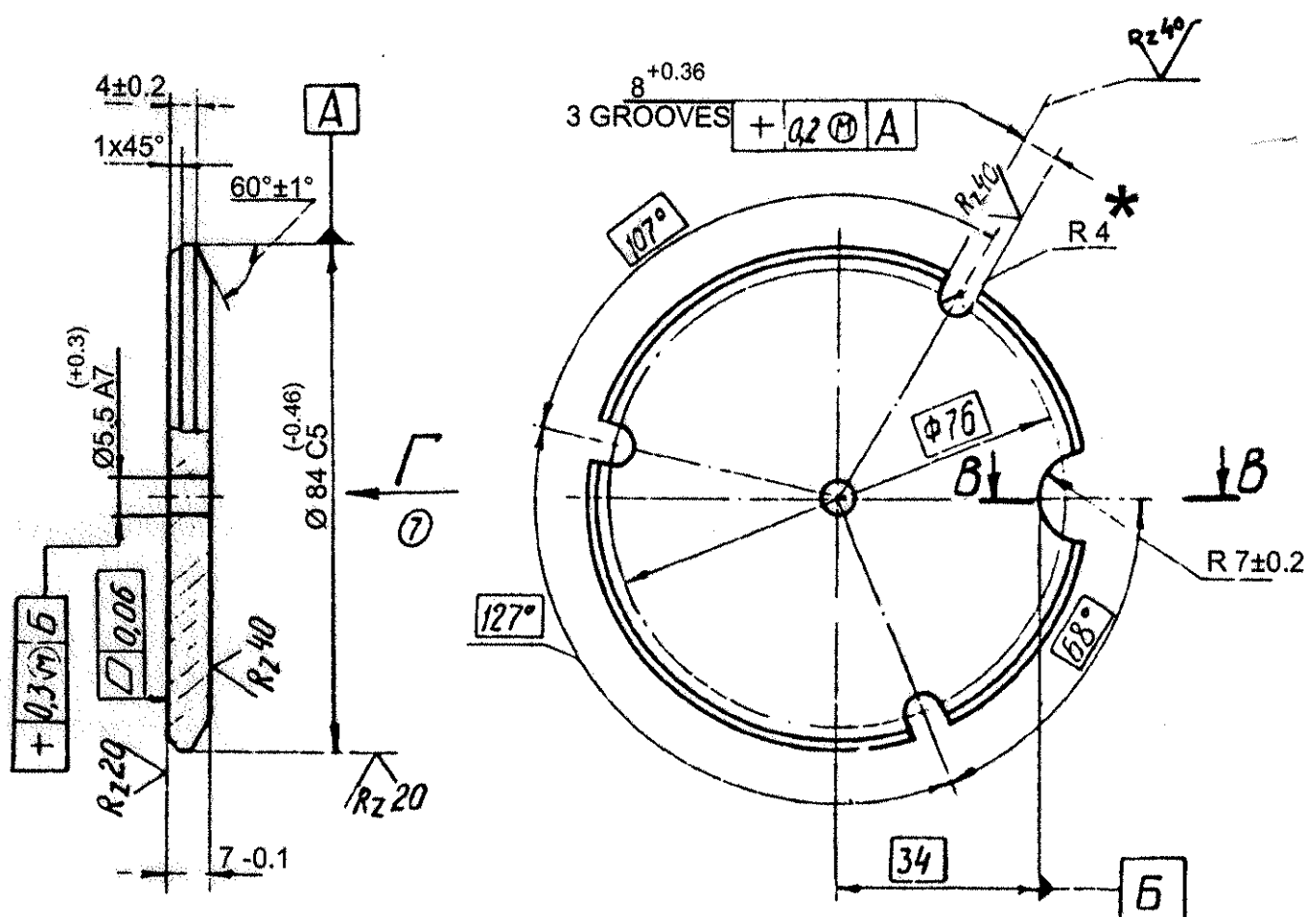
*BRONZE БР1АМЦ9-2 GOST-18175-78

संख्या NO.OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS																																										
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संख्या	संबंधित पुर्जाका आरेखण क्र.	सूचक	संशोधन	2006	दिनांक	नाम																																										
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<p>कार्यालय OFFICE D.O.</p>																																																
<p>द्वारा बदला REPLACED BY</p> <p>हेतु बदला REPLACED FOR</p> <p>आरेखण क्र. DRAWING NO. E.M46-002</p>																																																

* This drg has been prepared based on AHSP drg

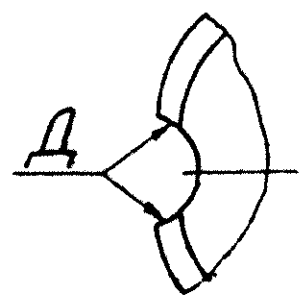
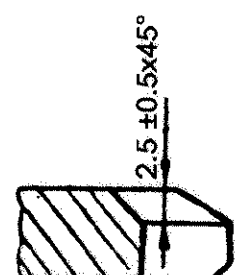
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B - B
SCALE - 2 : 1

VIEW - Γ



TECHNICAL CONDITIONS

1. TO BE ANNEALED TO IMPROVE THE MAGNETIC PROPERTIES.
2. COATING: ZINC PLATING 15 FOLLOWED BY CHROMATE TREATMENT.
3. RADII 0.5 mm UNLESS OTHERWISE SPECIFIED.
4. * SIZE FOR REFERENCE.
5. THE CHAMFER MAY BE ABSENT AT PLACES Δ.

CHEMICAL COMPOSITION	10 GOST- 1050-74 ✓
CARBON	0.07 - 0.14 ✓
SILICON	0.17 - 0.37 ✓
MANGANESE	0.35 - 0.65 ✓
CHROMIUM	0.15 Max ✓
PHOSPHORUS	0.035 Max ✓
SULPHUR	0.04 Max ✓
NICKEL	0.25 Max ✓
COPPER	0.25 Max ✓

MECHANICAL PROPERTIES

ULTIMATE STRENGTH Kgf/mm ²	34 MIN ✓
YIELD POINT Kgf/mm ²	21 MIN ✓
RELATIVE ELONGATION %	31 MIN ✓
REDUCTION OF AREA %	55 MIN ✓
HARDNESS BHN	143 MIN ✓



Rz 80 ✓(✓)

संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS																																																								
			STEEL 10 GOST-1050-74 ✓			WT=0.29 Kg																																																								
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ARMATURE ELECTROMAGNET B.M.P. II				मापमान SCALE NTS		आरेखित DRAWN 4.7.06 ✓ जाँचा CHECKED 17/07 ✓ अनुमोदित APPROVED																																																								
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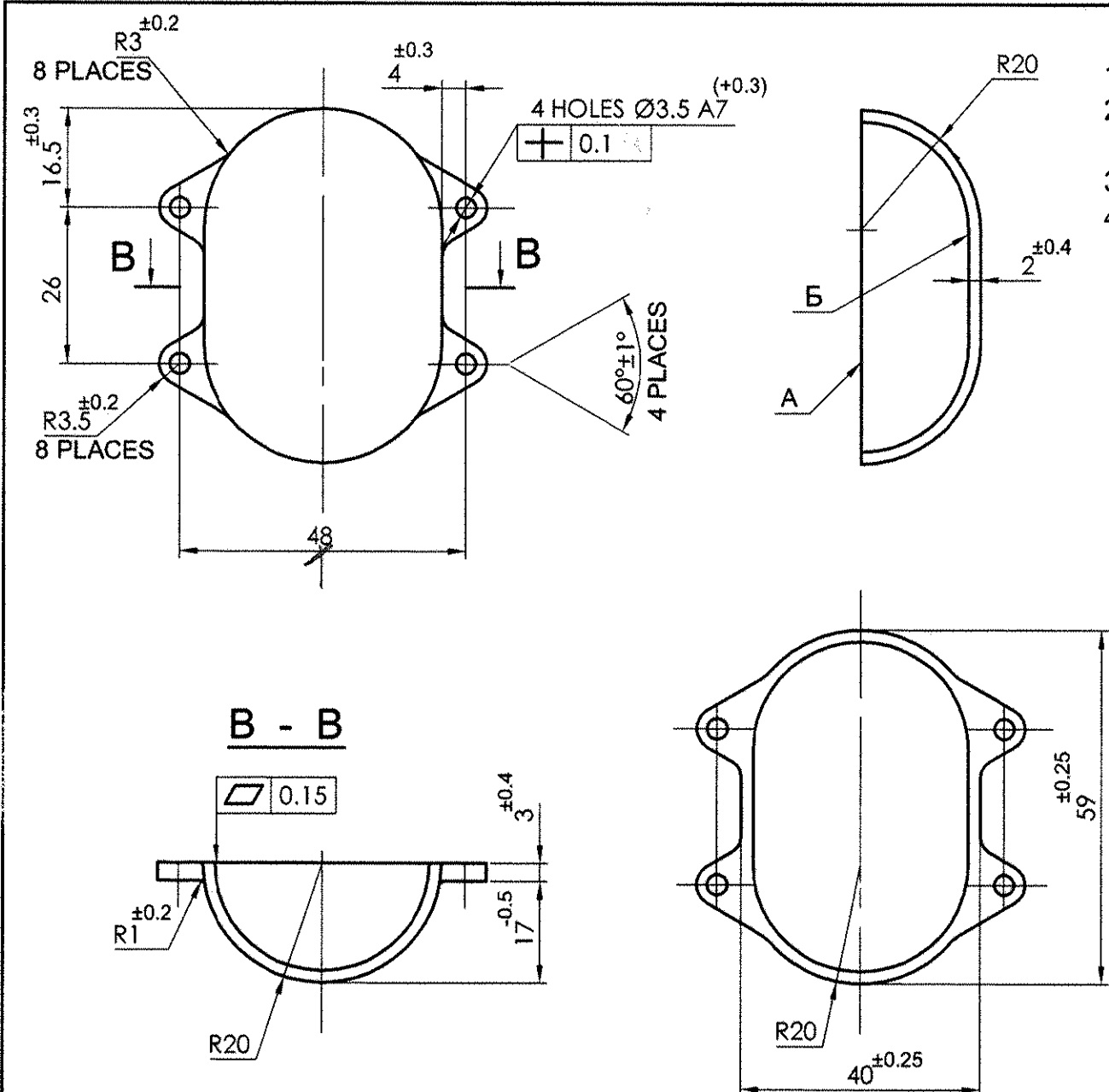
This drg. has been prepared based on AHSP drg.

इन आरेखणों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION



- TECHNICAL CONDITIONS**
1. THE CASTING SLOPE GRADIENTS ARE 1°30' Max. IN INCREASING ORDER OF SIZES.
 2. CASTED SURFACES, THE REMNANTS OF THE POURING GATES AND THE FLASHES ARE ALLOWED TO BE MACHINED PROVIDED THE SIZES ARE MAINTAINED INTACT.
 3. NO CAVITIES ARE ALLOWED ON SURFACE A.
 4. THE COATING OF OUTER SURFACES: ELECTROLESS OXIDIZING WITH SUBSEQUENT PHOSPHORIC ACID TREATMENT (ENAMEL M JI 165, GRAY, GOST 12034-77). THE COATING OF SURFACE A AND B ELECTROLESS OXIDIZING WITH SUBSEQUENT PHOSPHORIC ACID TREATMENT.

CHEMICAL COMPOSITION

GRADE	AL	Mg	Si	Mn	Cu	Zn	Sn	Pb	Be	Zr	Fe	Ni	Ti
AL2D GOST 2685-75	Base	0.10 Max	10.0 13.0	0.50	0.60	0.30	---	---	0.10	0.10	1.50	-	0.10

MECHANICAL PROPERTIES

GRADE	TENSILE STRENGTH Min	SPECIFIC ELONGATION%	HARDNESS HB Min
AL2D GOST 2685-75	16 Kg/mm ²	1 Min	50



* CASTING I-OCT 3-4227-79
AL2D GOST-2685-75

Rz 32 (✓)

* This drg. has been prepared based on AHS P drg.

इन आरेखों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्व अधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

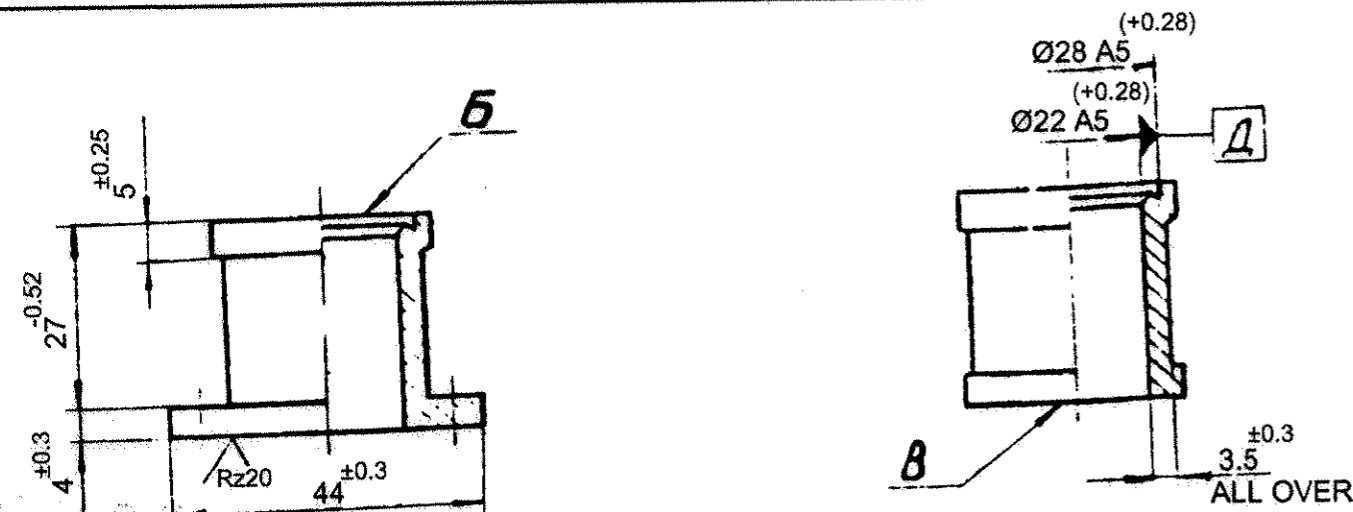
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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

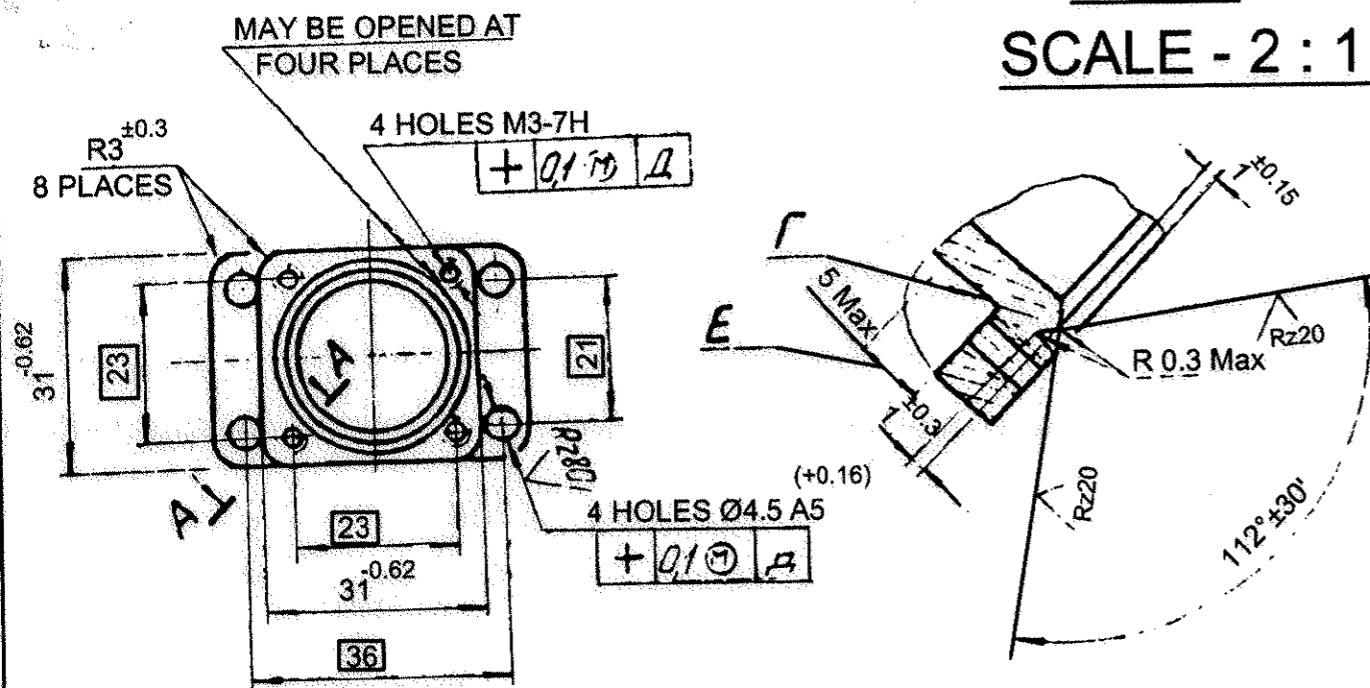
विचलन
DEVIATION

संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS
* सामान्य सहिष्णुता GENERAL TOLERANCE						WT=0.02 kg
रेखिक परिमाण LINEAR DIMENSION						
0-6	±0.1					
6-30	±0.2					
30-120	±0.3					
120-315	±0.5					
315-1000	±0.8					
1000-2000	±1.2					
कोणिक परिमाण ANGULAR DIMENSION						
1-10	±1°					
10-50	±30'					
50-100	±20'					
>100	±10'					
मापक 'म्यू एम' में VALUE IN 'um'						
-	>25					
▽	8-25					
▽▽	1.8-8					
▽▽▽	0.025-1.8					
▽▽▽▽	<0.025					
COVER ELECTROMAGNET B.M.P. II						2006 दिनांक नाम
मापमान SCALE आरेखित DRAWN 4/7/06 जाँचा CHECKED अनुमोदित APPROVED						द्वारा बदला REPLACED BY हेतु बदला REPLACED FOR
मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH						कार्यालय OFFICE D.O.
आरेखण क्र. DRAWING NO. EM46-005						

* This drg. has been prepared based on AHSP drg.



A - A
SCALE - 2 : 1



TECHNICAL CONDITIONS

1. THE CASTING SLOPE GRADIENTS ARE 1° MAX. IN INCREASING ORDER OF SIZES.
2. CASTING RADII 1 mm UNLESS OTHERWISE SPECIFIED.
3. THE COATING OF OUTER SURFACES: ELECTROLESS OXIDIZING WITH SUBSEQUENT PHOSPHORIC ACID TREATMENT (ENAMEL MI -165, GRAY, GOST-12034-77)
THE COATING OF INNER SURFACES B, B AND OF HOLES ELECTROLESS OXIDIZING WITH SUBSEQUENT PHOSPHORIC ACID TREATMENT.
4. INCISION IS ALLOWED ON SURFACE E AT SIZE E.

इन आरेखों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION

CHEMICAL COMPOSITION

GRADE	AL	Mg	Si	Mn	Cu	Zn	Sn	Pb	Be	Zr	Fe	Ni	Ti
AL2D GOST 2685-75	Base	0.10 Max	10.0 13.0	0.50	0.60	0.30	—	—	—	0.10	1.50	—	0.10

MECHANICAL PROPERTIES

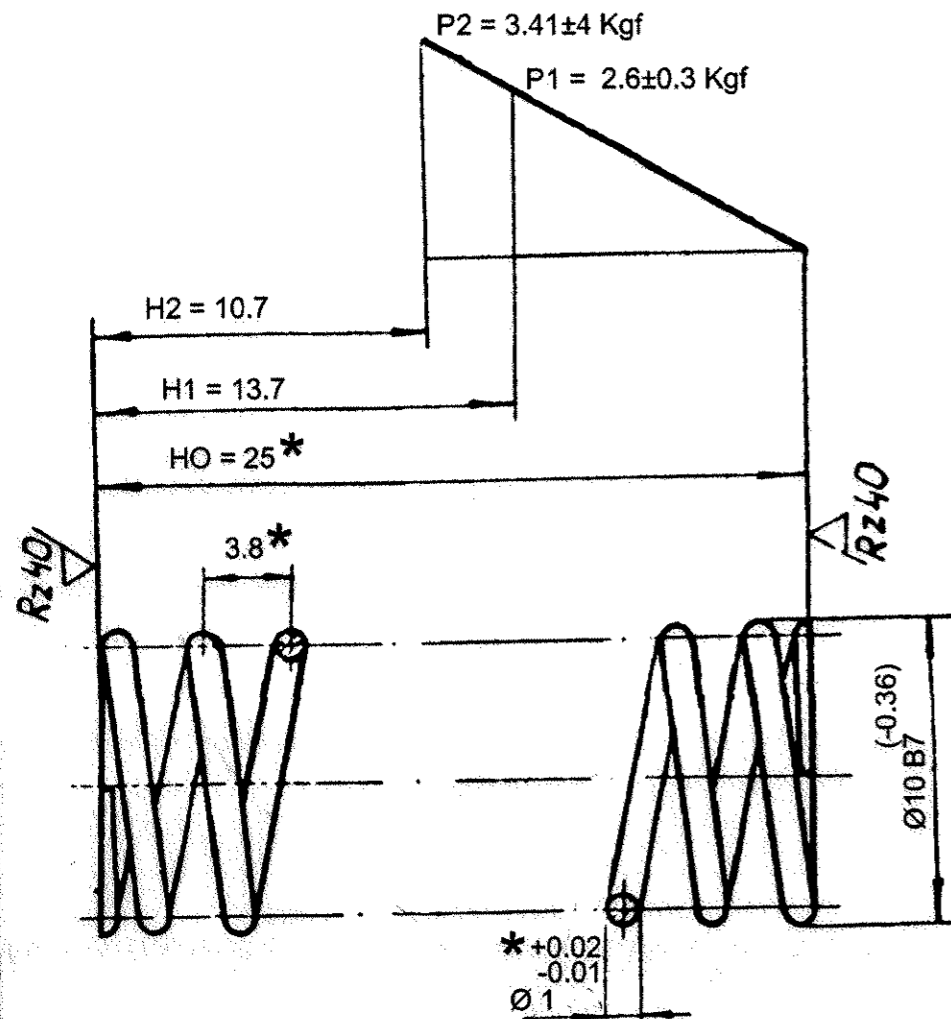
GRADE	TENSILE STRENGTH Min	SPECIFIC ELONGATION%	HARDNESS HB Min
AL2D GOST 2685-75	16 Kg/mm ²	1 Min	50

VETTED
18 JUL 2006
JWM/STD-CELL

Rz 32 (✓)

* CASTING I-OCT 3-4227-79
AL2D GOST-2685-75

संख्या NO.OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS																														
					WT=0.03																															
<p>सामान्य सहिष्णुता GENERAL TOLERANCE</p> <p>रेखिक परिमाण LINEAR DIMENSION</p> <table border="1"> <tr><td>0-6</td><td>±0.1</td></tr> <tr><td>6-30</td><td>±0.2</td></tr> <tr><td>30-120</td><td>±0.3</td></tr> <tr><td>120-315</td><td>±0.5</td></tr> <tr><td>315-1000</td><td>±0.8</td></tr> <tr><td>1000-2000</td><td>±1.2</td></tr> </table> <p>कोणिक परिमाण ANGULAR DIMENSION</p> <table border="1"> <tr><td>1-10</td><td>±1°</td></tr> <tr><td>10-50</td><td>±30'</td></tr> <tr><td>50-100</td><td>±20'</td></tr> <tr><td>>100</td><td>±10'</td></tr> </table> <p>मापक 'म्यू एम' में VALUE IN 'um'</p> <table border="1"> <tr><td>-</td><td>>25</td></tr> <tr><td>v</td><td>8-25</td></tr> <tr><td>vv</td><td>1.8-8</td></tr> <tr><td>vvv</td><td>0.025-1.8</td></tr> <tr><td>vvvv</td><td><0.025</td></tr> </table>							0-6	±0.1	6-30	±0.2	30-120	±0.3	120-315	±0.5	315-1000	±0.8	1000-2000	±1.2	1-10	±1°	10-50	±30'	50-100	±20'	>100	±10'	-	>25	v	8-25	vv	1.8-8	vvv	0.025-1.8	vvvv	<0.025
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					2006	दिनांक DATE																														
						नाम NAME																														
<p>POST ELECTROMAGNET B.M.P. II</p>						<p>मापमान SCALE</p> <p>आरेखित DRAWN</p> <p>जाँचा CHECKED</p> <p>अनुमोदित APPROVED</p> <p>द्वारा बदला REPLACED BY</p> <p>हेतु बदला REPLACED FOR</p> <p>आरेखण क्र. DRAWING NO.</p> <p>E M46-006</p>																														
<p>मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH</p>						<p>कार्यालय OFFICE</p> <p>D.O.</p>																														



* This drawing has been prepared based on AHS P drg.

CHEMICAL PROPERTIES	WIRE I-1 TY14-4- 823-77
CARBON	0.86 - 0.91
SILICON	0.17 - 0.37
MANGANESE	0.20 - 0.40
CHROMIUM	0.05 Max
PHOSPHORUS	0.020 Max
SULPHUR	0.020 Max
NICKEL	0.05 Max
COPPER	0.10 Max
MECHANICAL PROPERTIES	
ULTIMATE TENSILE STRENGTH Kg/mm ²	250 - 280
NUMBER OF REVERSE	Min 9
NUMBER OF TWISTS, Min	16

VETTED
18 JUL 2006
JWM/STD-CELL

TECHNICAL CONDITIONS

1. THE NUMBER OF OPERATING TURNS IS 6.
2. THE TOTAL NUMBER OF TURNS IS 8.
3. DIRECTION OF APPLYING THE WINDING: ANY.
4. SIZES FOR REFERENCE.
5. THE SQUARENESS TOLERANCE OF THE SPRING AXIS RELATIVE TO THE ENDS SHOULD NOT EXCEED 1 mm ALONG THE LENGTH OF THE SPRING.
6. THE BASE SURFACE OF THE LAST TURNS IS AT LEAST 3/4 THE LENGTH OF THE PERIPHERY.
7. PRESET THE SPRING WITH THE COILS TOUCHING FOR 24 HOURS.
8. THE VACANT LENGTH OF THE SPRING MAY BE VARIED DEPENDING UPON THE MATERIAL.
9. LOW-TEMPERATURE TEMPERING.
10. COATING: ELECTROLESS OXIDIZING (VARNISH rφ -95, COLOURLESS, GOST-8018-70)
11. MARK ON THE TAG.

इन आरेखों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

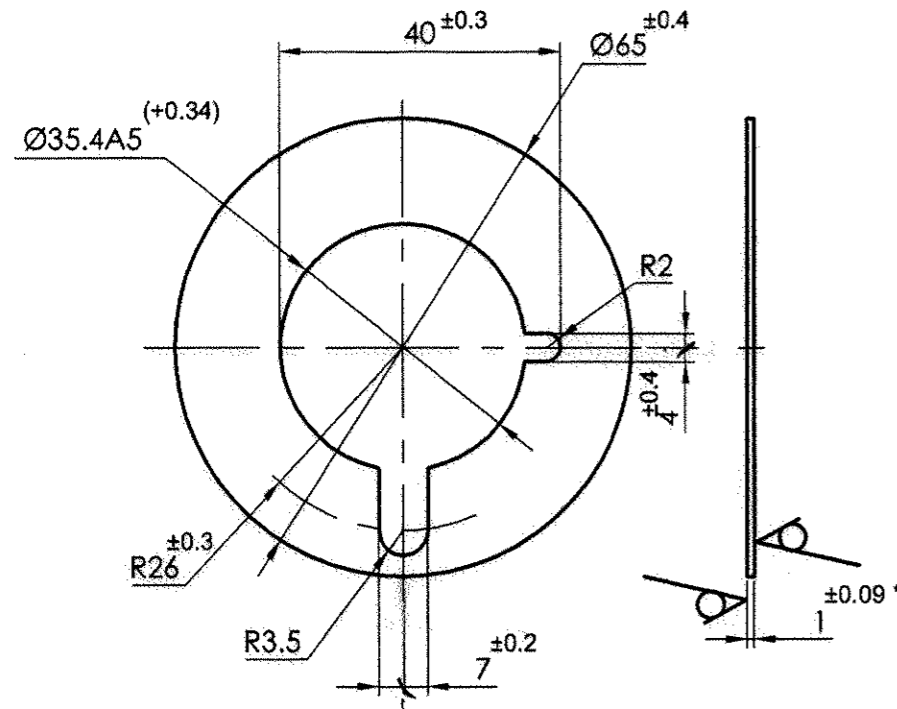
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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION

@ WIRE I-1 TY-14-4-823-77 CHEMICAL COMPOSITION KT-2 GOST-9389-75

				@		WT=2 g	
संख्या NO. OFF	विवरण DESCRIPTION	पुंजा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS	
सामान्य सहिष्णुता GENERAL TOLERANCE							
रेखिक परिमाण LINEAR DIMENSION							
0-6		±0.1					
6-30		±0.2					
30-120		±0.3					
120-315		±0.5					
315-1000		±0.8					
1000-2000		±1.2					
कोणिक परिमाण ANGULAR DIMENSION	संख्या NO. OFF	संबंधित पुंजांक आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	2006		दिनांक DATE
1-10	±1°						नाम NAME
10-50	±30'						
50-100	±20'						
>100	±10'						
मापक 'म्यू एम' में VALUE IN 'μm'							
-	>25						
▽	8-25						
▽▽	1.6-8						
▽▽▽	0.025-1.6						
▽▽▽▽	<0.025						
SPRING ELECTROMAGNET B.M.P. II				कार्यालय OFFICE		मापमान SCALE	
मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH				D.O.		आरेखित DRAWN	
D.O.						जाँचा CHECKED	
D.O.						अनुमोदित APPROVED	
D.O.						द्वारा बदला REPLACED BY	
D.O.						हेतु बदला REPLACED FOR	
D.O.						आरेखण क्र. DRAWING NO.	
D.O.						E M46-007	



CHEMICAL	4.II-10 GOST-16523-70
CARBON	0.07 - 0.14
SILICON	0.17 - 0.37
MANGANESE	0.35 - 0.65
CHROMIUM	0.15 Max
PHOSPHORUS	0.035 Max
SULPHUR	0.040 Max
NICKEL	0.25 Max
COPPER	0.25 Max

MECHANICAL PROPERTIES

TENSILE STRENGTH Kgf/mm ² 30 - 42
RELATIVE ELONGATION 25 Min

TECHNICAL CONDITIONS

- *SIZE FOR REFERENCE.
- COATING:ZINC PLATING 6 FOLLOWED BY CHROMATE TREATMENT.

VETTED
23 JUN 2006
JWM/STD-CELL

@ SHEET 51 GOST:19904-74
4.II-10 GOST:16523-70

Rz 80 ✓(✓)

						WT=0.022 kg
संख्या NO.OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS
सामान्य सहिष्णुता GENERAL TOLERANCE रेखिक परिमाण LINEAR DIMENSION 0-6 ±0.1 6-30 ±0.2 30-120 ±0.3 120-315 ±0.5 315-1000 ±0.8 1000-2000 ±1.2 कोणिक परिमाण ANGULAR DIMENSION 1-10 ±1° 10-50 ±30' 50-100 ±20' >100 ±10' मापक 'म्यू एम' में VALUE IN 'μm' - >25 ∇ 6-25 ∇∇ 1.6-6 ∇∇∇ 0.025-1.6 ∇∇∇∇ <0.025						
संख्या NO.OFF	संबंधित पुर्जा का आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	2006		दिनांक DATE
WASHER ELECTROMAGNET B.M.P.- II				मापमान SCALE	आरेखित DRAWN	23.6.06
				NTS	जाँचा CHECKED	06/07
					अनुमोदित APPROVED	
				द्वारा बदला REPLACED BY	हेतु बदला REPLACED FOR	
मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH				कार्यालय OFFICE	आरेखण क्र. DRAWING NO. E M46-009	

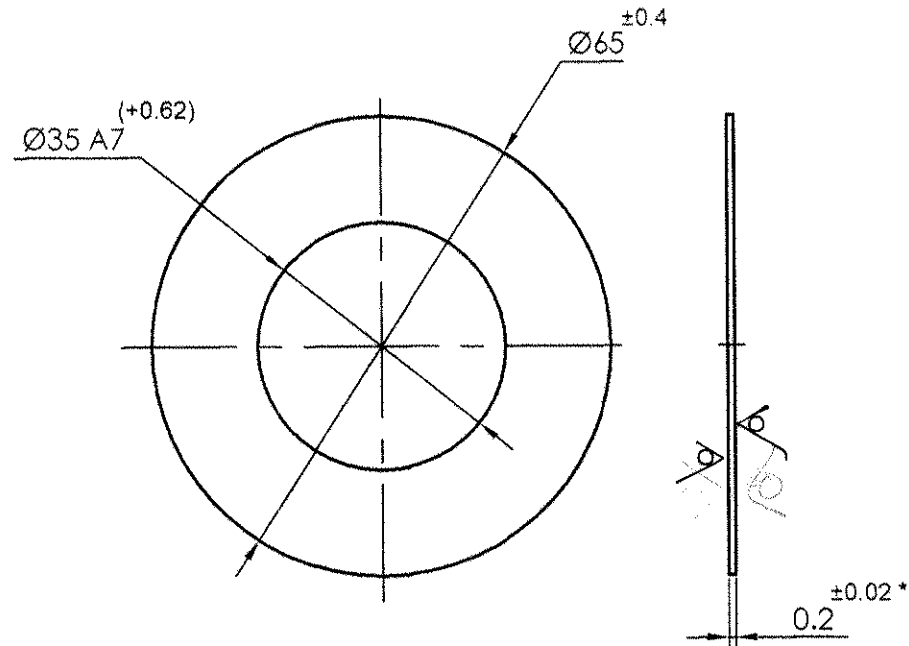
*This drg has been prepared based on AHSP drg

इन आरेखणों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION



SIZE FOR REFERENCE.

PARAMETERS INSULATION BOARD EVS,GOST-2824-75		
1- FIBRE COMPOSITION, % OF RAG FIBRE OR UNBLEACHED COTTON CELLULOSE, Minimum		15 -
UNBLEACHED CELLULOSE SULPHATE OF GRADE EK TO GOST 12765-78 OR TO GOST 5.1689-72, Maximum		85 -
2-ULTIMATE TENSILE STRENGTH IN INITIAL CONDITION,MPa(Kgf/mm ²) MINIMUM		
(a) IN MACHINE DIRECTION		127 (13.0)
(b) IN THE TRANSVERSE DIRECTION		34 (3.5) -
(c) AFTER REVERSE BENDING		
(i) IN MACHINE DIRECTION		98 (10.0) -
(ii) IN THE TRANSVERSE DIRECTION		29 (3.0) -
3-DIELECTRIC STRENGTH IN kv/mm AFTER DRYING,MINMUM:		
(a) IN FLAT CONDITION		12.0 -
(b) ALONG THE LINES OF REVERSE BENDING ,AVERAGE OF READINGS IN TWO DIRECTIONS		10.0 -
4 -ASH CONTENT,%Max		1.2 -
5 - MOISTURE CONTENT % AS SUPPLIED		8±2 -



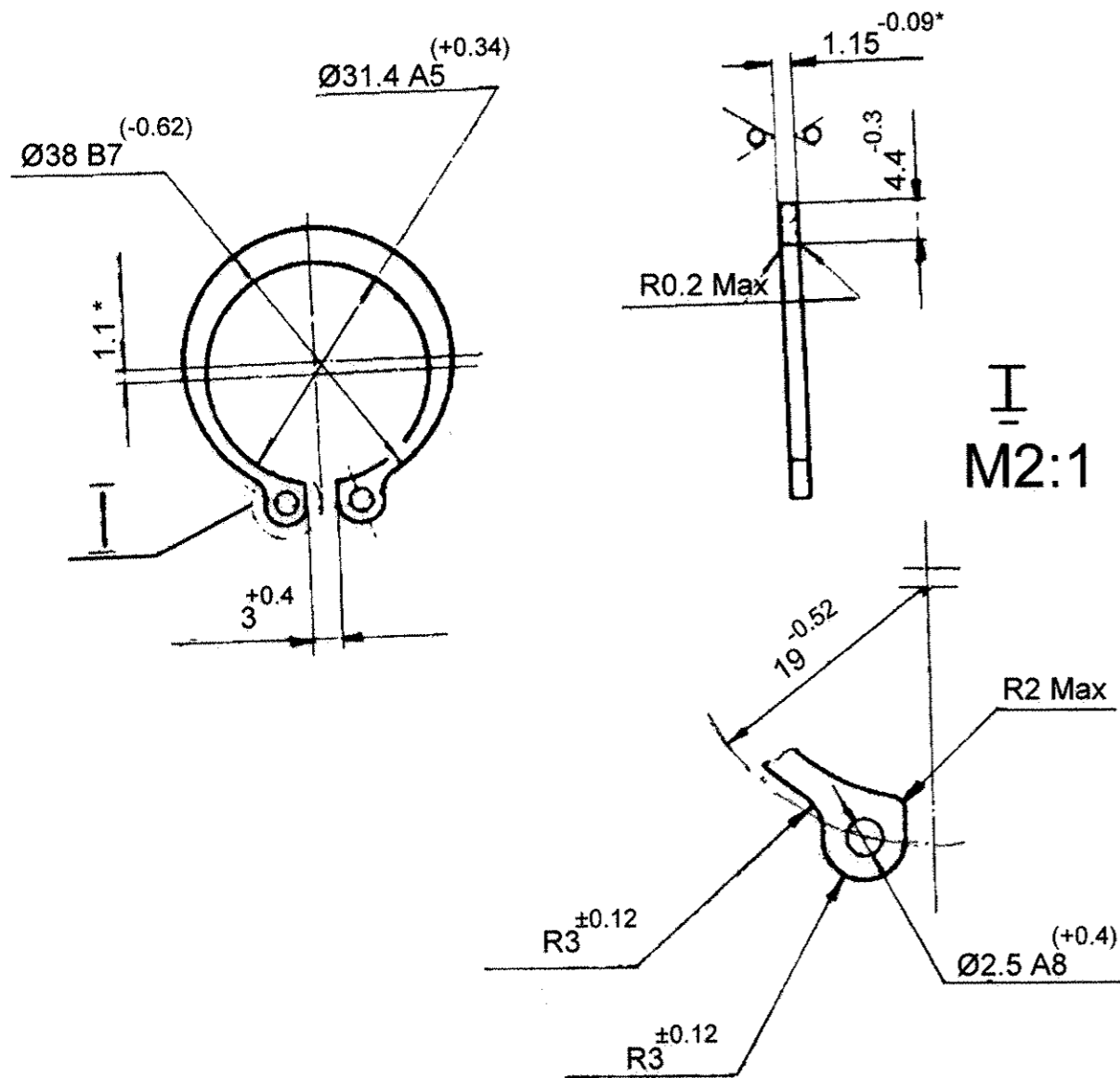
BOARD 3BC 0.2 GOST-2824-75

संख्या NO.OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS																																																																																																																																					
						WT= 0.52 g -																																																																																																																																					
<table border="1"> <tr> <td>सामान्य सहिष्णुता GENERAL TOLERANCE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>रेखिक परिमाण LINEAR DIMENSION</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>0-6</td> <td>±0.1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6-30</td> <td>±0.2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>30-120</td> <td>±0.3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>120-315</td> <td>±0.5</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>315-1000</td> <td>±0.8</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1000-2000</td> <td>±1.2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>कोणिक परिमाण ANGULAR DIMENSION</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1-10</td> <td>±1'</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10-50</td> <td>±30'</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>50-100</td> <td>±20'</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>>100</td> <td>±10'</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>मापक 'म्यू एम' में VALUE IN "um"</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>-</td> <td>>25</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>▽</td> <td>8-25</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>▽▽</td> <td>1.6-8</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>▽▽▽</td> <td>0.025-1.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>▽▽▽▽</td> <td><0.025</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							सामान्य सहिष्णुता GENERAL TOLERANCE							रेखिक परिमाण LINEAR DIMENSION							0-6	±0.1						6-30	±0.2						30-120	±0.3						120-315	±0.5						315-1000	±0.8						1000-2000	±1.2						कोणिक परिमाण ANGULAR DIMENSION							1-10	±1'						10-50	±30'						50-100	±20'						>100	±10'						मापक 'म्यू एम' में VALUE IN "um"							-	>25						▽	8-25						▽▽	1.6-8						▽▽▽	0.025-1.6						▽▽▽▽	<0.025					
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GASKET - ELECTROMAGNET B.M.P.-II						मापमान SCALE NTS आरेखित DRAWN 21.6.06 जाँचा CHECKED 27.06.06 अनुमोदित APPROVED																																																																																																																																					
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मूलमाप व अन्वयोजन NOMINAL SIZE & FIT विचलन DEVIATION						आरेखण क्र. DRAWING NO. EM46-012 -																																																																																																																																					

* This dwg. has been prepared based on AHSP dwg.

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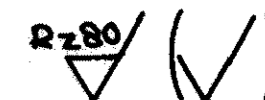
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CHEMICAL COMPOSITION	BAND Y8A-C-1. 15 GOST-2283-79
CARBON	0.75 - 0.84 ✓
MANGANESE	0.15 - 0.30 ✓
SILICON	0.15 - 0.35 ✓
SULPHUR	0.020 Max ✓
PHOSPHOROUS	0.030 Max ✓

MECHANICAL PROPERTIES

ULTIMATE TENSILE STRENGTH (Kgf/mm²)	750 - 1200 (75 - 120)
ELONGATION	----
BRINELL HARDNESS	----



TECHNICAL CONDITIONS

1. HRC 46 TO 52
2. COATING: ELECTROLESSLY OXIDIZED COATING WITH SUBSEQUENT OILING.
3. *SIZES FOR REFERENCE.

* This drg has been prepared based on A.H.S.P drg.

इन आरेखणों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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मूलमाप व अन्वायोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION

*** BAND Y8A-C-1.15 GOST-2283-79**

						* WT=3.6 g	
संख्या NO.OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS	
सामान्य सहिष्णुता GENERAL TOLERANCE							
रेखिक परिमाण LINEAR DIMENSION							
0-6 ±0.1							
6-30 ±0.2							
30-120 ±0.3							
120-315 ±0.5							
315-1000 ±0.8							
1000-2000 ±1.2							
कोणिक परिमाण ANGULAR DIMENSION	संख्या NO.OFF	संबंधित पुर्जाका आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	2006	दिनांक DATE	नाम NAME
1-10 ±1°							
10-50 ±30'							
50-100 ±20'							
>100 ±10'							
मापक 'म्यू एम' में VALUE IN 'um'							
- >25							
▽ 8-25							
▽▽ 1.6-8							
▽▽▽ 0.025-1.6							
▽▽▽▽ <0.025							
RING ELECTROMAGNET B.M.P.-II			मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		कार्यालय OFFICE	D.O.	
					मापमान SCALE	आरेखित DRAWN	22-6-06
					NTS	जाँचा CHECKED	22/06/06
						अनुमोदित APPROVED	
					द्वारा बदला REPLACED BY		
					हेतु बदला REPLACED FOR		
					आरेखण क्र. DRAWING NO.	EM46-013	

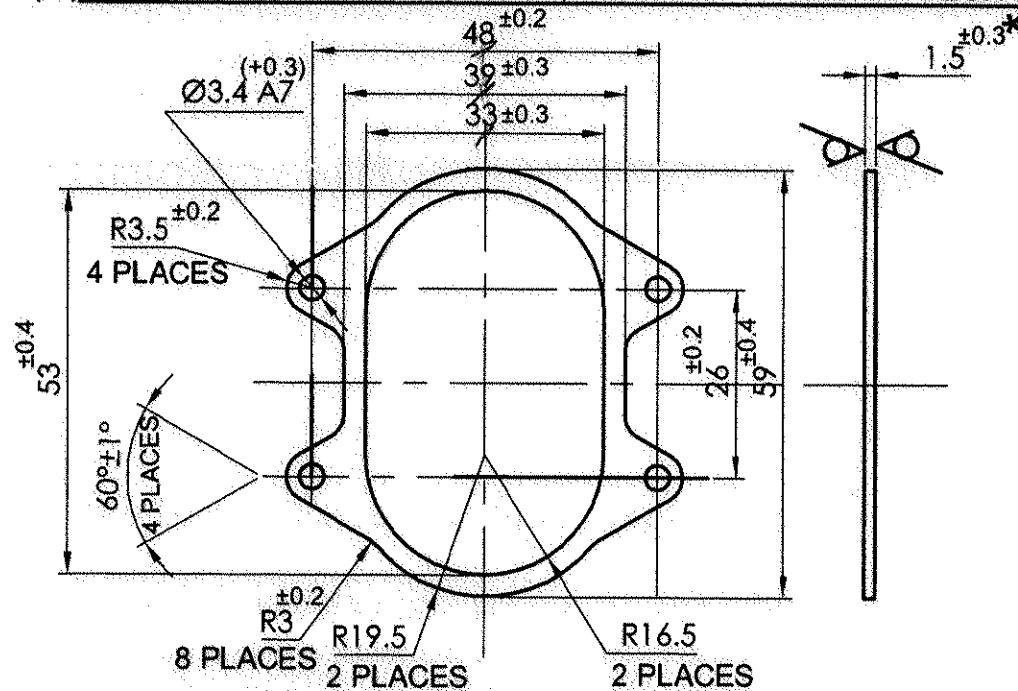
TEST PARAMETER WITH SPECIFIED VALUE AS PER TY.005216-75 -GRADE - HO 68-1,/NO.QAI/RUBBER/CQA(ICV)/005

GRADE OF RUBBER	TYPE OF RAW RUBBER	MODE OF VULCANIZATION AND THERMOSTATIC CONTROL(T)		RELATIVE TENSILE STRENGTH MPa (Kgf/cm ²) (Min)	RELATIVE ELONGATION AT RUPTURE % (min)	RELATIVE RESIDUAL DEFORMATION AFTER RUPTURE, % (MAX)	HARDNESS UNIT IN SHORE A WITHIN THE LIMIT	TEMPERATURE RANGE OF BRITTLENESS °C NOT MORE THAN, Minus 50°C for 3 Minutes	AGEING CO-EFFICIENT AT 70°C 144 Hrs
		TEMPERATURE.°C	TIME (Min)						
HO 68-1	CKH-18C VINYL	151±3 143 ±3	20 ±1.0 30 ±1.5	8.8 (90)	250	12	55-70	NO CRACKS	0.70
TEST METHOD	AS PER ASTM D 297			AS PER IS:3400PART-I	AS PER IS:3400 PART-I	AS PER IS:3400 PART-I	AS PER IS:3400 PART II	AS PER ASTM D 2137	AS PER IS:3400 PART I& IV

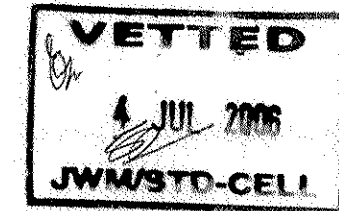
* THIS DRAWING HAS BEEN PREPARED BASED ON AHSP d79.

AGEING PROPERTIES AT 100°C+1°C FOR 72 Hrs			OZONE RESISTANCE TEST AT 100 PPhm 20% STRETCH, 40°C FOR 48 Hrs	ASH CONTENT	POLYMER CONTENT	COMPRESSION SET AT 100°C FOR 22 Hrs	CHANGE OF WEIGHT AT 100°C 24 hrs IN ASTM OIL	DENSITY Kg/M ³ 10 ³ (LIMIT DEVIATION. ±0.05)	COEFFICIENT OF FREEZING STABILITY AS PER ELASTICITY RECOVERY AFTER PRESSING.(MIN)	
CHANGE OF TENSILE STRENGTH	CHANGE IN ELONGATION (Max)	CHANGE IN HARDNESS							TEMPERATURE.°C	VALUE K V
±15%	(-)40%	(±)15%	NO CRACKS	3 TO 8%	50%(Min)	35%(Max)	PLUS 6 TO PLUS 8 %	1.24	MINUS 50	
AS PER IS:3400 PART IV			AS PER IS:3400 PART XX	AS PER ASTM D297 TGA	AS PER ASTM D297	AS PER IS :3400 PART X	AS PER IS :3400 PT VI		AS PER IS:3400 PART I&IV	

- NOTE: (I) TEST SUCH AS TENSILE STRENGTH, ELONGATION, RELATIVE RESIDUAL ELONGATION, HARDNESS, DENSITY, AGEING CO-EFFICIENT AND TESTS OF AGEING PROPERTIES, COMPRESSION SET, BRITTLENESS TEMP, & OZONE RESISTANCE SHALL BE CARRIED OUT ON TEST BUTTONS/TEST SLABS.
 (II) TESTS SUCH AS CHANGE OF MASS AND TESTS OF POLYMER CONTENT & ASH CONTENT SHALL BE CARRIED OUT ON THE ITEM.
 (III) TESTS OF AGEING PROPERTIES & OZONE RESISTANCE TEST ARE APPLICABLE TO PILOT SAMPLE AND FIRST BULK.
 (IV) TESTS OF POLYMER CONTENT, ASH CONTENT AND HYPALON COATING SHALL BE GOT CROSS CHECKED FROM IRMRA THANE OR ANY GOVT. APPROVED LAB.



* PLATE 254311-1 TY 005-216-75 RUBBER 7-HO-68-1



1. ALL SIZES ARE PROVIDED BY THE TOOLS WHICH ARE CHECKED AT LEAST ONCE QUARTELY.
 2. * SIZE FOR REFERENCE.
 3. TECHNICAL REQUIREMENTS AS PER TY 005.216-75.

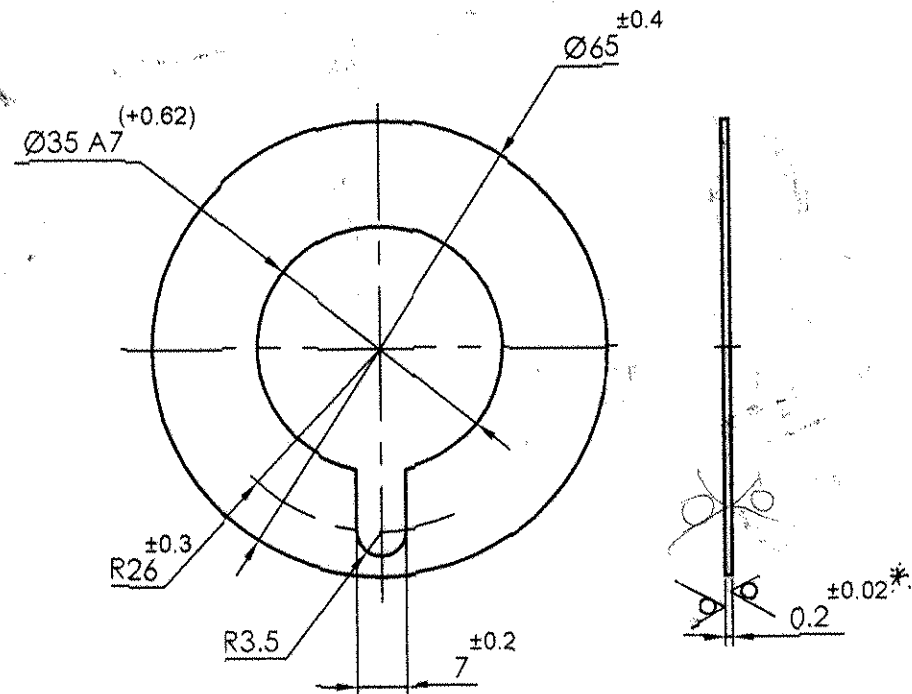
इन आरेखणों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विवचलन
DEVIATION

संख्या NO.OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाणु DIMENSIONS	अभ्यक्ति REMARKS
						WT=0.36kg.
* सामान्य सहिष्णुता GENERAL TOLERANCE						
रेखिक परिमाणु LINEAR DIMENSION						
0-6 ±0.1						
6-30 ±0.2						
30-120 ±0.3						
120-315 ±0.5						
315-1000 ±0.8						
1000-2000 ±1.2						
कोणिक परिमाणु ANGULAR DIMENSION						
1-10 ±1'						
10-50 ±30'						
50-100 ±20'						
>100 ±10'						
मापक 'म्यू एम' में VALUE IN 'um'						
- >25						
V 8-25						
VV 1.6-8						
VVV 0.025-1.6						
VVVV <0.025						
GASKET ELECTROMAGNET B.M.P. II				2006		दिनांक DATE
मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH				कार्यालय OFFICE		नाम NAME
D.O.				2006		
मूलमाप व अन्वयोजन				विवचलन		
E M46-014				DRAWING NO.		



± SIZE FOR REFERENCE.

PARAMETERS INSULATION BOARD EVS, GOST-2824-75	
1- FIBRE COMPOSITION, % OF RAG FIBRE OR UNBLEACHED COTTON CELLULOSE, Minimum	15
UNBLEACHED CELLULOSE SULPHATE OF GRADE EK TO GOST 12765-78 OR TO GOST 5.1689-72, Maximum	85
2-ULTIMATE TENSILE STRENGTH IN INITIAL CONDITION, MPa(Kgf/mm ²) MINIMUM	
(a) IN MACHINE DIRECTION	127 (13.0)
(b) IN THE TRANSVERSE DIRECTION	34 (3.5)
(c) AFTER REVERSE BENDING	
(i) IN MACHINE DIRECTION	98 (10.0)
(ii) IN THE TRANSVERSE DIRECTION	29 (3.0)
3-DIELECTRIC STRENGTH IN kv/mm AFTER DRYING, MINIMUM:	
(a) IN FLAT CONDITION	12.0
(b) ALONG THE LINES OF REVERSE BENDING, AVERAGE OF READINGS IN TWO DIRECTIONS	10.0
4 -ASH CONTENT, %Max	1.2
5 - MOISTURE CONTENT % AS SUPPLIED	8±2

VETTED
22 JUN 2006
JWM/STD-CELL

BOARD ØBC 0.2 GOST-2824-75

संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS
	सामान्य सहिष्णुता GENERAL TOLERANCE					
	रेखक परिमाण LINEAR DIMENSION					
	0-6	±0.1				
	6-30	±0.2				
	30-120	±0.3				
	120-315	±0.5				
	315-1000	±0.8				
	1000-2000	±1.2				
	कोणिक परिमाण ANGULAR DIMENSION					
	1-10	±1°				
	10-50	±30'				
	50-100	±20'				
	>100	±10'				
	मापक 'म्यू एम' में VALUE IN 'um'					
	-	>25				
	▽	8-25				
	▽▽	1.8-8				
	▽▽▽	0.025-1.6				
	▽▽▽▽	<0.025				
					2006	दिनांक DATE
						नाम NAME
						मापमान SCALE
						आरेखित DRAWN
						जाँचा CHECKED
						अनुमोदित APPROVED
						द्वारा बदला REPLACED BY
						हेतु बदला REPLACED FOR
						आरेखण क्र. DRAWING NO.
						E M46-021

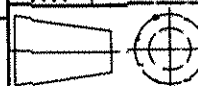
* This drg has been prepared based on AHSP drg.

इन आरेखणों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विवचन
DEVIATION

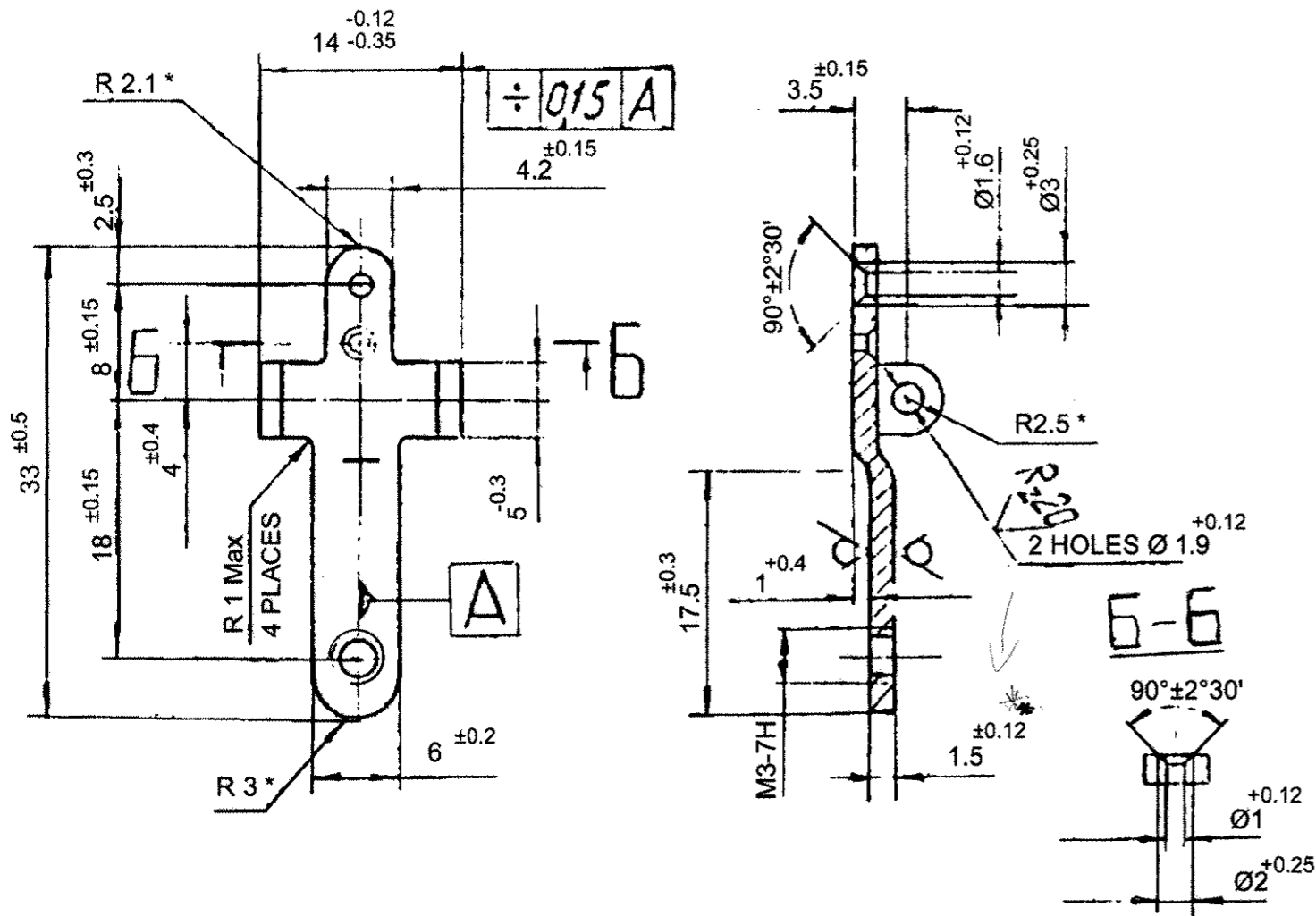


मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ
MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH

कार्यालय
OFFICE
D.O.

File Path: D:/KHAN/BMP-II(R)/EM46-021

PP-2



CHEMICAL	4.II-10 GOST-16523-70
CARBON	0.07 - 0.14 ✓
SILICON	0.17 - 0.37 ✓
MANGANESE	0.35 - 0.65 ✓
CHROMIUM	0.15 Max ✓
PHOSPHORUS	0.035 Max ✓
SULPHUR	0.040 Max ✓
NICKEL	0.25 Max ✓
COPPER	0.25 Max ✓

MECHANICAL PROPERTIES

TENSILE STRENGTH Kgf/mm ²	30 - 42 ✓
RELATIVE ELONGATION	25 Min ✓

VETTED
23 JUN 2006
JWM/STD-CELL

Rz 80 (M)

TECHNICAL CONDITIONS

1. *SIZES FOR REFERENCE.
2. BENDING RADIUS 1 mm.
3. AT THE BENDING POINTS, THE SIZES MAY BE INCREASED TO A VALUE NOT EXCEEDING 0.4 mm.
4. COATING: CADMIUM PLATING 9.

@SHEET B1.5 GOST:19904-74
4.II-10 GOST:16523-70

*This drg has been prepared based on AHSP drg.

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मूलमाप व अन्वायोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION

		@		WT=0.003 Kgf		
संख्या NO. OF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS
सामान्य सहिष्णुता GENERAL TOLERANCE						
रेखिक परिमाण LINEAR DIMENSION						
0-6	±0.1					
6-30	±0.2					
30-120	±0.3					
120-315	±0.5					
315-1000	±0.8					
1000-2000	±1.2					
कोणिक परिमाण ANGULAR DIMENSION						
1-10	±1°					
10-50	±30'					
50-100	±20'					
>100	±10'					
मापोंक 'म्यू एम' में VALUE IN 'μm'						
-	>25					
▽	0-25					
▽▽	1.6-8					
▽▽▽	0.025-1.6					
▽▽▽▽	<0.025					
		संख्या NO. OF	संबंधित पुर्जाका आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	2006
						दिनांक DATE
						नाम NAME
						मापमान SCALE
						आरेखित DRAWN
						जाँच CHECKED
						अनुमोदित APPROVED
						द्वारा बदला REPLACED BY
						हेतु बदला REPLACED FOR
						आरेखण क्र. DRAWING NO.
						E M46-023
		मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		कार्यालय OFFICE	D.O.	

MOULDING MATERIAL AG-4-B GOST-20437-75

PROPERTIES	NORMS FOR GRADES AG-4B
GRADES 'B'	
ULTIMATE BENDING STRESS MPa(Kgf/cm) ² Min	147 (1500)
ULTIMATE COMPRESSION STRESS (Kgf/cm) ² Min	127 (1300)
IMPACT STRENGTH KJ/m (Kgf.cm/cm) ² NOT LESS THAN	49 (50)
DIELECTRIC CONSTANT AT FREQUENCY 10 ⁶ Hz, NOT MORE THAN	7.0
DISSIPATION FACTOR AT FREQUENCY 10 ⁶ Hz, NOT MORE THAN	0.05
VOLUME RESISTIVITY Ohm.cm, NOT MORE THAN	10 ¹²
SURFACE RESISTIVITY, Ohm.cm, NOT MORE THAN	10 ¹²
DIELECTRIC STRENGTH AT FREQUENCY 50 Hz, Kv/mm NOT LESS THAN	13.0
MOISTURE AND VOLATILE SUBSTANCE CONTENT, % BY WEIGHT	2 TO 7
BINDER CONTENT, % BY WEIGHT	38±2

PROPERTIES OF MOULDING MATERIAL AG-4B

PROPERTIES	NORMS
DISSIPATION FACTOR AT PLUS 200°C AND FREQUENCY 1 MHz, NOT MORE THAN	0.12
DIELECTRIC CONSTANT AT PLUS 200°C FREQUENCY 1 MHz, NOT MORE THAN	10
MEAN COEFFICIENT OF LINEAR THERMAL EXPANSION IN THE TEMPERATURE RANGE OF 25 TO 200°C DEGREES -1	12.4·10 ⁻⁶
MEAN SPECIFIC HEAT IN THE TEMPERATURE RANGE OF 25 TO 250°C, K Cal/Kg, °C	0.28
OIL AND BENZINE RESISTANCE, %	±0.05
ACID RESISTANCE, % NOT MORE THAN	0.1
REACTION TO AQUEOUS EXTRACT	NEUTRAL
SOLUBLE RESIN CONTENT AS A % OF BINDER, NOT MORE THAN	80
WATER ABSORPTION % NOT MORE THAN	0.2
DENSITY g/cm ³	1.7-1.9
ESTIMATED SHRINKAGE ON MOULDING, % NOT MORE THAN	0.15
THERMAL RESISTANCE ON MARTIN SCALE °C NOT LESS THAN	280
HEAT RESISTANCE AS PER GOST 8865-70	CLASS B

TECHNICAL CONDITIONS

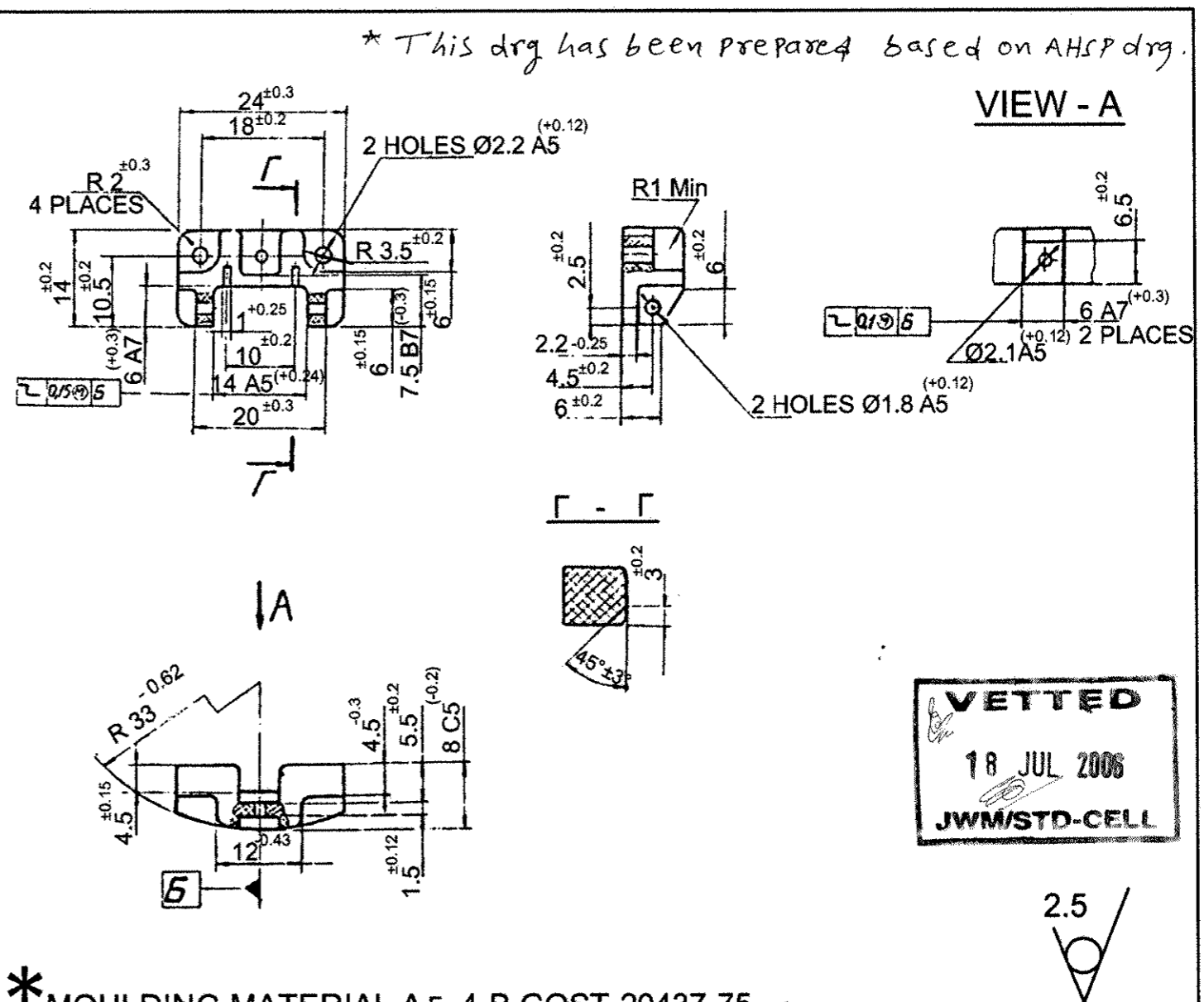
1. TO BE THERMALLY TREATED.
2. RADII 0.5 mm UNLESS OTHERWISE SPECIFIED.
3. SLOP GRADIENTS SHOULD NOT EXCEED 1° IN INCREASING ORDER OF SIZES.
4. CRACKS AND CHIPPING ARE NOT ALLOWED.
5. MATERIAL SUBSTITUTE: MOULDING MATERIAL CB-2-P-2M, GRADE 'O' GOST-17478-72

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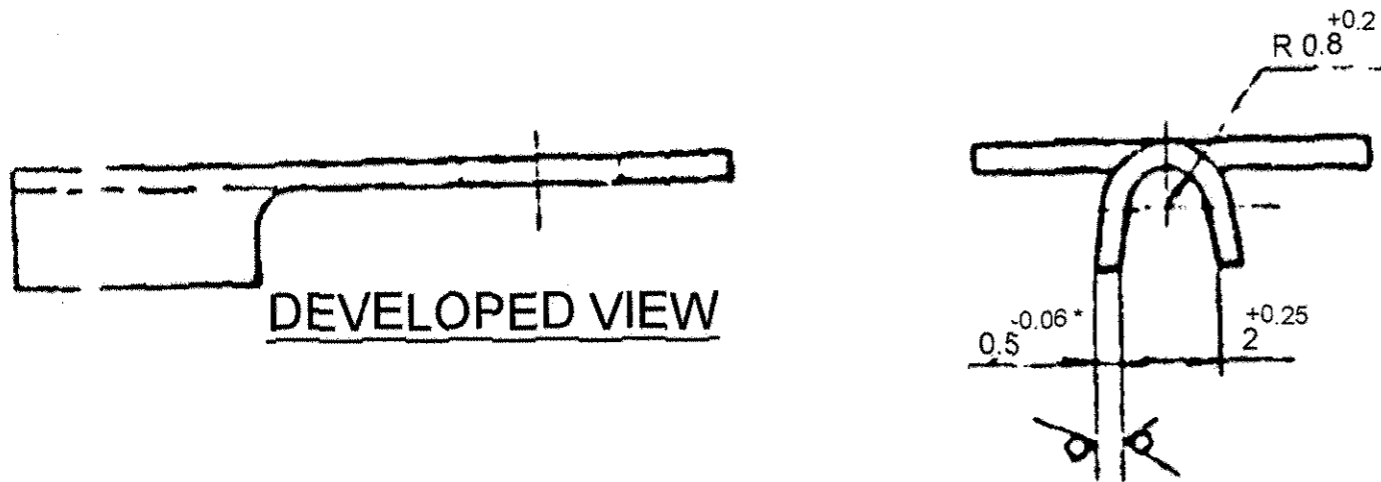
मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION



* MOULDING MATERIAL AG-4-B, GOST-20437-75

संख्या NO. OF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS																																																
						WT=0.002 Kg.																																																
<table border="1"> <tr> <th>संख्या</th> <th>संबंधित पुर्जा का आरेखण क्र.</th> <th>सूचक</th> <th>संशोधन</th> <th>दिनांक</th> <th>नाम</th> </tr> <tr> <td>NO. OF</td> <td>DRG. NO. OF ASSOCIATED PART</td> <td>INDEX</td> <td>ALTERATION</td> <td>DATE</td> <td>NAME</td> </tr> <tr> <td>1-10</td> <td></td> <td>±1'</td> <td></td> <td>2006</td> <td></td> </tr> <tr> <td>10-50</td> <td></td> <td>±30'</td> <td></td> <td></td> <td></td> </tr> <tr> <td>50-100</td> <td></td> <td>±20'</td> <td></td> <td></td> <td></td> </tr> <tr> <td>120-315</td> <td></td> <td>±0.5</td> <td></td> <td></td> <td></td> </tr> <tr> <td>315-1000</td> <td></td> <td>±0.8</td> <td></td> <td></td> <td></td> </tr> <tr> <td>1000-2000</td> <td></td> <td>±1.2</td> <td></td> <td></td> <td></td> </tr> </table>							संख्या	संबंधित पुर्जा का आरेखण क्र.	सूचक	संशोधन	दिनांक	नाम	NO. OF	DRG. NO. OF ASSOCIATED PART	INDEX	ALTERATION	DATE	NAME	1-10		±1'		2006		10-50		±30'				50-100		±20'				120-315		±0.5				315-1000		±0.8				1000-2000		±1.2			
संख्या	संबंधित पुर्जा का आरेखण क्र.	सूचक	संशोधन	दिनांक	नाम																																																	
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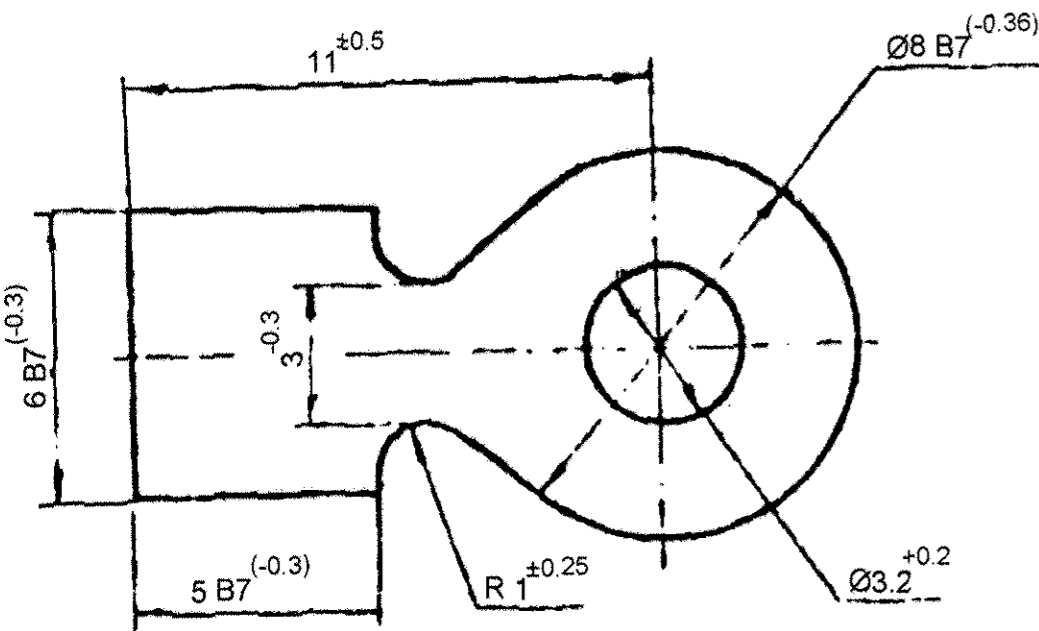


CHEMICAL COMPOSITION	SHEET ДЛРМ 0.5 Л63 GOST-931-78
COPPER	62.0 - 68.0
LEAD	0.07 Max
IRON	0.2 Max
ANTIMONY	0.005 Max
BISMUTH	0.002 Max
PHOSPHORUS	0.01 Max
TOTAL	0.5 Max

MECHANICAL PROPERTIES

TENSILE STRENGTH Krc/mm ² 30 - 41
ELONGATION 38 Min
BRINELL HARDNESS 70

VETTED
22 JUN 2006
JWM/STD-CELL



TECHNICAL CONDITIONS

1. MATERIAL SUBSTITUTE: BAND ДЛРМ 0.5 Л63 GOST-2208-75
2. *SIZE FOR REFERENCE.
3. COATING: O-Bu (99.8) 9.

* SHEET ДЛРМ 0.5 Л63 GOST:931-78

Rz 80 (✓)

* This dwg has been prepared based on AHSP dwg.

इन आरेखों तथा इसके साथ की सम्पूर्ण सामग्री का स्वत्वाधिकार भारत सरकार रक्षा मंत्रालय की भारतीय आयुध निर्माणियों के पास है। भारतीय आयुध निर्माणियों के महानिदेशक की लिखित अनुमति के बिना इनकी नकल या किसी भी रूप में इनके उद्धरण या इनमें समाहित सूचना किसी अनधिकृत व्यक्ति को उपलब्ध नहीं कराई जानी चाहिए।

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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION

संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS																																																								
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<p>END PIECE ELECTROMAGNET B.M.P.-II</p>						<p>मापमान SCALE</p> <p>आरेखित DRAWN</p> <p>जाँचा CHECKED</p> <p>अनुमोदित APPROVED</p> <p>द्वारा बदला REPLACED BY</p> <p>हेतु बदला REPLACED FOR</p> <p>आरेखण क्र. DRAWING NO.</p>																																																								
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KH7-10634

AP-2

GRADE OF RUBBER	TYPE OF RAW RUBBER	MODE OF VULCANIZATION AND THERMOSTATTING (T) STANDARD SAMPLE		RELATIVE TENSILE STRENGTH MPa (Kg/cm ²) NOT LESS THAN	RELATIVE ELONGATION AT RUPTURE % NOT LESS THAN	RELATIVE RESIDUAL DEFORMATION AFTER BREAKING (MAX)	HARDNESS UNIT IN SHORE A WITHIN THE LIMIT	TEMPERATURE RANGE OF BRITTLENESS °C NOT MORE THAN. Minus 50°C for 3 Minutes	AGEING CO-EFFICIENT AT
		TEMPERATURE. °C	TIME. (Min)						
98-1	CKH-18C BLEND OF NITRILE NEOPRENE	143±3	30 ±1.5	4.9 (50)	160	8	50 - 65	NO CRACKS	0.60
TEST METHOD	AS PER ASTM D 297			AS PER IS:3400PART-I	AS PER IS:3400 PART-I	AS PER IS:3400 PART-I	AS PER IS:3400 PART II	AS PER ASTM D 2137	AS PER IS:3400 PART I& IV

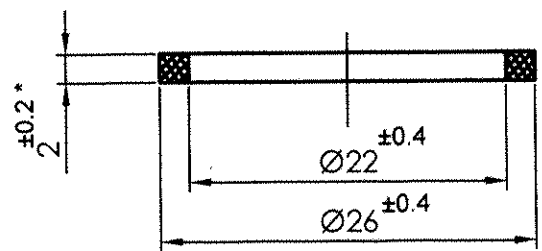
** This drg. has been prepared based on AHSP drg.*

AGEING PROPERTIES AT 100°C±1°C FOR 72 Hrs			OZONE RESISTANCE TEST AT 100 PPhm 20% STRETCH, 40°C FOR 48 Hrs	ASH CONTENT	POLYMER CONTENT	COMPRESSION SET AT 100°C FOR 22 Hrs	CHANGE OF WEIGHT AT 100°C 24 hrs IN ASTM OIL	DENSITY Kg/M ³ × 10 ⁻³ (LIMIT DEVIATION, ±0.05)	COEFFICIENT OF COLD RESISTANCE AS PER ELASTIC RESTORATION AFTER PRESSING. (MIN)	
CHANGE IN TENSILE STRENGTH	CHANGE IN ELONGATION (Max)	CHANGE IN HARDNESS							TEMPERATURE. °C	VALUE K V
±15%	(-)40%	(±)15%	NO CRACKS	3 TO 8%	50%(Min)	35%(Max)	28 %	1.16	---	---
AS PER IS:3400 PART IV			AS PER IS:3400 PART XX	AS PER ASTM D297 TGA	AS PER ASTM D297	AS PER IS :3400 PART X	AS PER IS :3400 PT VI		AS PER IS:3400 PART I&IV	



NOTE: (I) TEST SUCH AS TENSILE STRENGTH, ELONGATION, RELATIVE RESIDUAL ELONGATION, HARDNESS, DENSITY, AGEING CO-EFFICIENT AND TESTS OF AGEING PROPERTIES, COMPRESSION SET, BRITTLENESS TEMP. & OZONE RESISTANCE SHALL BE CARRIED OUT ON TEST BUTTONS/TEST SLABS.
 (II) TESTS SUCH AS CHANGE OF MASS AND TESTS OF POLYMER CONTENT & ASH CONTENT SHALL BE CARRIED OUT ON THE ITEM.
 (III) TESTS OF AGEING PROPERTIES & OZONE RESISTANCE TEST ARE APPLICABLE TO PILOT SAMPLE AND FIRST BULK.
 (IV) TESTS OF POLYMER CONTENT, ASH CONTENT AND HYPALON COATING SHALL BE GOT CROSS CHECKED FROM IRMRA THANE OR ANY GOVT. APPROVED LAB.

* RUBBER 98-1, TY 005216-75



TECHNICAL CONDITIONS

- *THE SIZE MUST BE CHECKED. THE REMAINING SIZES ARE PROVIDED WITH THE TOOLS WHICH ARE CHECKED AT LEAST QUARTERLY.
- OTHER TECHNICAL REQUIREMENTS AS PER TY 005216-75

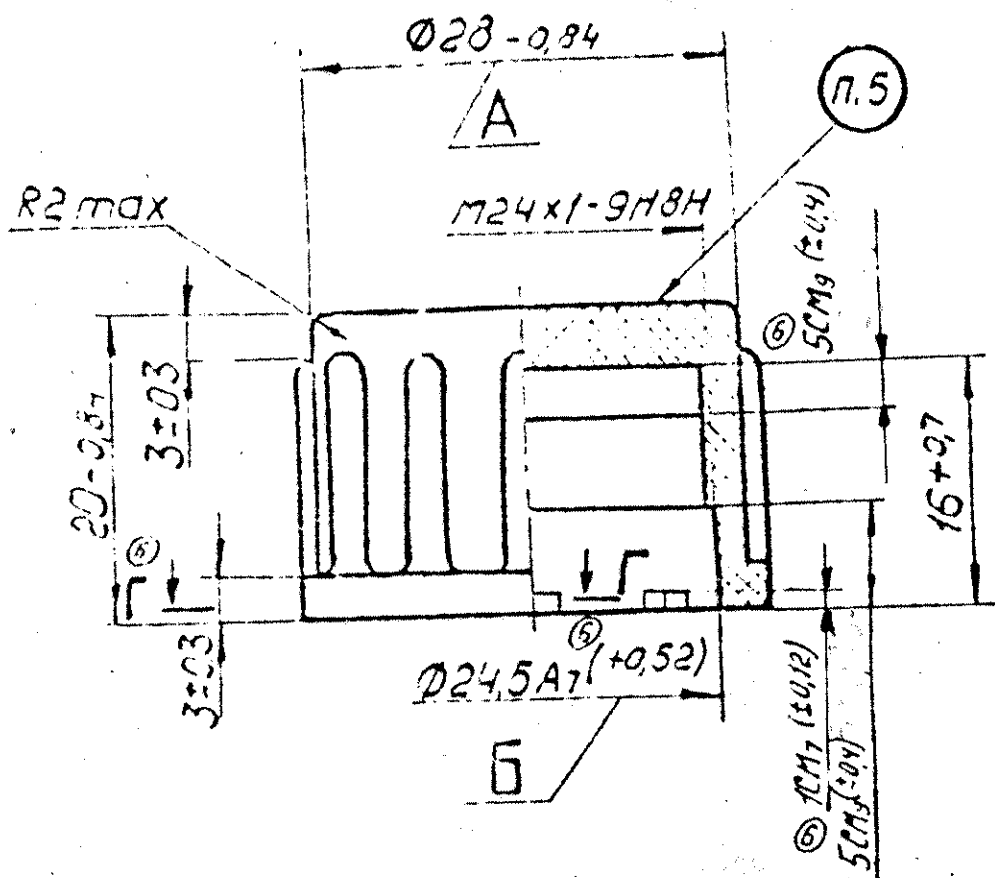
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Handwritten note: 06/07

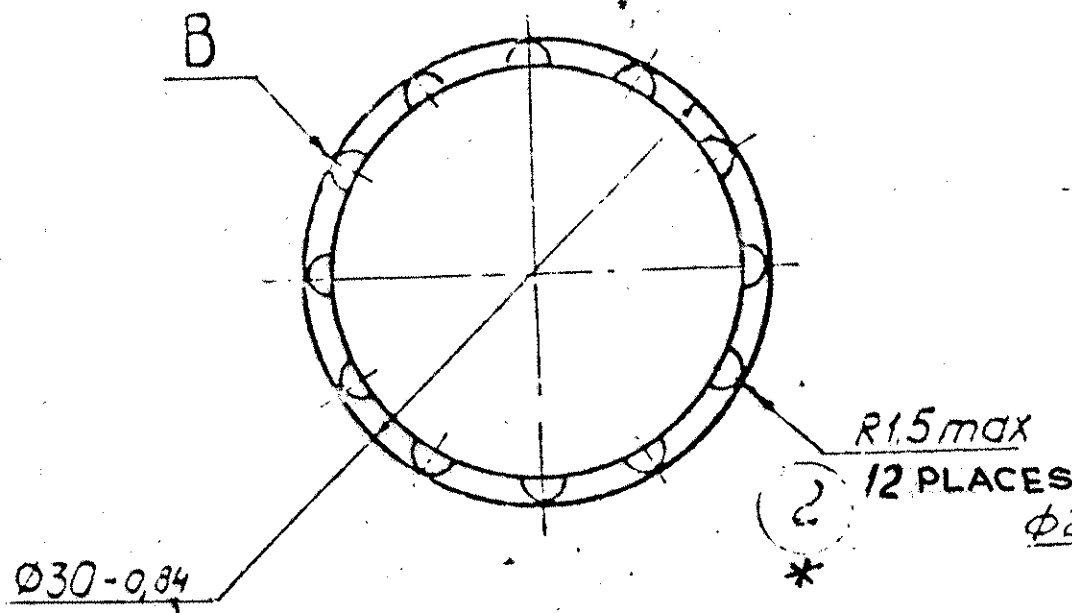
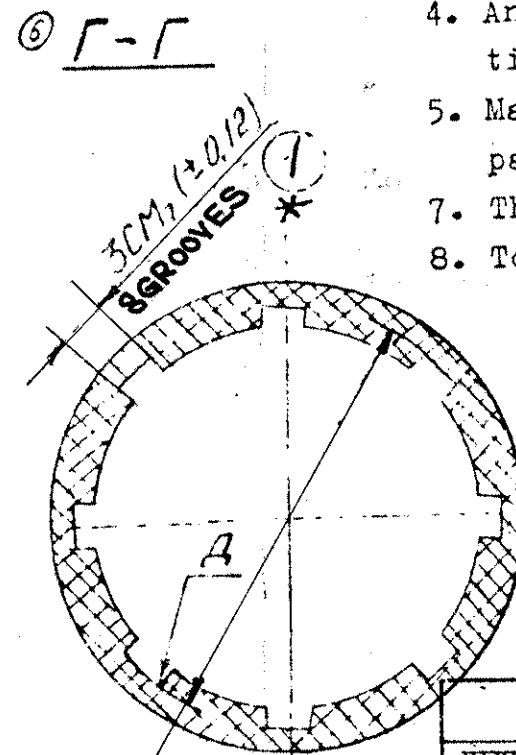
* WT=0.8 g						
संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS
सामान्य सहिष्णुता GENERAL TOLERANCE						
रेखिक परिमाण LINEAR DIMENSION						
0-6 ±0.1						
6-30 ±0.2						
30-120 ±0.3						
120-315 ±0.5						
315-1000 ±0.8						
1000-2000 ±1.2						
कोणिक परिमाण ANGULAR DIMENSION	संख्या NO. OFF	संबंधित पुर्जा का आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE	नाम NAME
1-10 ±1°						
10-50 ±30'						
50-100 ±20'						
>100 ±10'						
मापक 'म्यू एम' में VALUE IN "μm"						
- >25						
∇ 8-25						
▽ 1.6-8						
▽▽ 0.025-1.6						
▽▽▽ <0.025						
RING ELECTROMAGNET B.M.P.			मापमान SCALE		आरेखित DRAWN	27/6/06
			NTS		जाँचा CHECKED	06/07
					अनुमोदित APPROVED	
			द्वारा बदला REPLACED BY			
			हेतु बदला REPLACED FOR			
मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH			कार्यालय OFFICE		आरेखण क्र. DRAWING NO. KS 5-008	
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT			विचलन DEVIATION		D.O.	

- * ① 8 grooves
- * ② 12 places



TECHNICAL CONDITIONS

- (3) 1. Material substitute: polyethylene 210-01, grade 1, GOCT 16338-77.
2. Angle of taper of 1° is allowed in the direction of removal in decreasing order of size A and 4°, in increasing order of size B.
3. Radii 1 mm unless otherwise specified.
4. Angular displacement of the ribs is ±1° of the nominal position.
5. Mark the number of the mould cavity and designation of the part using convex lettering 4.
7. The sizes are provided by means of appropriate tools.
8. Tolerable displacement of grooves II is not in excess of 1°.



VETTED
21 JUL 2008
JWM/STD-CELL

PROVISIONALLY VETTED
8 JUN 2006
JWM/STD-CELL

संख्या NO. OFF.	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS	W.T.
	सामान्य सहिष्णुता GENERAL TOLERANCE						
	रेखिक परिमाण LINEAR DIMENSION						
	0 - 6				± 0.1		
	6 - 30				± 0.2		
	30 - 120				± 0.3		
	120 - 315				± 0.5		
	315 - 1000				± 0.8		
	1000 - 2000				± 1.2		
	कोणिक परिमाण ANGULAR DIMENSION	संख्या NO. OFF.	संबंधित पुर्जा क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE	नाम NAME
	1 - 10						
	10 - 50						
	50 - 100						
	> 100						

TRANSPORTATION CAP

**POLYETHYLENE 209-01, GRADE I,
GOST - 16338-77**

**मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ
MACHINE TOOL PROTOTYPE FACTORY, AMBARNATH**

मापमान SCALE	आरेखित DRAWN	5-88	Q
2:1	जांचा CHECKED	07/06/08	
	अनुमोदित APPROVED		
द्वारा बदला REPLACED BY	हेतु बदला REPLACED FOR		
कार्यालय OFFICE	आरेखण क्र. DRAWING NO.	WMT	KS5-011

This dwg has been prepared based on AHSP dwg.

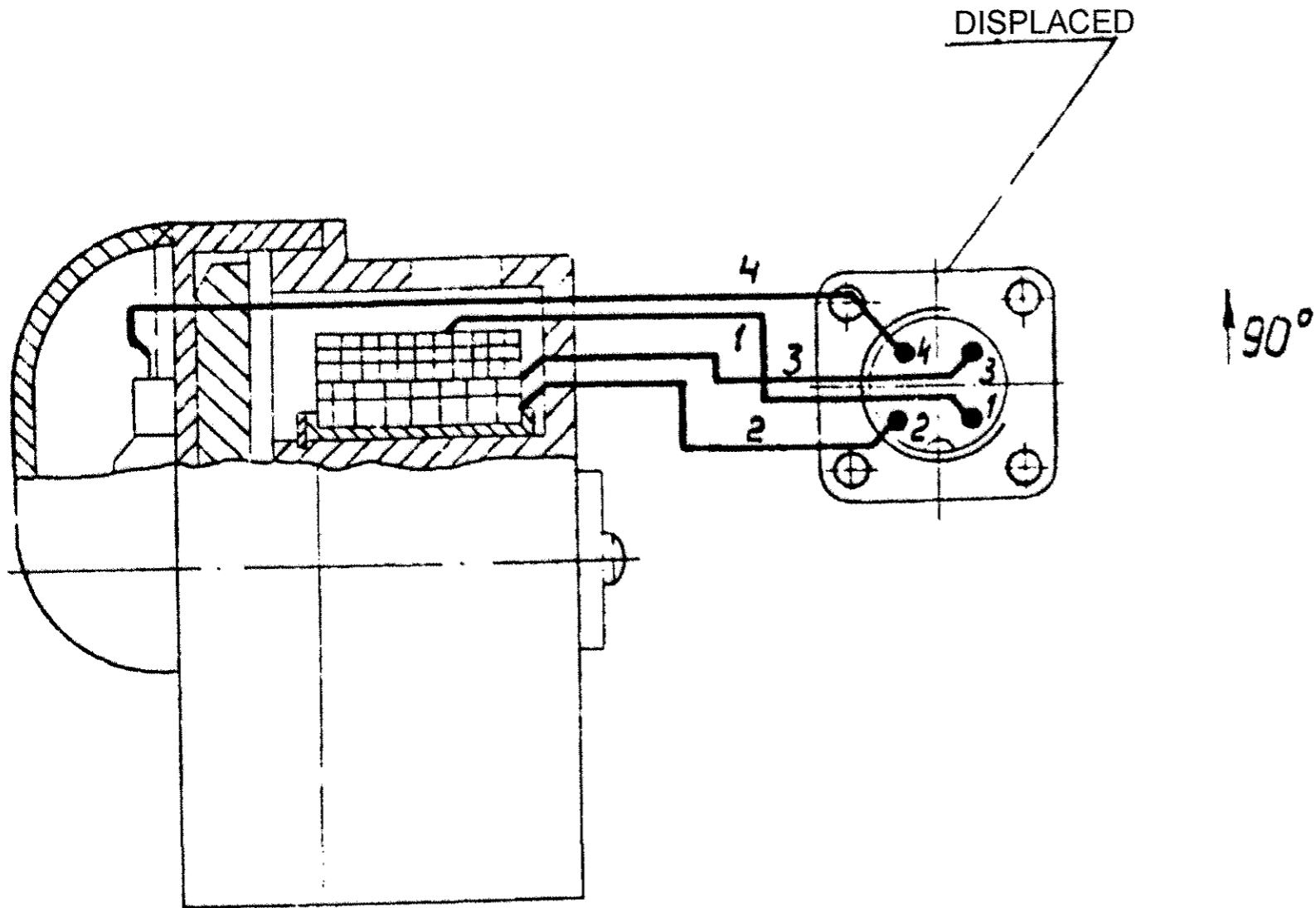
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मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विचलन DEVIATION	
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TECH. CONDITIONS

- SOLDER THE LEADS OF COIL, RFE. NO. 2 AND COVER, REF. NO. 1 TO THE PINS OF THE PLUG CONNECTOR IN COMPLIANCE WITH THE MARKING ON THE TUBINGS. FOR SOLDERING, USE SOLDER ЛОССу 40-2 GOST-21930-76 WITH FLUX ФКС ЛОСТ4. С 0.033-200
- PUT TUBINGS, REF. NOS 36, 37, ON THE SOLDERED POINTS IN THE PLUG



VETTED
21 JUN 2006
JWM/STD-CELL

*This drg. has been prepared based on AHSP drg.

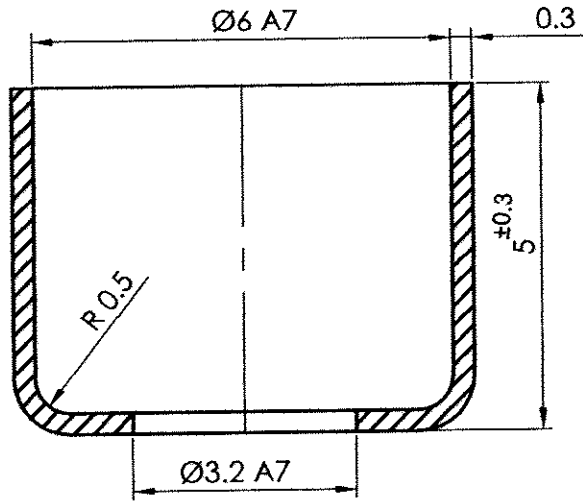
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मूलमाप व अन्वयोजन
NOMINAL SIZE & FIT

विचलन
DEVIATION

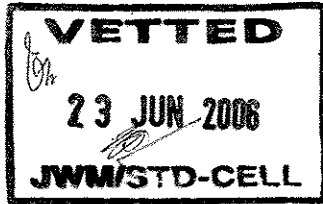
संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS												
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30-120	±0.3																	
120-315	±0.5																	
315-1000	±0.8																	
1000-2000	±1.2																	
<p>कोणिक परिमाण ANGULAR DIMENSION</p> <table border="1"> <tr><td>1-10</td><td>±1'</td></tr> <tr><td>10-50</td><td>±30'</td></tr> <tr><td>50-100</td><td>±20'</td></tr> <tr><td>>100</td><td>±10'</td></tr> </table>							1-10	±1'	10-50	±30'	50-100	±20'	>100	±10'				
1-10	±1'																	
10-50	±30'																	
50-100	±20'																	
>100	±10'																	
<p>मापक 'म्यू एम' में VALUE IN 'μm'</p> <table border="1"> <tr><td>~</td><td>>25</td></tr> <tr><td>▽</td><td>8-25</td></tr> <tr><td>▽▽</td><td>1.6-8</td></tr> <tr><td>▽▽▽</td><td>0.025-1.6</td></tr> <tr><td>▽▽▽▽</td><td><0.025</td></tr> </table>							~	>25	▽	8-25	▽▽	1.6-8	▽▽▽	0.025-1.6	▽▽▽▽	<0.025		
~	>25																	
▽	8-25																	
▽▽	1.6-8																	
▽▽▽	0.025-1.6																	
▽▽▽▽	<0.025																	
<p>संख्या NO. OFF</p>		<p>संबंधित पुर्जाका आरेखण क्र. DRG. NO. OF ASSOCIATED PART</p>		<p>सूचक INDEX</p>		<p>संशोधन ALTERATION</p>												
<p>ELECTROMAGNET 3M-46</p> <p>WIRING DRAWING</p> <p>B.M.P.-II</p>				<p>2006</p>		<p>दिनांक DATE</p>												
<p>मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH</p>				<p>कार्यालय OFFICE</p>		<p>मापमान SCALE</p> <p>आरेखित DRAWN</p> <p>जाँचा CHECKED</p> <p>अनुमोदित APPROVED</p>												
<p>द्वारा बदला REPLACED BY</p>				<p>हेतु बदला REPLACED FOR</p>		<p>21.6.06</p> <p>27/06/06</p>												
<p>मूलमाप व अन्वयोजन NOMINAL SIZE & FIT</p>				<p>कार्यालय OFFICE</p>		<p>आरेखण क्र. DRAWING NO. E M46-000 ME</p>												



TECHNICAL CONDITIONS

1. COATING: O-Bu (99,8) 9.
2. CLEAN OFF BURRS.

CHEMICAL COMPOSITION	BAND ДЛРHM HD Л63 GOST- 2208-75
COPPER	62.0 - 68.0 ✓
LEAD	0.07 Max ✓
IRON	0.2 Max ✓
ANTIMONY	0.005 Max ✓
BISMUTH	0.002 Max ✓
PHOSPHORUS	0.01 Max ✓
TOTAL	0.5 Max ✓



MECHANICAL PROPERTIES

TENSILE STRENGTH Kg/mm ² 30 - 42 ✓
RELATIVE ELONGATION 38 Min ✓

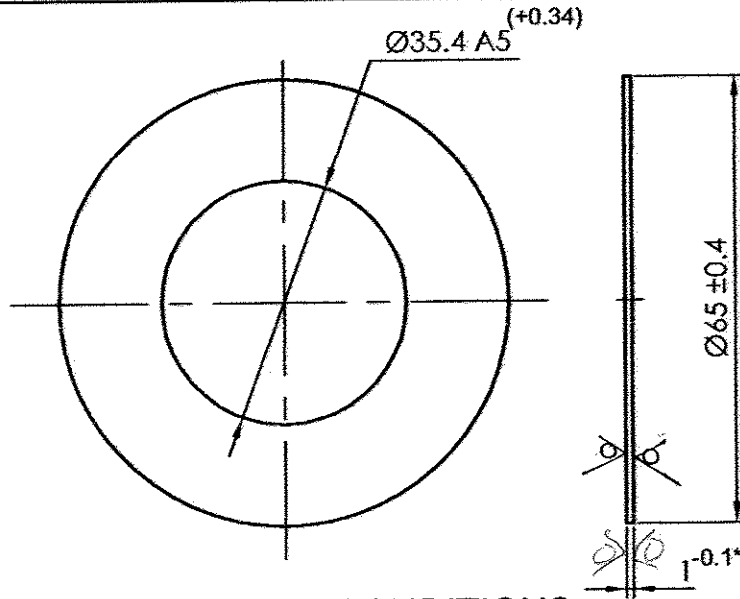
@ BAND ДЛРHM HD Л63,
GOST-2208-75

संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS
						WT=0.00025
सामान्य सहिष्णुता GENERAL TOLERANCE						
रेखिक परिमाण LINEAR DIMENSION						
0-6	±0.1					
6-30	±0.2					
30-120	±0.3					
120-315	±0.5					
315-1000	±0.8					
1000-2000	±1.2					
कोणिक परिमाण ANGULAR DIMENSION		संख्या NO. OFF	संबंधित पुर्जा क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE
1-10	±1°				2006	नाम NAME
10-50	±30°					
50-100	±20°					
>100	±10°					
मापक 'म्यू एम' में VALUE IN μm		CAP		मापमान SCALE	आरेखित DRAWN	
~	>25	ELECTROMAGNET		NTS	जाँचा CHECKED	
∇	8-25	B.M.P. - II			अनुमोदित APPROVED	
∇∇	1.6-8	मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		कार्यालय OFFICE	द्वारा बदला REPLACED BY	
∇∇∇	0.025-1.6			D.O.	हेतु बदला REPLACED FOR	
∇∇∇∇	<0.025				आरेखण क्र. DRAWING NO.	
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विवचन DEVIATION				VK8-634-019	

This drg has been prepared based on A/HSP drg . File Path: D:KHAN/BMP-II(R)VK8-634-019

AD-2

This drg. has been prepared based on A/HSP drg.



TECHNICAL CONDITIONS

1. SIZE FOR REFERENCE.
2. COATING: ELECTROLESS PASSIVATION.

CHEMICAL COMPOSITION	SHEET ДЛРМ 0.5 Л63 GOST-931-78
COPPER	62.0 - 68.0
LEAD	0.07 Max
IRON	0.2 Max
ANTIMONY	0.005 Max
BISMUTH	0.002 Max
PHOSPHORUS	0.01 Max
TOTAL	0.5 Max

MECHANICAL PROPERTIES

TENSILE STRENGTH Krc/mm ² 30 - 41
ELONGATION 38 Min
BRINELL HARDNESS 70

VETTED
22 JUN 2006
JWM/STD-CELL

*SHEET ДЛРХМ 1.0Л 63 GOST:931-78

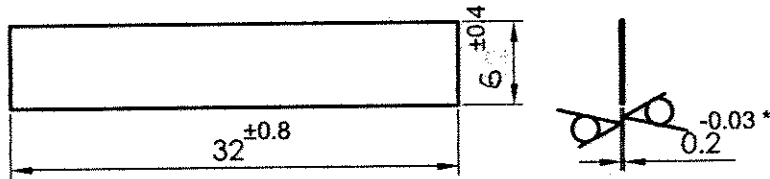
Rz80

संख्या NO. OFF		विवरण DESCRIPTION		पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यासित REMARKS
		सामान्य सहिष्णुता GENERAL TOLERANCE						
		रेखिक परिमाण LINEAR DIMENSION						
		0-6	±0.1					
		6-30	±0.2					
		30-120	±0.3					
		120-315	±0.5					
		315-1000	±0.8					
		1000-2000	±1.2					
		कोणिक परिमाण ANGULAR DIMENSION		संख्या NO. OFF	संबन्धित पुर्जा क्र. आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE
		1-10	±1°				2006	नाम NAME
		10-30	±30'					
		30-100	±25'					
		>100	±10'					
		मापक 'यू एम' में VALUE IN 'UM'						
		~	±25					
		V	±0.25					
		∇	1.0-8					
		∇∇	0.025-1.6					
		∇∇∇	±0.025					
मूलमाप व अन्वामोहन NOMINAL SIZE & FIT	विवचन DEVIATION			WASHER ELECTROMAGNET B.M.P.-II		मापमान SCALE NTS		आरेखित DRAWN 22/6/06 जाँच CHECKED 27/06/06 अनुमोदित APPROVED
		मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		कार्यालय OFFICE D.O.		द्वारा बदला REPLACED BY हेतु बदला REPLACED FOR आरेखण क्र. DRAWING NO. E M46-011		

*This dwg has been prepared based on A.H.S.P. dwg. File Path: XD:KHAM/BMP#(R)EM46-011

AD-2

This dwg is for... [unclear]...



1. SIZE FOR REFERENCE.

CHEMICAL COMPOSITION	BAND ДЛРHM 0.2 П63 GOST-2208-75
COPPER	62.0 - 68.0 -
LEAD	0.07 Max -
IRON	0.2 Max -
ANTIMONY	0.005 Max -
BISMUTH	0.002 Max -
PHOSPHORUS	0.01 Max -
TOTAL	0.5 Max -

MECHANICAL PROPERTIES



TENSILE STRENGTH Kg/mm ² 30 - 42 -
RELATIVE ELONGATION 38 Min -

@ BAND ДЛРHM 0.2 П63, GOST-2208-75

Rz 80 √ (√)

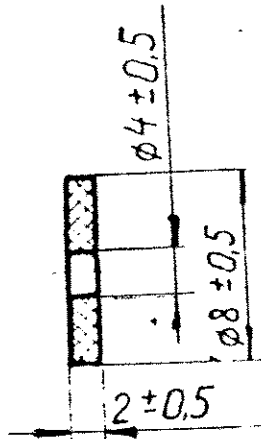
WT=0.33 g

संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS
सामान्य सहिष्णुता GENERAL TOLERANCE						
रेखिक परिमाण LINEAR DIMENSION						
0-6		±0.1				
6-30		±0.2				
30-120		±0.3				
120-315		±0.5				
315-1000		±0.8				
1000-2000		±1.2				
कोणिक परिमाण ANGULAR DIMENSION		संख्या NO. OFF	संबंधित पुर्जा क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE
1-10		±1°				
10-50		±30'				
50-100		±20'				
>100		±10'				
मापक 'म्यू एम' में VALUE IN μm						
~		±25				
∇		6-25				
∇∇		1.6-6				
∇∇∇		0.025-1.6				
∇∇∇∇		-0.025				
मूलमाप व अन्वायेजन NOMINAL SIZE & FIT	विचलन DEVIATION	मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH			कार्यालय OFFICE D.O.	2006 दिनांक DATE
		STRAP ELECTROMAGNET B.M.P. II			मापमान SCALE NTS	आरेखित DRAWN 23/06/06
					जाँचा CHECKED 01/07/06	नाम NAME
					अनुमोदित APPROVED	
					द्वारा बदला REPLACED BY	
					हेतु बदला REPLACED FOR	
					आरेखण क्र. DRAWING NO. EM46-016	

* This dra. has been prepared based on AHS Pdm. File Path: D:/KHAN/BMP-II(R)EM46-016

... has been prepared based on ...

AD2



PROVISIONALLY VETTED
8 JUN 2006
JWM/STD-CELL

Technical requirements as per ISCT 11025-78.

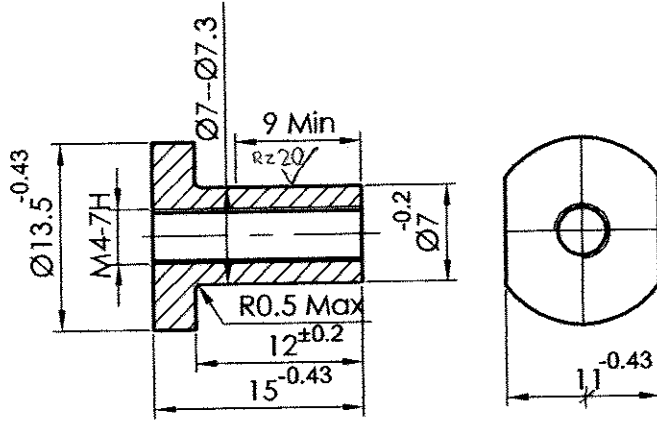
VETTED
21 JUL 2006
JWM/STD-CELL

* This drg has been prepared based on AHSP drg.

0.03 g

संख्या NO. OFF.	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS			
	सामान्य सहिष्णुता GENERAL TOLERANCE								
	रेखिक परिमाण LINEAR DIMENSION								
	0 - 6 ± 0.1								
	6 - 30 ± 0.2								
	30 - 120 ± 0.3								
	120 - 315 ± 0.5								
	315 - 1000 ± 0.8								
	1000 - 2000 ± 1.2								
	कोणिक परिमाण ANGULAR DIMENSION	संख्या NO. OFF.	संबंधित पुर्जांक आरेखण क्र. DRG NO OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE	नाम NAME		
	1 - 10 ± 1°								
	10 - 50 ± 30								
	50 - 100 ± 20								
	> 100 ± 10°								
	मापोंक म्य एम. में VALUE IN μm								
	> 25								
	8 - 25								
	16 - 8								
	0.025 - 16								
	< 0.025								
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विवचन DEVIATION	RING FELT T32. GOST: 11025-78				मापमान SCALE 2:1	आरेखित DRAWN C-88	जांचा CHECKED 21/06/06	अनुमोदित APPROVED
		मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBARNATH				कार्यालय OFFICE WMT	द्वारा बदला REPLACED BY हेतु बदला REPLACED FOR आरेखण क्र. DRAWING NO. EM46-018		

This drg has been prepared based on AHSP drg. GOST-11025-78. EM46-018



CHEMICAL COMPOSITION

MATERIAL GRADE	C	Si	Mn	Cr	Ni	S Max	P Max
12X18H9, 5632-72	0.12 Max	0.8 Max	2.0 Max	17.0- 19.0	8.0- 10.0	0.020	0.035

VETTED
28 JUN 2006
JWM/STD-CELL

* MATERIAL:-STEEL 12X18H9,GOST-5632-72

Rz 80 (✓)

WT=5.0 g

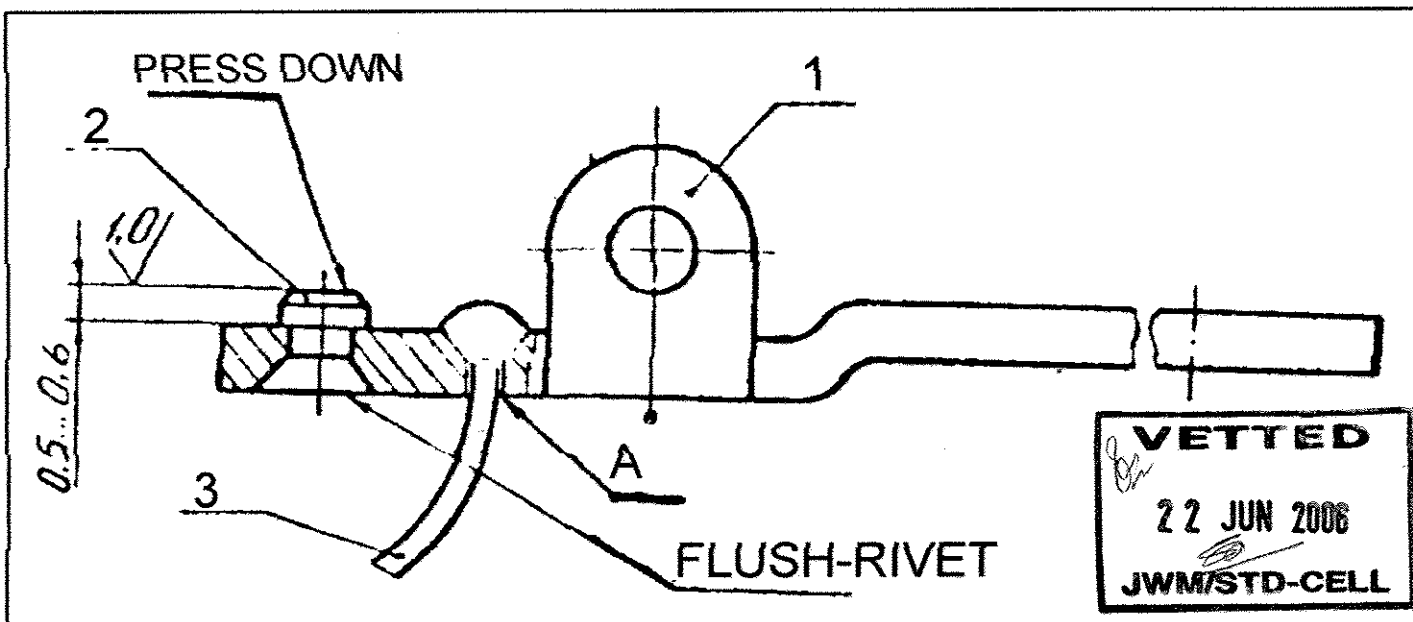
संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यन्त REMARKS
	सामान्य सहिष्णुता GENERAL TOLERANCE					
	रेखिक परिमाण LINEAR DIMENSION					
	0-6	±0.1				
	6-30	±0.2				
	30-120	±0.3				
	120-315	±0.5				
	315-1000	±0.8				
	1000-2000	±1.2				
	कोणिक परिमाण ANGULAR DIMENSION					
	1-10	±1°				
	10-30	±30'				
	30-100	±20'				
	>100	±10'				
	मापक 'म्यू एम' में VALUE IN μm					
	~	±25				
	∇	6-25				
	∇∇	1.6-8				
	∇∇∇	0.025-1.6				
	∇∇∇∇	<0.025				
	मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विचलन DEVIATION	BUSHING ELECTROMAGNET B.M.P. II		2006	दिनांक DATE
			संशोधन ALTERATION			नाम NAME
			संबंधित पुर्जा क्र. आरेखण क्र. DRG. NO. OF ASSOCIATED PART			
			सूचक INDEX			
			कार्यालय OFFICE		मापमान SCALE	आरेखित DRAWN
			मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		NTS	जाँचा CHECKED
			D.O.			अनुमोदित APPROVED
			द्वारा बदला REPLACED BY			
			हेतु बदला REPLACED FOR			
			आरेखण क्र. DRAWING NO.			
			EM46-024			

This drg has been prepared based on AHSP drg. File Path: D:/KHAN/BMP-II(R)EM46-024

AD-2

This drg has been prepared based on AHSP drg.

AD-2



NO.	DESIGNATION	DESCRIPTION	QNTY	REMARK
1.	EM46-023	<u>PARTS</u> LEVER	1	
2.		<u>MISCELLANEOUS</u> CONTACT-PART Cp 999 CГ2555 GOST-21932-76	1	
3.		<u>MATERIALS</u> WIRE ЛЩ 0.35 GOST 9125-74	0.025 m	

TECHNICAL CONDITIONS

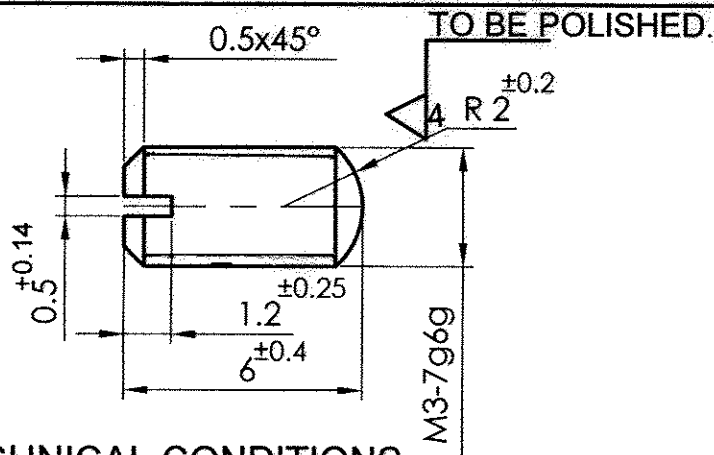
- SOLDER WIRE, REF. NO. 3, USING SOLDER ЛОССу 61-0.5 GOST 21930-76 WITH FLUX ФКС л OCT 4.ГО.33.200.
- PENETRATION OF THE SOLDER TO THE PLACE OF BEND A IS NOT ALLOWED.

संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यन्तित REMARKS	
	सामान्य सहिष्णुता GENERAL TOLERANCE						
	रेखिक परिमाण LINEAR DIMENSION						
	0-6 ±0.1						
	6-30 ±0.2						
	30-120 ±0.3						
	120-315 ±0.5						
	315-1000 ±0.8						
	1000-2000 ±1.2						
	कोणिक परिमाण ANGULAR DIMENSION	संख्या NO. OFF	संबंधित पुर्जाका आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE	नाम NAME
	1-10 ±1'				2006		
	10-50 ±30'						
	50-100 ±20'						
	>100 ±10'						
	मापक 'म्यू एम' में VALUE IN μm						
	~ >25						
	▽ 8-25						
	▽ 1.6-8						
	▽ 0.025-1.6						
	▽ 0.025						
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विचलन DEVIATION	LEVER ELECTROMAGNET B.M.P. II			मापमान SCALE	आरेखित DRAWN	जाँचा CHECKED
		मशीनी औजार आदिस्व फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH			द्वारा बदला REPLACED BY	22/06/06	27/06/06
		कर्मालय OFFICE			हेतु बदला REPLACED FOR		
		D.O.			अपने रूप क्र. DRAWING NO.		
		E M 46-040					

This drg has been prepared based on AHSP drg File Path: D:/KHAN/BMP-II(R)/EM46-040

AD-2

This drg. has been prepared based on AHSP drg.



TECHNICAL CONDITIONS

1. COATING: CADMIUM PLATING 6.
2. THE SLOT MAY BE DISPLACED TO 0.2 mm RELATIVE TO THE SCREW AXIS.
3. TECHNICAL REQUIREMENTS AS PER GOST-1759-70

CHEMICAL COMPOSITION	45 GOST- 1050-74
CARBON	0.42 - 0.50
SILICON	0.17 - 0.37
MANGANESE	0.50 - 0.80
CHROMIUM	0.25 Max
PHOSPHORUS	0.035 Max
SULPHUR	0.040 Max
NICKEL	0.25 Max
COPPER	0.25 Max

MECHANICAL PROPERTIES

ULTIMATE STRENGTH Kgf/mm ² 61
YIELD POINT Kgf/mm ² 36
RELATIVE ELONGATION % 16
REDUCTION OF AREA % 40
IMPACT STRENGTH Kgm/cm ² 5



STEEL 45, GOST-1050-74

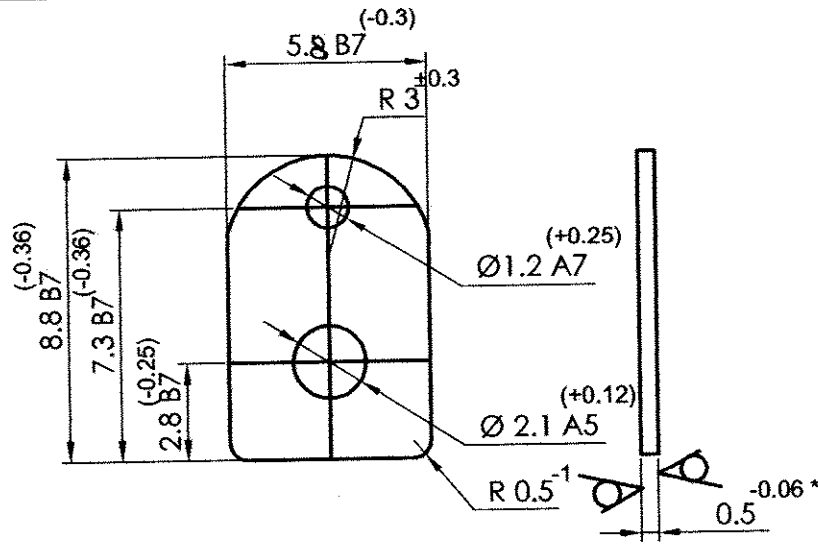


WT=0.21 g

संख्या NO.OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यन्त REMARKS	
सामान्य सहिष्णुता GENERAL TOLERANCE रेखिक परिमाण LINEAR DIMENSION 0-6 ±0.1 8-30 ±0.2 30-120 ±0.3 120-315 ±0.5 315-1000 ±0.8 1000-2000 ±1.2		कोणिक परिमाण ANGULAR DIMENSION 1-10 ±1° 10-50 ±30' 50-100 ±20' >100 ±10'		मापक 'म्यू एम' में VALUE IN "μm" ~ >25 ∇ 8-25 ∇∇ 1.8-8 ∇∇∇ 0.025-1.8 ∇∇∇∇ <0.025		संख्या NO.OFF संबंधित पुर्जाका आरेखण क्र. DRG. NO. OF ASSOCIATED PART सूचक INDEX संशोधन ALTERATION 2006 दिनांक DATE नाम NAME	
मूलमाप व अन्वायोजन NOMINAL SIZE & FIT 		विचलन DEVIATION 		SCREW - ELECTROMAGNET B.M.P. II मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH कार्यालय OFFICE D.O.		मापमान SCALE आरेखित DRAWN जाँचा CHECKED अनुमोदित APPROVED द्वारा बदला REPLACED BY हेतु बदला REPLACED FOR आरेखण क्र. DRAWING NO. E MT10-023	

This drg has been prepared based on AHP drg . File Path: XD:/KHAM/EMP-11(CR) EMT10-023

This drg has been prepared based on AHP drg .



1. SIZE FOR REFERENCE.
2. COATING: 0.9.

CHEMICAL COMPOSITION	BAND ДЛРHM 0.5 Л63 GOST-2208-75
COPPER	62.0 - 68.0
LEAD	0.07 Max
IRON	0.2 Max
ANTIMONY	0.005 Max
BISMUTH	0.002 Max
PHOSPHORUS	0.01 Max
TOTAL	0.5 Max

MECHANICAL PROPERTIES

VETTED
 23 JUN 2006
 JWM/STD-CELL

TENSILE STRENGTH
 Kg/mm²
 30 - 42
 RELATIVE ELONGATION
 38 Min

@ BAND ДЛРHM 0.5 Л63, GOST-2208-75

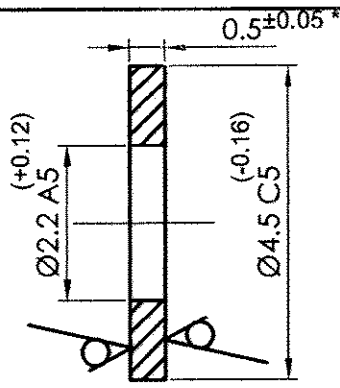
Rz 80
 ∇ (✓)

संख्या NO. OFF		विवरण DESCRIPTION		पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS
		सामान्य सहिष्णुता GENERAL TOLERANCE						
		रेखिक परिमाण LINEAR DIMENSION						
		0-6	±0.1					
		6-30	±0.2					
		30-120	±0.3					
		120-315	±0.5					
		315-1000	±0.8					
		1000-2000	±1.2					
		कोणिक परिमाण ANGULAR DIMENSION		संख्या NO. OFF	संबंधित पुर्जा क्र. आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE
		1-10	±1°				2006	नाम NAME
		10-50	±30'					
		50-100	±20'					
		>100	±10'					
		मापक 'म्यू एम' में VALUE IN μm		LUG ELECTROMAGNET B.M.P. II		मापमान SCALE		आरेखित DRAWN
		~	>25			NTS		25/06/06 Cm
		∅	8-25			जाँच CHECKED		01/07/06 JW
		∅∅	1.6-8			अनुमोदित APPROVED		
		∅∅∅	0.025-1.6			द्वारा बदला REPLACED BY		
		∅∅∅∅	<0.025			हेतु बदला REPLACED FOR		
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विचलन DEVIATION			मशीनी औजार आदिस्वप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		कार्यालय OFFICE	आरेखण क्र. DRAWING NO.	
						D.O.	EMT76M-061	

* This drg has been prepared based on AHS P drg. File Path: D:/KHAN/BMP-II(R)EMT76M-061

AD-2

This drg has been prepared based on AHS P drg.



DESIGNATION	COATING
KH3-9991	ZINC PLATING 6 FOLLOWED BY CHROMATE TREATMENT

TECHNICAL CONDITIONS

- MATERIAL SUBSTITUTE: BAND 10-M-2-0,5 GOST-503-81
- * SIZE FOR REFERENCE.

CHEMICAL	4.II-10 GOST-16523-70
CARBON	0.07 - 0.14 -
SILICON	0.17 - 0.37 -
MANGANESE	0.35 - 0.65 -
CHROMIUM	0.15 Max -
PHOSPHORUS	0.035 Max -
SULPHUR	0.040 Max -
NICKEL	0.25 Max -
COPPER	0.25 Max -



MECHANICAL PROPERTIES

TENSILE STRENGTH Kgf/mm ²	30 - 42 -
RELATIVE ELONGATION	25 Min -

@ SHEET 50.5 GOST:19904-74
4.II-10 GOST:16523-70

Rz 80 ✓(✓)

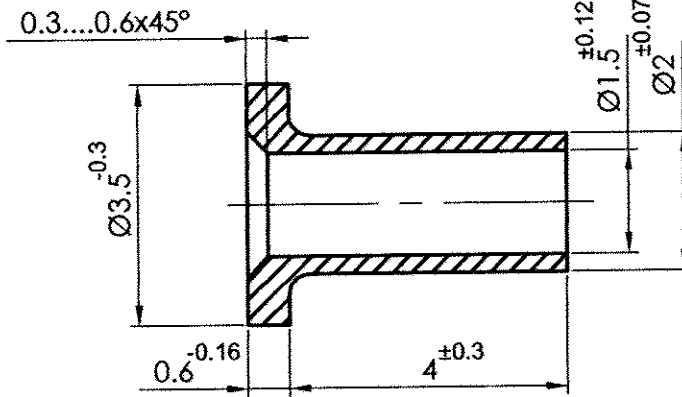
				@		WT=0.01 gm	
संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS	
सामान्य सहिष्णुता GENERAL TOLERANCE							
रेखिक परिमाण LINEAR DIMENSION							
0-6	±0.1						
6-30	±0.2						
30-120	±0.3						
120-315	±0.5						
315-1000	±0.8						
1000-2000	±1.2						
कोणिक परिमाण ANGULAR DIMENSION	संख्या NO. OFF	संबंधित पुर्जा क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	2006	दिनांक DATE	नाम NAME
1-10	±1°	WASHER		मापमान SCALE	आरेखित DRAWN	23-6-06	Cm
10-50	±30'	ELECTROMAGNET		NTS	जाँचा CHECKED	01/07	JS
50-100	±20'	B.M.P.-II			अनुमोदित APPROVED		
>100	±10'				द्वारा बदला REPLACED BY		
मापिक 'यू एम' में VALUE IN μm	संख्या NO. OFF	मशीनी औजार आदि रूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		कार्यालय OFFICE	हेतु बदला REPLACED FOR	आरेखण क्र. DRAWING NO. KH3-9991	
~	>25			D.O.			
▽	8-25						
▽▽	1.6-8						
▽▽▽	0.025-1.6						
▽▽▽▽	<0.025						
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विवरण DEVIATION						

This drg. has been prepared based on A.H.S. drg. File Path: D:/KHAN/BMP-II (R)/ 3-9991

KH3-9991

A-2

This drg. has been prepared based on A.H.S. drg.



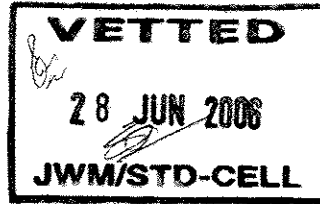
TECHNICAL CONDITIONS

(1) COATING:O-Bu (99.8) 9.

CHEMICAL COMPOSITION	BAR Л163 Т.КР.Л ЛТ-5 GOST-2060-73
COPPER	62.0 - 68.0 ✓
LEAD	0.07 Max ✓
IRON	0.2 Max ✓
ANTIMONY	0.005 Max ✓
BISMUTH	0.002 Max ✓
PHOSPHORUS	0.01 Max ✓
TOTAL	0.5 Max ✓

MECHANICAL PROPERTIES

TENSILE STRENGTH Kg/mm ² 38 Min ✓
RELATIVE ELONGATION 15 Min ✓
BRINELL HARDNESS 100 Min ✓



@ BAR Л163 Т.КР.Л .ЛТ-5 GOST-2060-73

Rz 80 ✓ (✓)

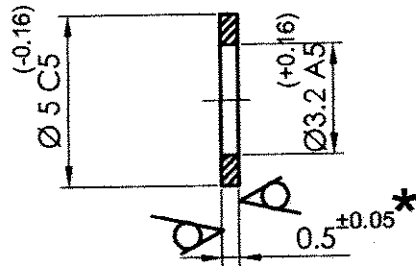
	X	X		X	@				WT= 0.064 g	
	संख्या NO. OFF	विवरण DESCRIPTION		पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्युक्ति REMARKS		
	सामान्य सहिष्णुता GENERAL TOLERANCE									
	रेखिक परिमाण LINEAR DIMENSION									
	0-6	±0.1								
	6-30	±0.2								
	30-120	±0.3								
	120-315	±0.5								
	315-1000	±0.8								
	1000-2000	±1.2								
	कोणिक परिमाण ANGULAR DIMENSION		संख्या NO. OFF	संबंधित पुर्जा क्र. आरेखण क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	2006	दिनांक DATE	नाम NAME	
	1-10	±1°								
	10-50	±30'								
	50-100	±20'								
	>100	±10'								
	मापक 'म्यू एम' में VALUE IN μm									
	~	>25								
	▽	0-25								
	▽▽	1.0-6								
	▽▽▽	0.025-1.6								
	▽▽▽▽	<0.025								
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विचलन DEVIATION		RIVET ELECTROMAGNET B.M.P. II			कार्यालय OFFICE	मापमान SCALE	आरेखित DRAWN	28/06/06	C
			मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH			D.O.	NTS	जाँचा CHECKED	17/07/06	
							द्वारा बदला REPLACED BY	अनुमोदित APPROVED		
							हेतु बदला REPLACED FOR			
							आरेखण क्र. DRAWING NO.			
							KH6-111-15			

This drg has been prepared based on AHSP drg - File Path: D:KHAN\BMP-II(R)\6-111-15

KH6-111-15

AD-2

This drg has been prepared based on AHSP drg



DESIGNATION	COATING
M11-40293	ZINC PLATING 6 FOLLOWED BY CHROMATE TREATMENT

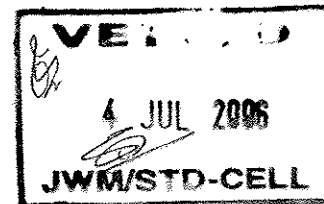
TECHNICAL CONDITIONS

1. MATERIAL SUBSTITUTE: BAND 10-M-HT-2-0,5 GOST-503-71.
2. * SIZE FOR REFERENCE.

CHEMICAL	II-BГ -0.8 КЛ GOST-9045-80
CARBON	0.10 Max -
SILICON	0.03 Max -
MANGANESE	0.20 - 0.40 -
CHROMIUM	0.10 Max -
PHOSPHORUS	0.025 Max -
SULPHUR	0.030 Max -
NICKEL	0.10 Max -
COPPER	0.15 Max -

MECHANICAL PROPERTIES

ULTIMATE STRENGTH Kgf/mm ² 26 - 37 -
RELATIVE ELONGATION 28 Min -



* SHEET Б-0.5 GOST-19904-74
II-BГ -0.8 КЛ GOST-9045-80 -

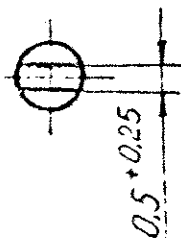
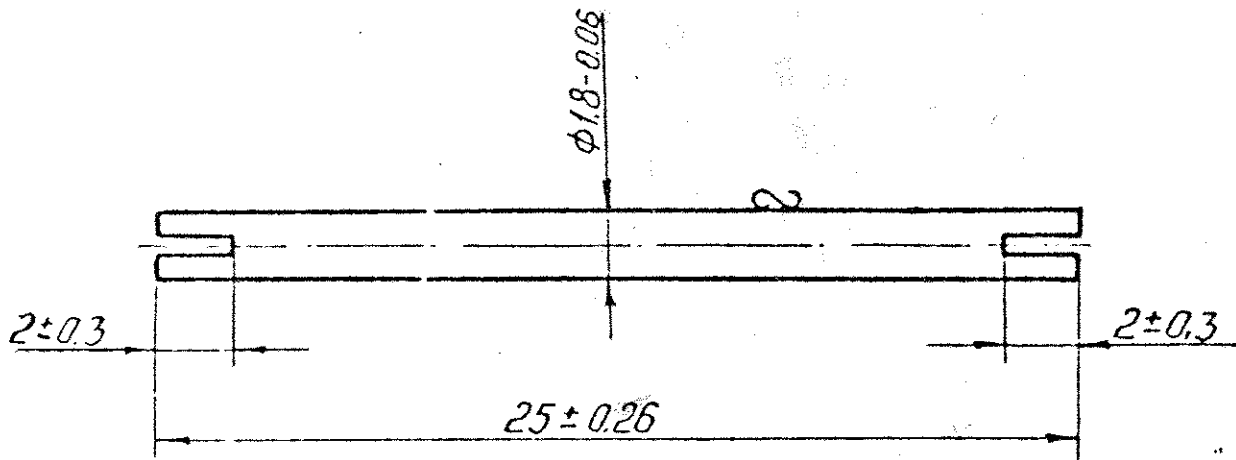
Rz 80 (✓) (✓)

						WT=0.06 g	
संख्या NO. OFF	विवरण DESCRIPTION	पुर्जा क. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यक्ति REMARKS	
सामान्य सहिष्णुता GENERAL TOLERANCE							
रेखिक परिमाण LINEAR DIMENSION							
0-5	±0.1						
6-30	±0.2						
30-120	±0.3						
120-315	±0.5						
315-1000	±0.8						
1000-2000	±1.2						
कोणिक परिमाण ANGULAR DIMENSION		संख्या NO. OFF	संबंधित पुर्जा क. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	2006	दिनांक DATE
1-10	±1°						
10-50	±30'						
50-100	±20'						
>100	±10'						
मापक 'यू एम' में VALUE IN 'UM'							
~	>25						
▽	8-25						
▽▽	1.6-8						
▽▽▽	0.025-1.6						
▽▽▽▽	<0.025						
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT		विचलन DEVIATION		WASHER ELECTROMAGNET B.M.P. II		मापमान SCALE	आरेखित DRAWN
						NTS	17/07/06
						द्वारा बदला REPLACED BY	जाँचा CHECKED
						द्वारा बदला REPLACED FOR	अनुमोदित APPROVED
		मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		कार्यालय OFFICE	D.O.		
						अखिण क. DRAWING NO. M11-40293	

This drg has been prepared based on AHSP drg. File Path: D:/KHAN/BMP-II(R)/M11-40293

AP-2

This drg. has been prepared based on AHSP drg.



**PROVISIONALLY
VETTED**
8 JUN 2006
JWM/STD-CELL

TECHNICAL CONDITIONS

1. Sharp ribs are not allowed.
2. Displacement of the groove should not exceed 0.15 mm relative the shaft, 1.8 dia.
3. Coating: hard plating chromium coating (chromium coat of 6 microns thick).
4. Location of grooves relative to each other is arbitrary.

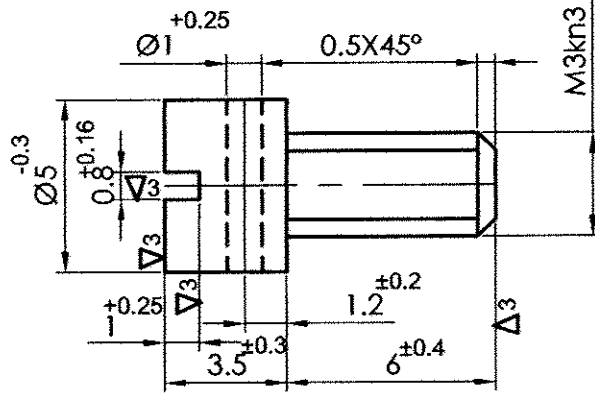
VETTED
21 JUL 2008
JWM/STD-CELL

$\nabla 3 (\nabla) 0.0008$

								0.0008		
संख्या NO. OFF.	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभ्यांक्ति REMARKS		WT		
सामान्य सहिष्णुता GENERAL TOLERANCE										
रेखिक परिमाण LINEAR DIMENSION										
0 - 6		± 0.1								
6 - 30		± 0.2								
30 - 120		± 0.3								
120 - 315		± 0.5								
315 - 1000		± 0.8								
1000 - 2000		± 1.2								
कोणिक परिमाण ANGULAR DIMENSION	संख्या NO. OFF.	संबंधित पुर्जाका DRC NO. OF ASSOCIATED PART	अंशिक INDEX	संशोधन ALTERATION	दिनांक DATE	नाम NAME				
1 - 10										
10 - 50										
50 - 100										
> 100										
मापक म्य एम. मे VALUE IN μm										
~	> 25	SHAFT								
▽	8 - 25	WIRE 1.8-10 GOST-5663-79								
▽▽	16 - 8									
▽▽▽	0.025 - 16									
▽▽▽▽	< 0.025									
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT	विक्षलन DEVIATION	मशीनी औजार आदिरूप फैक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBARNATH				कार्यालय OFFICE	हेतु बदला REPLACED FOR आरेखण क्र. DRAWING NO.			
						WMT	VD8-304-000			

This dwg has been prepared based on AHSP dwg.

... has been prepared based on AHSP dwg. B.D.8. 304-000



TECHNICAL CONDITIONS

1. THE HEAD ECCENTRICITY OF 0.2 mm RELATIVE TO THE AXIS IS ALLOWED.
2. THE SLOT ECCENTRICITY OF 0.2 mm RELATIVE TO THE AXIS IS ALLOWED.
3. COATING: ZINC PLATING 6 FOLLOWED BY CHROMATE TREATMENT.
4. ROUND OFF SHARP EDGES IN HOLE $1^{+0.25}$ DIA.
5. INCOMPLETE THREAD CUTTING : 1 mm, MAXIMUM.
6. OTHER TECHNICAL REQUIREMENTS AS PER GOST-1759-70

MECHANICAL PROPERTIES

CHEMICAL COMPOSITION	STEEL A-12 GOST-1414-75
CARBON	0.08 - 0.16
MANGANESE	0.70 - 1.00
SILICON	0.15 - 0.35
SULPHUR	0.08 - 0.2
PHOSPHOROUS	0.08 - 0.15

TENSILE STRENGTH (Kgf/mm ²)	42 Min
PERCENTAGE ELONGATION	22 Min
PERCENTAGE REDUCTION IN AREA	34 Min
BHN Max	160



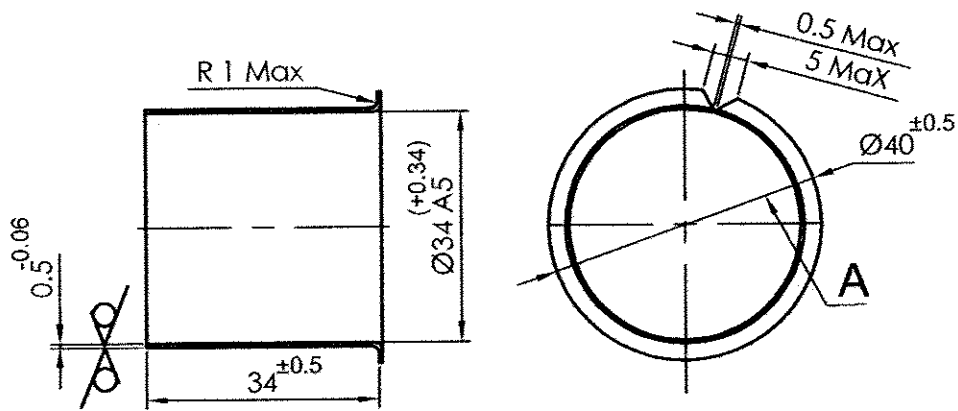
∇4

		STEEL A-12 GOST-1414-75		WT=0.001		
संख्या NO OFF	विवरण DESCRIPTION	पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अन्यक्ति REMARKS
सामान्य सहिष्णुता GENERAL TOLERANCE						
रेखिक परिमाण LINEAR DIMENSION						
0-6		±0.1				
6-30		±0.2				
30-120		±0.3				
120-315		±0.5				
315-1000		±0.8				
1000-2000		±1.2				
कोणिक परिमाण ANGULAR DIMENSION		संख्या NO OFF	संबंधित पुर्जा क्र. DRG. NO. OF ASSOCIATED PART	सूचक INDEX	संशोधन ALTERATION	दिनांक DATE
1-10						2006
10-50						
50-100						
>100						
मापिक 'म्यू एम' में VALUE IN μm						
~						
∇						
∇∇						
∇∇∇						
∇∇∇∇						
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT		विचलन DEVIATION		कार्यालय OFFICE		मापमान SCALE
				D.O.		आरेखित DRAWN
				D.O.		जाँचा CHECKED
				D.O.		अनुमोदित APPROVED
				D.O.		द्वारा बदला REPLACED BY
				D.O.		हेतु बदला REPLACED FOR
				D.O.		आरेखण क्र. DRAWING NO.
				D.O.		VD8-900-001

This dwg has been prepared based on A.H.C.P File Path: D:KHAN/BMP-II(R)VD8-900-001

AD-2

* This dwg has been prepared based on A.H.S. log.



TECHNICAL CONDITIONS

- (1) 1.*SIZE FOR REFERENCE.
- 2.COATING :ELECTROLESS PASSIVATION.
- 3.THE MATERIAL MAY BE THINNED DOWN TO 0.3 mm AT SIZE A.

CHEMICAL COMPOSITION	SHEET ДЛ PXM 0.5 Л63 GOST-931-78
COPPER	62.0 - 68.0 ✓
LEAD	0.07 Max ✓
IRON	0.2 Max ✓
ANTIMONY	0.005 Max ✓
BISMUTH	0.002 Max ✓
PHOSPHORUS	0.01 Max ✓
TOTAL	0.5 Max ✓

MECHANICAL PROPERTIES

TENSILE STRENGTH Krc/mm ² 30 - 41 ✓
ELONGATION 38 Min ✓
BRINELL HARDNESS 70 ✓



Rz80/ (✓)

* SHEET ДЛ PXM 0.5 Л63 GOST-931-78

संख्या NO OFF		विवरण DESCRIPTION		पुर्जा क्र. PART NO.	पदार्थ MATERIAL	मानक STANDARD	परिमाण DIMENSIONS	अभिवृत्त REMARKS	
* WT=0.022									
सामान्य सहिष्णुता GENERAL TOLERANCE									
रेखिक परिमाण LINEAR DIMENSION									
0-6				±0.1					
6-30				±0.2					
30-120				±0.3					
120-315				±0.5					
315-1000				±0.8					
1000-2000				±1.2					
कोणिक परिमाण ANGULAR DIMENSION									
1-10				±1°					
10-50				±30'					
50-100				±20'					
>100				±10'					
मापक 'म्यू एम' में VALUE IN μm									
~				±25					
H				±0.25					
K				±0.8					
P				±0.25-1.6					
VVVV				±0.025					
मूलमाप व अन्वयोजन NOMINAL SIZE & FIT				विचलन DEVIATION		BUSHING ELECTROMAGNET M46-000 NTS B.M.P. II			
				संख्या NO OFF		संबन्धित पुर्जा क्र. आरेखण क्र. DRG. NO. OF ASSOCIATED PART		सूचक INDEX	
						संशोधन ALTERATION		दिनांक DATE	
								नाम NAME	
				मशीनी औजार आदिसुप फेक्टरी, अम्बरनाथ MACHINE TOOL PROTOTYPE FACTORY, AMBERNATH		कार्यालय OFFICE		मापमान SCALE	
				D.O.		द्वारा बदला REPLACED BY		आरेखित DRAWN	
						द्वारा बदला REPLACED FOR		जाँचा CHECKED	
						आरेखण क्र. DRAWING NO.		अनुमोदित APPROVED	
						E M46-008		22/6/06	
								27/06/06	

* This drg has been prepared based on AHLP drg. File Path: D:/KHAN/BMP-II (R)/EM46-008

AP-2

This drg has been prepared based on AHLP drg

MTPF AMBARNATH	PART LIST GROUP - ELECTROMAGNET - E M 46 SUB GROUP -	SHEET NO. 2/2 ASSEMBLY DRAWING NO. E M 46 -000 SB
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NO.	DESIGNATION	DESCRIPTION	QNTY	REMARK
23	VD8 - 304.000	SHAFT	1	
24	VD8 - 385.002-01	SPRING	1	
25	KH7 - 10634	CABLE LUG	1	
26	EM46 - 024	BUSHING	3	
27	M11 - 40293	WASHER	4	
		<u>STANDARD ITEMS</u>		
28		SCREW GOST 1491-80 VM3 -6gx10.36.016	8	
29		SCREW VM4-6gx10.36.016 GOST 17473-80	4	
30		RING T312-7,5-2 GOST 11025-64	1	
32		WASHER 3. 65G.06 GOST 6402-70	5	
33		WASHER 4. 65G.06 GOST 6402-70	3	
34		SCREW	3	
		<u>MISCELLANEOUS</u>		
35		PLUG RMG 22 B4 SH3 V1 GYEO.364.165 TU TO BE INSTALLED ACCORDING TO EM46.000 ME	1	
		<u>MATERIALS</u>		
		TUBING, WHITE, TOP QUALITY,		
36		GOST 19034-82, 3.31 TV-40, 2.5 L=15 mm	2	
37		3.31 TV-40. 4.5 L=15 mm	2	
38		THREADS, 12-FOLD EXTRA STRONG, NO. 00, BLEACHED, ANY COLOUR, GRADE 1, GOST 6309-80	0.1 m	
		<u>SETS</u>		
	U.773.000	PACKAGE OF ELECTRO MAGNET EM-46	1/8	SEPARATE ALBUM

VETTED

5 JUL 2008

[Signature]

JWM/STD-CELL

APPROVED	E M 46 -000 SB		
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	ELECTROMAGNET - E M 46		WEIGHT
			SCALE
	SHT	SHT	

This drg. has been prepared based on AHSP drg.

Sub by 100100 prepared based on AHSP drg.

MTPF AMBARNATH	PART LIST GROUP SUB GROUP - COIL	SHEET NO. ASSEMBLY DRAWING NO. E M 46. 030 SB
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NO.	DESIGNATION	DESCRIPTION	QNTY	REMARK
		<u>DOCUMENTATION</u>		
	EM46. 030 SB	ASSEMBLY DRAWING		
		<u>ASSEMBLY UNITS</u>		
1	EM46. 020	FRAME	1	
		<u>MATERIALS</u>		
2		WIRE MGSHV 0.35 mm ² TU 16-505.437-73	0.12 m	
3		WIRE MGSHV 0.75 mm ² TU 16-505.437-73	0.3 m	
4		WIRE PEV-1-0.315 GOST 7262-78	0.17 Kg	
5		WIRE PEV-2-1.18 GOST 7262-78	0.14 Kg	
6		PAPER KON-2-22 GOST 1908-82	2.14 g	
8		VARNISHED CLOTH LSHM-105-0.1 GOST 2214-78 b=10	0.12 m	
9		TAPE LES 0.1x16 GOST 5937-68	0.8 m	
10		TAPE, CALICO, 0.22x16, GRADE 1, GOST 4514-71	0.12 m	
11		THREADS, 12-FOLD EXTRA STRONG, NO. 00, BLEACHED, ANY COLOUR, GRADE 1, GOST 6309-80	0.8 m	
12		VARNISHED GLASS CLOTH LSK-155/180- 0.15 GOST 10156-78	0.01 m ²	
13		VARNISHED GLASS CLOTH LSKL-155-0.12x15 GOST 10156-78	0.12 m	
14		TUBING, WHITE, TOP QUALITY GOST 19034-82 3.31 TV-40.3 L = 30±1.5 mm	1	
15		TUBING, WHITE, TOP QUALITY GOST 19034-82 3.31 TV-40.3 L = 80±1.7 mm	1	
16		TUBING, WHITE, TOP QUALITY GOST 19034-82 3.31 TV-40.3 L = 140±2 mm	1	

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[Signature]

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APPROVED CHECKED	E M 46. 030										
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	COIL	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"></td> <td style="width:25%; text-align: center;">WEIGHT</td> <td style="width:25%; text-align: center;">SCALE</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">SHT</td> <td></td> <td style="text-align: center;">SHT</td> </tr> </table>		WEIGHT	SCALE				SHT		SHT
	WEIGHT	SCALE									
SHT		SHT									

This drwg. has been prepared based on AHSP drwg.

This drwg. has been prepared based on AHSP drwg.

MTPF AMBARNATH	PART LIST GROUP - ELECTROMAGNET - E M 46 SUB GROUP -	SHEET NO. 1/2 ASSEMBLY DRAWING NO. E M 46 -000 SB
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NO.	DESIGNATION	DESCRIPTION	QNTY	REMARK
		DOCUMENTATION		
	EM46 - 000 SB	ASSEMBLY DRAWING		
	EM46 -000 GCH	OUTLINE DRAWING		
	EM46 - 000 ME	WIRING DRAWING		
	EM46 - 000 VS	PARTS LIST		
	EM46 - 000 TU	SPECIFICATIONS		SEPARATE ALBUM
	EM46 - 000 PS	CERTIFICATE		SEPARATE ALBUM
		ASSEMBLY UNITS		
1	EM46 - 010	COVER	1	
2	EM46 - 030	COIL	1	
3	EM46 - 040	LEVER	1	
		PARTS	x	
5	EM46 - 001	CASING	1	
6	EM46 - 002	ROD	1	
7	EM46 - 003	ARMATURE	1	
8	EM46 - 005	COVER	1	
9	EM46 - 006	POST	1	
10	EM46 - 007	SPRING	1	
11	EM46 - 013	RING	1	
12	EM46 - 014	GASKET	1	
13	EM46 - 015	GASKET	1	
14	VD8 - 900.001	SCREW	1	
15	EM46 - 018	RING	1	
17	EM46 - 022	GASKET	4	8 PCS, Max.
18	VK8 - 634.019	CAP	3	
19	KS5 - 008	GASKET	1	
20	KS5 - 011	TRANSPORTATION CAP	1	
22	EMT10 - 023	SCREW	1	

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APPROVED	E M 46 -000 SB		
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	ELECTROMAGNET - E M 46		WEIGHT
			SCALE
	SHT	SHT	

This dng. has been prepared based on AHS P dng.

This dng. has been prepared based on AHS P dng.

AD-2

5. GUARANTEE

The guaranteed term of the electromagnet is 600 operating hours of the vehicle engine (10,000-km run of the vehicle).

The guaranteed storage term of the electromagnet preserved as per OCT B3-2381-74 and kept at the Customer's depots does not exceed 7 years or 8 years for the electromagnet packed in sealed bag as per OCT B3-2381-74.

The storage term of the electromagnet supplied according to the contracts does not exceed 6 months.

N o t e.

The manufacturing plant accepts no claims provided the mastic seals of the electromagnet cover screws are broken.



1. BASIC CHARACTERISTICS

- 1.1. Supply voltage: $(27 \pm \frac{2}{5})$ V, DC.
- 1.2. Minimum armature travel: 3 mm.
- 1.3. Force (holding force) developed by the electromagnet at the maximum and zero gaps between the armature and the stop: at least 490.3 N (50 kgf).
- 1.4. Winding resistance at a temperature of 20 °C:
boosting winding, (0.26 ± 0.03) ohm;
holding winding, (50 ± 5) ohms.
- 1.5. Version: dust- and splash-proof.
- 1.6. Mode of operation: sustained.
- 1.7. Type of connection: two-wire connection for the electromagnet and single-wire connection for the contact.
- 1.8. Operating position: any.
- 1.9. Maximum mass: 2.2 kg.

2. DELIVERY SET

- 2.1. Electromagnet 3M-46, 1 pc.
- 2.2. Certificate, 1 pc.

3. ACCEPTANCE CERTIFICATE

Electromagnet 3M-46 Serial No. _____ is in full compliance with Specifications 3M46.000 TV and found fit for service.

Accepted by _____

Customer's representative _____

4. PRESERVATION

Electromagnet 3M-46 has been preserved with oil K-17 as per TOCT 10877-76 for the factory transportation; with oil K-17 as per TOCT 10877-76 for storage at the Customer's depots; preserved and packed in sealed bag for long-term storage at the Customer's depots (delete which necessary).

Preservation term 0.5; 5.0; 8.0 years
(delete which necessary)

Date of preservation _____

Accepted by _____



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3 sheets

ALBUM No. 15
ELECTROMAGNET
ЭМ-46

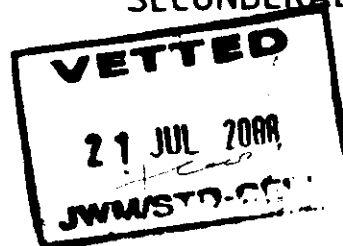
CERTIFICATE

ЭМ46.000 ПС

EM46.000 PS

CONTROLLERATE OF INSPECTION
(INFANTRY COMBAT VEHICLES)

SECUNDERAEAD

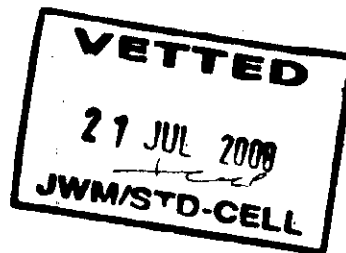


The guaranteed term is 600 operating hours of the vehicle engine (10,000-km run of the vehicle).

The guaranteed storage term of the electromagnets preserved as per OCT B3-2381-74 and kept at the Customer's depot does not exceed 5 years or 8 years for the electromagnets packed in sealed bags as per OCT B3-2381-74.

List of Appendices

2. Electromagnet 3M-46. Outline Drawing 3M46.000 P4.



These Specifications pertain to the DC electromagnet 3M-46 with boosting winding (hereinafter referred to as electromagnet). The electromagnet is installed in the vehicle crew compartment and is intended to be used in the automatic equipment system in all climatic zones except for the humid tropical zones.

When submitting requests for the electromagnet, it will be designated as electromagnet 3M-46, 3M46.000 TV.

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C O N T E N T S

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1. TECHNICAL REQUIREMENTS

The electromagnet should comply with the requirements of these Specifications and set of documents in accordance with Specifications 3M46.000 and OCT B3-1164-72.

All completing items and materials used to manufacture the electromagnet should comply with the pertinent effective standards and specifications.

1.1. Basic Characteristics and Dimensions

1.1.1. The basic characteristics of the electromagnet are as follows:

- (a) rated voltage, 27 V DC;
- (b) nominal armature travel, 3 mm;
- (c) force developed by the electromagnet at the maximum gap between the armature and the stop and at zero gap (holding force), at least 50 kgf;
- (d) resistance of windings at a temperature of 20 °C:
 - boosting winding, 0.26±0.03 ohm;
 - holding winding, 50±5 ohms.
- (e) mode of operation - sustained;
- (f) type of connection - two-wire for the electromagnet and single-wire for the contact;
- (g) version - dust-proof and splash-resistant;
- (h) operating position - any;
- (i) maximum mass, 2.2 kg;
- (j) permissible electromagnet contact current, from 0.05 to 0.15 A.

1.1.2. The electromagnet overall dimensions are in full compliance with Drawing 3M46.000 F4.

1.2. Performance Characteristics

1.2.1. The overall dimensions, mounting dimensions and appearance of the electromagnet should comply with drawings 3M46.000 F4 and 3M46.000.

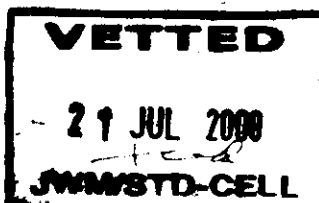
1.2.2. The contact should make at the gap of 0.8 to 1.3 mm between the armature and the stop.

1.2.2a. The voltage drop across the made contacts of the electromagnet at a current of 0.1 A and a voltage of 29 V should not exceed:

- (a) 30 mV at the manufacturing plant;
- (b) 300 mV during tests and operation.

1.2.3. The electromagnet should develop a force of at least 50 kgf in a practically cool state under normal environmental conditions at a voltage of 17 V and at zero and maximum gaps between the armature and the stop. This being the case, the consumption current should not exceed 0.37 A in the holding mode.

1.2.4. The electromagnet holding winding overheat should not exceed 50 °C at a voltage of 29 V.



1.2.5. The insulation resistance between the electric circuits and the chassis and also between the electrically-disconnected circuits should be as follows:

- (a) under normal environmental conditions in a practically cool state, at least 20 megohms;
- (b) at elevated temperature conditions, at least 5 megohms;
- (c) at elevated humidity, at least 1 megohm.

1.2.6. The insulation between the electric circuits and the chassis as well as between the electrically-disconnected circuits should withstand an AC test voltage of 500 V (r.m.s.), 50 Hz without break-down or flash-over under normal environmental conditions.

1.2.7. The parts and assembly units of items belonging to one lot should be interchangeable.

1.2.8. The electromagnet should provide normal operation and ensure the rated characteristics under the conditions specified in OCT B3-1164-72.

1.2.9. The electromagnet should be dust-proof and splash-resistant.

1.2.10. To ensure guaranteed life the electromagnet should withstand 5000 on-off operations of bench tests.

1.2.11. The service life of the electromagnet should be equal to 10,000 on-off operations.

1.3. Delivery Set

1.3.1. The delivery set should include the following items:

- (a) electromagnet 3M-46;
- (b) Certificate.

1.4. Marking

1.4.1. The electromagnet should be marked in compliance with the set of documents as per Specifications 3M46.000.

1.5. Packing

1.5.1. The electromagnet should be packed in compliance with the requirements of OCT B3-1164-72 and the effective drawing of package.

The preservation should be performed in compliance with the requirements of OCT B3-2381-74.

2. ACCEPTANCE RULES

2.1. The basic documents used as a guide in manufacturing, testing and acceptance of the electromagnet are these Specifications, standard OCT B3-1164-72 and the set of documents as per Specifications 3M46.000.

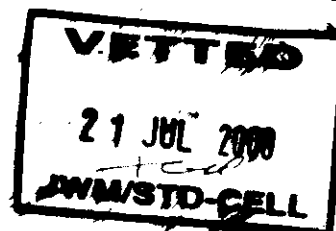
2.2. All commercial items and materials used for manufacturing the electromagnet should be checked by the commercial items quality control department. The scope of and procedures for the incoming control are agreed upon with the Customer's representative.

2.3. The electromagnet tests are divided into acceptance tests, scheduled tests and standard tests.

2.4. Every electromagnet is subjected to acceptance test in the scope and sequence listed in Table 1 of these Specifications.

2.5. Two specimen electromagnets are subjected to scheduled test every six months in the scope and sequence listed in Table 1 of these Specifications.

2.6. The standard test is carried out to check the electromagnet for compliance with the requirements of these Specifications; in case of major modifications of de-



sign or technology of production of the electromagnet which may affect its properties, whenever necessary to check the electromagnet service life and the steps taken to eliminate faults. Subject to the standard test is also the first series production batch.

The necessity to carry out the standard test, including the test for service life, is determined and coordinated by the designer, the manufacturer and the Customer's representative. The scope should be sufficient to determine the efficiency of steps taken or the service life. The tests are conducted in accordance with the coordinated program on the basis of the tests listed in Table 1 of these Specifications.

Table 1

Test or check	Para. No. of.		Test category		
	requirements	test procedure	acceptance test	scheduled test	standard test
1. Check for completeness and compliance with drawings	1.2.1	3.2	+	+	+
2. Check for contact make moment	1.2.2	3.3	+	+	+
2a. Check for voltage drop across made contacts	1.2.2a	3.3a	+	+	+
3. Check for force developed and current consumed	1.2.3	3.4	+	+	+
4. Insulation resistance test:					
(a) under normal environmental conditions	1.2.5a	3.5	+	+	+
(b) at elevated temperature	1.2.5b	3.5	-	-	-
(c) at elevated humidity	1.2.5c	3.5	-	+	+
5. Insulation dielectric strength	1.2.6	3.6	+	+	+
6. Check of holding winding overheat	1.2.4	3.7	-	+	+
7. Check for interchangeability	1.2.7	3.8	-	+	+
8. Moisture-resistance test	1.2.8	3.9	-	+	+
9. Test for resistance to cold	1.2.8	3.10	-	+	+
10. Thermal stability test	1.2.8	3.11	-	+	+
11. Check for resistance to effects of hoarfrost and dew	1.2.8	3.12	-	+	+
12. Check for resistance to effects of sea (salty) fog	1.2.8	3.13	-	+	+
13. Check for resistance to effects of thermal cycling	1.2.8	3.14	-	+	+
14. Vibration strength test	1.2.8	3.15	-	+	+
15. Impact strength test	1.2.8	3.16	-	+	+
16. Check for resistance to effects of reduced atmospheric pressure of:					
(a) up to 460 mm Hg;	1.2.8	3.17a	-	-	+
(b) up to 170 mm Hg	1.2.8	3.17b	-	-	+
17. Check for guaranteed life	1.2.10	3.18	-	+	+
18. Check for service life	1.2.11	3.19	-	-	+
19. Dust-resistance test	1.2.9	3.20	-	+	+
20. Splash-resistance test	1.2.9	3.21	-	+	+

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Table 1, continued

Test or check	Para. No. of		Test category		
	requirements	test procedure	acceptance test	scheduled test	standard test
21. Check for resistance to effects of single impacts at high acceleration	1.2.8	3.22	-	-	+
23. Check for resistance to effects of γ - and n -background	1.2.8	3.24	-	-	+

The "+" sign is used to designate that the test is carried out, the "-" sign is used to designate that it is not carried out.

Notes:

- The sequence of tests to be performed may be changed upon agreement with the Customer's representative.
- The sequence of operations to be performed during the vibration strength test and impact strength test is given in the test procedures.
- The size of the batch submitted for the acceptance test is agreed upon with the Customer's representative after two or three years of series-production.
- The acceptance and scheduled tests may be carried out as prescribed in the technological documents: in the technological acceptance process sheets and in the instructions for scheduled tests agreed upon with the Customer and approved according to the standard procedure.

3. TEST PROCEDURES

3.1. All tests are carried out under normal environmental conditions except when stated otherwise.

The normal environmental conditions presume the following:

- ambient air temperature, $+25 \pm 10$ °C;
- relative air humidity, from 45 to 80 per cent;
- atmospheric pressure, from 630 to 800 mm Hg.

Note.

At temperature exceeding 30 °C, the relative air humidity should not exceed 70 per cent.

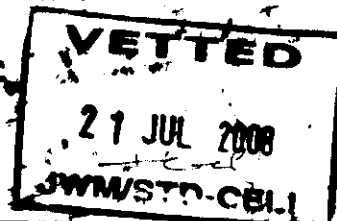
The test and measuring instruments should have the accuracy class of 1.5 or better.

During all types of checks, except for the check of the developed force, the electromagnet should be connected to a spring having a force of 392.4 H (40 kgf) at the travel beginning and of 490.5 H (50 kgf) at the travel end; when the electromagnet is deenergized, the gap between its rod and the element transmitting the spring force, should be equal to (0.1 - 0.15) mm.

3.2. The visual inspection includes the check for completeness, the check for compliance with the requirements of the drawings, quality of assembly, external finishing, condition of soldered joints, check for absence of loose attachments. The mounting and overall dimensions are checked by means of the test and measuring instruments.

3.3. The check for the contact make moment is carried out on the special bench. The contact make moment is determined by means of any indicator. The indicator is connected to contact 4 of the plug connector and to the electromagnet chassis. The armature travel value is measured by means of the test and measuring instruments.

The electromagnet is considered to pass the check, if it meets the requirements of Para. 1.2.2 of these Specifications.



3.3a. The voltage drop across the made contacts of the electromagnet is carried out at a DC voltage of 29 V. To that end, establish the setup shown in Fig. 1. In this case, a current of 0.1 A flows through the electromagnet contacts provided a resistor is connected in parallel to the winding of relay Fl.

3.4. Check the force developed by the electromagnet on a special bench. For this purpose, apply opposing force of 490.5 H (50 kgf) to the rod and supply voltage of 17 V. To that end, establish the setup shown in Fig. 1. At the same time, measure the current consumed by the holding winding of the electromagnet; the total number of on-off operations is 5.

With the electromagnet deenergized, the opposing force should not act upon the rod to avoid breakdown of the armature or cover (the gap between the rod and the element transmitting the force in the deenergized condition should be of 0.1 to 0.15 mm).

The electromagnet is considered to pass the check if it meets the requirements of Para. 1.2.3 of these Specifications.

3.5. Check the insulation resistance with a DC megohmmeter rated at 500 V.

Measure the insulation resistance between the chassis and contacts 4 and 1 or contacts 2 and 3 of the plug connector as well as between contacts 1 and 2 or 3 and contact 4 of the plug connector. This being the case, the electromagnet armature should be in the initial state.

The electromagnet is considered to pass the check if the measured insulation resistance values meet the requirements set forth in Para. 1.2.5 of these Specifications (for respective check conditions).

3.6. Check the insulation dielectric strength with the aid of a HV test bench having a power of at least 0.5 kVA by applying a test voltage for one minute.

The test voltage is applied to between the chassis and contacts 4 and 1 or 2 and 3 of the plug connector as well as between contacts 1 or 2, or 3 and contact 4 of the plug connector. This being the case, the electromagnet armature should be in the initial state.

The electromagnet is considered to pass the check if no insulation breakdown or flash-over occurred during the check.

Notes:

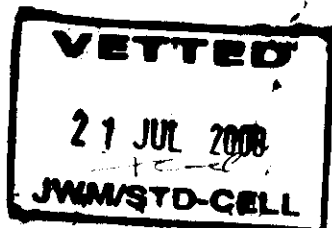
1. It is permissible to reduce the time during which the test voltage is applied to 1 s, provided the test voltage is increased up to 625 V (r.m.s.).
2. If the check is carried out again, before installing the electromagnet in the vehicle, set the test voltage value equal to 80 per cent of the rated value listed in these Specifications.

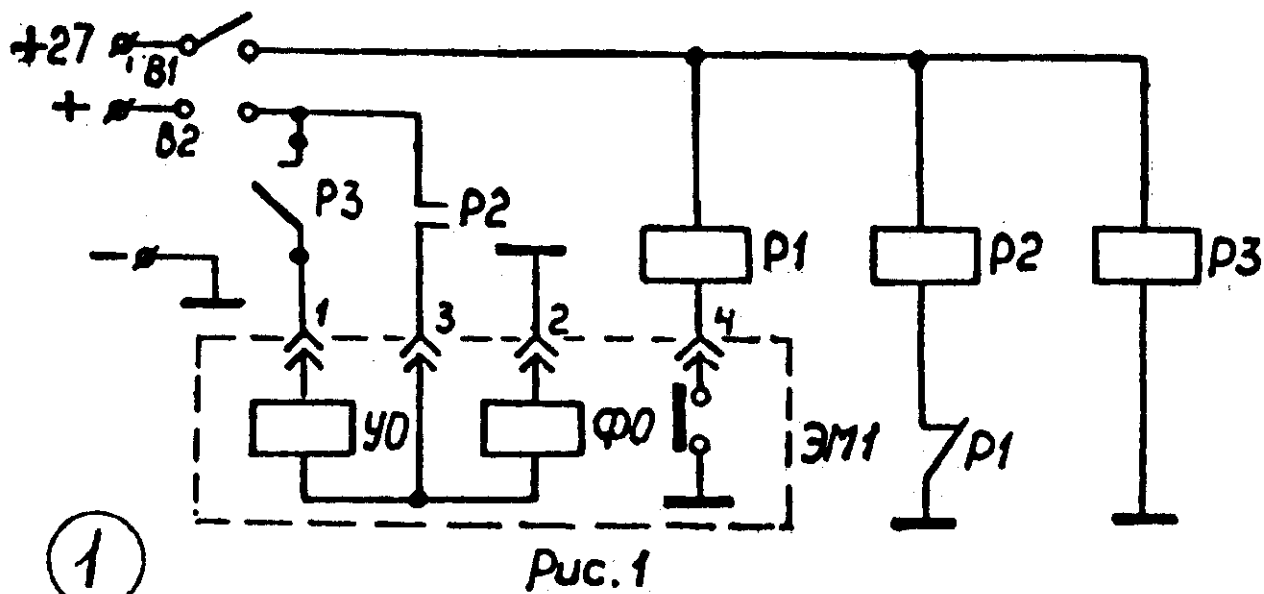
3.7. The holding winding overheat is measured on the basis of the heat stability resistance check. The current consumed by the electromagnet at a voltage of 29 V is measured under normal environmental conditions and in a practically cool state just before the check and in the heat chamber after keeping the electromagnet alive for 4 hours.

The overheat is determined from the following formula:

$$Q = \frac{I_c - I_h}{I_h} (235 + t_{air}) + t_{air} - t_{ch}, \text{ } ^\circ\text{C}$$

where: I_c - the winding current in cool state, A;
 I_h - the winding current in heat state, A;
 t_{air} - the ambient air temperature at the moment of measuring I_c , $^\circ\text{C}$;
 t_{ch} - the ambient air temperature in the chamber at the moment of measuring I_h , $^\circ\text{C}$.





(1) Fig. 1

- P1, P3 - relays P3C10, PC4.524.302 И2 PC0.452.049 Э
- P2 - contactor ТКД501Д0Д
- B1 - toggle switch Т2
- B2 - circuit breaker АЗС25, Э16-526.015-73
- 3M1 - electromagnet

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The electromagnet is considered to pass the check, if the calculated overheating value does not exceed the value set forth in the requirements of Para. 1.2.4 of these Specifications.

N o t e .

During the check the electromagnet should be secured to the smooth metal surface 10 mm thick the total area of which is at least 2000 cm².

3.8. To check the electromagnet for compliance with the drawings and its component parts for interchangeability, disassemble one electromagnet from the batch at the request of the Customer's representative. In so doing, check the parts and assembly units for compliance with the requirements set forth in the design papers.

Check for interchangeability by replacing parts and assembly units of the disassembled electromagnet with similar ones available at the assembly line, and adjust the electromagnet in the prescribed manner. If no parts and assembly units are available at the assembly line, disassemble two electromagnets.

The electromagnet is considered to pass the check for interchangeability, if the parts and assembly units comply with the drawings and if upon their replacement the electromagnet complies with the requirements of the acceptance tests of these Specifications.

3.9. To carry out the moisture-resistant test, install the deenergized electromagnet with the contact system cover removed into a constant-humidity cabinet with a relative air humidity of 93 to 97 per cent and a temperature of 20 to 25 °C, and keep it there for 5 days.

The humidity may elevate up to 98 per cent and the temperature, up to +35 °C.

No later than 3 minutes after the removal of the electromagnet from the constant-humidity cabinet, check the following:

- (a) the insulation resistance as prescribed in Para. 3.5 of these Specifications;
- (b) the force developed and the current consumed as prescribed in Para. 3.4 of these Specifications;
- (c) for absence of corrosion, except for the mounting surfaces the anti-corrosion coating of which is not specified by the drawings;
- (d) for condition of paint-and-varnish coatings.

Keep the electromagnet removed for 48 hours under normal environmental conditions, then check the insulation resistance and insulation dielectric strength as specified in Paras 3.4, 3.5 and 3.6 of these Specifications.

The electromagnet is considered to pass the test, if it meets the requirements set forth in Paras 1.2.3 and 1.2.5c of these Specifications; no peeling of paint-and-varnish coatings or corrosion is detected, and if after its keeping under normal environmental conditions the dielectric strength and the insulation resistance comply with the requirements set forth in Paras 1.2.5a and 1.2.6 of these Specifications.

3.10. To carry out the test for resistance to cold, install the deenergized electromagnet into a refrigerating chamber and decrease the temperature in the chamber to $-(50 \pm 3)$ °C. The required temperature obtained, keep the electromagnet in the chamber for 4 hours, then remove the electromagnet from the chamber and no later than 3 minutes after its removal, check it as prescribed in Para. 3.4 of these Specifications. Do not check the current.

The electromagnet is considered to pass the test, if its force meets the requirements set forth in Para. 1.2.3 of these Specifications.

N o t e .

It is permissible to install the electromagnet in a refrigerating chamber with the temperature decreased to -50 °C in advance. This being the case, the electromagnet is kept in the chamber for 6 hours.

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3.11. To carry out the thermal stability test, set a temperature of $+(50\pm 3)$ °C in the heat chamber. Establish the setup shown in Fig. 1 and apply a voltage of 29 V. This done, keep the energized electromagnet for 4 hours in the heat chamber.

Upon completion of the test, remove the electromagnet from the heat chamber and no later than 3 minutes after the removal, check its force and the insulation resistance as specified in Paras 3.4 and 3.5 of these Specifications. The electromagnet force is checked at a voltage of 22 V.

The electromagnet is considered to pass the test, if it attracts and holds an opposing force of 50 kgf at a voltage of 22 V and the insulation resistance meets the requirements set forth in Paras 1.2.5b and 1.2.4 of these Specifications.

3.12. To check the electromagnet for resistance to effects of hoarfrost and dew, install the deenergized electromagnet into the refrigerating chamber and keep it in the chamber at a temperature of -20 ± 5 °C for two hours.

Remove the electromagnet from the chamber, keep it under normal conditions and check the force every 30 to 60 minutes for 3 hours under the conditions of hoarfrost and dew formation as specified in Para. 3.4 of these Specifications. In this case the current is not checked.

The electromagnet is considered to pass the check if during its stay under normal environmental conditions after the removal from the refrigerating chamber the force meets the requirement set forth in Para. 1.2.3 of these Specifications.

3.13. To check the electromagnet for resistance to effects of sea (salty) fog, place it on the smooth metal surface and install it in the chamber. Set a temperature of 27 to 30 °C and check the electromagnet for resistance to effect of salty fog. Prior to installing the electromagnet in the chamber, inspect it visually for absence of damaged coatings. Install the electromagnet in the chamber so that the splashes of solution and also the drops from ceiling, walls and suspension system do not hit it.

The centrifugal aerosol generator or the atomizer breaks up the salt solution into a mist. The salt solution is formed by dissolving the sodium chloride in a distilled water (33 ± 3 g/l). The fog should have a dispersity of 1 to 10 μ (95 per cent of drops) and water content of 2 to 3 g/m³.

The solution is atomized every 45 minutes for 15 minutes. The total time of the check is 2 days. The time of the check is counted from the moment of the first atomization.

The check completed, clean the electromagnet with wads moistened with distilled water, dry it at a temperature of $+55\pm 2$ °C, cool down and inspect it visually.

The electromagnet is considered to pass the check if no corrosion or damage to paint-and-varnish coatings is detected.

3.14. To check for resistance to effects of thermal cycling subject the deenergized electromagnet to the effects of three temperature-variation cycles immediately following one another.

Each cycle consists in the following: install the electromagnet in the refrigerating chamber, where the temperature is set in advance to -50 °C and keep it in the chamber for 4 hours.

Transfer the electromagnet immediately from the refrigerating chamber to the heat chamber having a temperature of $+65$ °C and keep it in the chamber for 4 hours.

Count the time of the electromagnet keeping in the heat and refrigerating chambers from the moment the required air temperature is obtained in the chamber after the electromagnet installation.

The last test cycle completed, remove the electromagnet from the heat chamber and keep it under normal environmental conditions for 4 hours.

This done, visually inspect the electromagnet and check its force and current as described in Para. 3.4 of these Specifications.

The electromagnet is considered to pass the check, if its force and current meet the requirement set forth in Para. 1.2.3 of these Specifications:

Note .

It is permissible to check the electromagnet for resistance to effects of thermal cycling in one chamber with the temperature rate of change of at least 0.5 °C per minute.

3.15. Carry out the vibration strength test with the electromagnet deenergized. Before the test, visually inspect it. Secure the electromagnet on the bench with single-component horizontal or vertical vibration which occurs in turn in two mutually perpendicular positions in one of which the armature axis is perpendicular to the table plane (with the rod up), and in the other, parallel to the table plane, and then test the electromagnet at a fixed frequency according to standards listed in Table 2. During the test, the rod travel should be within 0.1 to 0.15 mm.

Table 2

Fixed frequency, Hz	Amplitude value		Total test duration, h
	acceleration, g	shift, mm	
10	1.0	2.0	3.0
20	2.0	1.0	9.0
30	3.0	0.8	6.0
40		0.6	
50		0.4	4.5
60	4.0	0.3	
80		according to acceleration	1.5
100			
120			

Note .

The test is carried out either against the acceleration value or against the shift value.

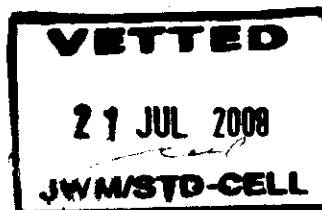
Carry out the vibration strength test simultaneously with the check for guaranteed life in the following manner: 1/4 of the total vibration time in the first position of the electromagnet before the check for guaranteed life; 1/2 of the total vibration time in the second position of the electromagnet in the middle of the check for guaranteed life; 1/4 of the total vibration time in the first position of the electromagnet after the check for guaranteed life.

The check completed, visually inspect the electromagnet and check its force, current and contact make moment as specified in Paras 3.3 and 3.4 of these Specifications.

The electromagnet is considered to pass the test if visual inspection reveals no mechanical damage and the force and the current meet the requirements set forth in Para. 1.2.3 of these Specifications and the contact makes at a gap of 0.8 to 1.3 between the armature and the stop.

3.16. Carry out the impact strength test with the deenergized electromagnet in the middle of the check for guaranteed life.

Before the test, visually inspect the electromagnet. Install the electromagnet rigidly in two mutually perpendicular positions (do it in turn) as specified in Para 3.15 of these Specifications and subject it to the effects of impacts in every position in compliance with standards listed in Table 3 below. During the test, the rod travel should be of 0.1 to 0.15 mm.



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Table 3

Acceleration, g	Pulse duration, ms	Total number of strikes	Number of strikes per minute
15	10 to 15	2000	100, max.

The total number of strikes is distributed equally for each position of the electromagnet. The check completed, visually inspect the electromagnet and check its force, current and the contact make moment as specified in Paras 3.3 and 3.4 of these Specifications.

The electromagnet is considered to pass the test, if visual inspection reveals no mechanical damage and its force and current meet the requirement set forth in Para. 1.2.3 of these Specifications, and the contact is made at a gap of 0.8 to 1.3 mm between the armature and the stop.

3.17. Check the electromagnet for resistance to effects of reduced atmospheric pressure in an altitude chamber at a temperature of $+25 \pm 10$ °C.

Before the check, visually inspect the electromagnet and check its developed force and consumed current as described in Para. 3.4 of these Specifications.

The electromagnet is placed in the altitude chamber and the pressure in the chamber is reduced to 460 mm Hg. This done, energize the electromagnet to operate under conditions of the guaranteed life check for 20 minutes at a voltage of 29 V. The number of on-off operations performed in the altitude chamber is taken into account during the guaranteed life and service life checks.

This done, slowly build up the pressure in the chamber to the normal value, remove the electromagnet from the chamber, visually inspect it and check its force and current as specified in Para. 3.4 of these Specifications.

The electromagnet is considered to pass the check if it operates satisfactorily in the altitude chamber and, upon removal from the chamber, its force and current meet the requirements set forth in Para. 1.2.3 of these Specifications under normal environmental conditions.

The deenergized electromagnet is placed in the altitude chamber and the pressure in the chamber is set to 170 mm Hg. This done, the electromagnet is kept in the chamber for 2 hours.

This done, slowly build up the pressure in the chamber to the normal value, remove the electromagnet from the chamber, visually inspect it and check its force and current as specified in Para. 3.4 of these Specifications.

The electromagnet is considered to pass the check if its force and current meet the requirements set forth in Para. 1.2.3 of these Specifications.

3.18. Check the electromagnet for guaranteed life on a special bench. Apply an opposing force of 50 kgf to the electromagnet rod and energize the electromagnet to operate in the "10 s on, 10 s off" mode.

With the electromagnet deenergized, the opposing force should not act upon the rod to avoid break-down of the armature or cover (the gap between the rod and the element, transmitting the force in the deenergized state, should be of 0.1 to 0.15 mm).

The number of on-off operations should be the following:

at a voltage of 22 V, 1500;

at a voltage of 27 V, 2000;

at a voltage of 29 V, 1500.

The check completed, perform 50 on-off operations more, and then check the force and the current as described in Para. 3.4 of these Specifications.

The electromagnet is considered to pass the check if it operates satisfactorily and its force and current meet the requirement set forth in Para. 1.2.3 of these Specifications.

3.19. Check the electromagnet for service life as specified in Para. 3.18 of these Specifications. After 5000 on-off operations, adjust the contact, if necessary.

The number of on-off operations during the guaranteed life check is taken into account during the service life check.

The electromagnet is considered to pass the check if no additional job has been performed during the check and it remained serviceable after the additional check in the scope of 25 on-off operations as described in Para. 3.18 of these Specifications.

3.20. Check the electromagnet dust-resistant properties with the aid of fine cement powder. Place 4 kg of powder into a chamber measuring 1 m³. Place the electromagnet with the rod down into the chamber and test it for 5 hours. In so doing, disturb the cement powder every 15 minutes with an air jet at a speed of 10 to 15 m/s.

The electromagnet is considered to pass the check if the dust penetrated inside cannot be noticed with a naked eye.

3.21. To check the electromagnet splash-resistant properties, install the deenergized electromagnet with its rod directed downwards in the sprinkling chamber and sprinkle it with water stream at an angle of 45° with an intensity of 2 to 2.5 mm/min, uniformly sprayed with compressed air at a pressure of 3 to 3.5 kgf/cm². See that the water stream is sprayed over the electromagnet at a height of at least 100 mm.

During the check, gradually turn the electromagnet through 360° around the vertical axis. Carry out the check for 5 minutes. The check completed, wipe dry the electromagnet on the outside and open it for inspection.

The electromagnet is considered to pass the check, if no water can be detected inside.

3.22. Check the electromagnet mount for resistance to effects of single impacts at high acceleration during the vehicle tests. Record the results in the summary report.

3.23. Do not check for resistance to effects of γ and n background. The compliance with these requirements is provided by the electromagnet design.

4. SHIPMENT AND STORAGE

4.1. The packed electromagnets may be shipped by any means of transportation, provided they are protected against precipitation and mechanical damage.

4.2. The electromagnet should be stored in compliance with the requirements of standards OCT B3-1164-72 and OCT B3-2381-74.

5. DIRECTIONS FOR USE

5.1. The electromagnet should be operated under the conditions and in the modes complying with the requirements set forth in these Specifications.

5.2. The User should provide for attachment of the electromagnet to a smooth metal surface 10 mm thick and the total area of which is at least 2000 cm².

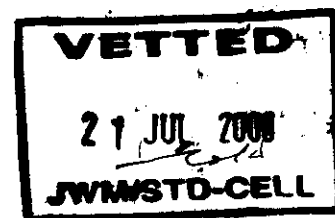
5.3. The use of the electromagnet should be agreed upon.

6. SUPPLIER'S GUARANTEE

6.1. The electromagnet should be accepted by the Quality Control Department of the Supplier.

The Supplier guarantees the compliance of the electromagnet with the requirements of these Specifications and trouble-free operation provided it is properly used, shipped and stored in accordance with the Specifications.

ALBUM No. 16
ELECTROMAGNET ЭМ-46
SPECIFICATIONS
ЭМ46.000 ТУ
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