SECRET/CLASSIFIED

NUMBER TY16-535-174-68

SHEET 1 OF 23

SUPERSEDES..

(23)

I - 756

A L B U M NO: 214

TECHNICAL DOCUMENTS
FOR ARTICLE " 84/0848711-03-ID -
40007"

TECHNICAL SPECIFICATION
TY16-535-174-68

TRANSLATED	M.Uma		9.11.84	Ordnance Factory Project Hyderabad.
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	NAME	SIGN.	DATE	

Ordnance Factory Project Hyderabad.		NUMBER TY16-535.174-68
		SHEET 2 OF 23

I-756

CONTENTS OF ALBUM NO: 24

INDEX NUMBER "84/0848711-03-76-40007"

Sl. No:	Nos of drawings assemblies, articles.	Description of document.	Nos of drawings (process sheets)	Number of sheets in one copy	Remarks
1	2	3	4	5	6
1.	Technical specification	Miniature electrical incandescent lamps of high reliability	TY 16-535,174-68	20	
			Total sheets	20	

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TECHNICAL SPECIFICATIONS

MINIATURE ELECTRICAL INCANDESCENT LAMPS OF HIGH RELIABILITY

TY 16-535.174-68

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Present technical specifications (TY) refer to miniature electrical incandescent lamps of high reliability (here after referred to as "lamps") which are intended for lighting and signalling circuits.

Present technical specifications together with the set of drawings are the main documents for manufacturing and acceptance of lamps,

Usage of lamps in modes and conditions exceeding those specified in the present technical specification is prohibited

I. TYPES BASIC PARAMETERS AND DIMENSIONS

1.1 Baisc, overall and connecting dimensions, weight of lamps and types of caps should comply with drawings 1 and 2 and table 1.

Table -2

Types of lamps	Diameter of the bulb D, maximum, mm	Total length of the lamp L mm	Types of caps	Weight, maximum, gms.
MH26-0,12-B	II	28,5	III9/14-1	2
MH26-0,12-B-1	12	24	P10/13-1	2

Explanation of conventional designation of lamp:
group of letters MH-indicate the lamp belongs to miniature type.

~~Next page Figure No.1&2~~

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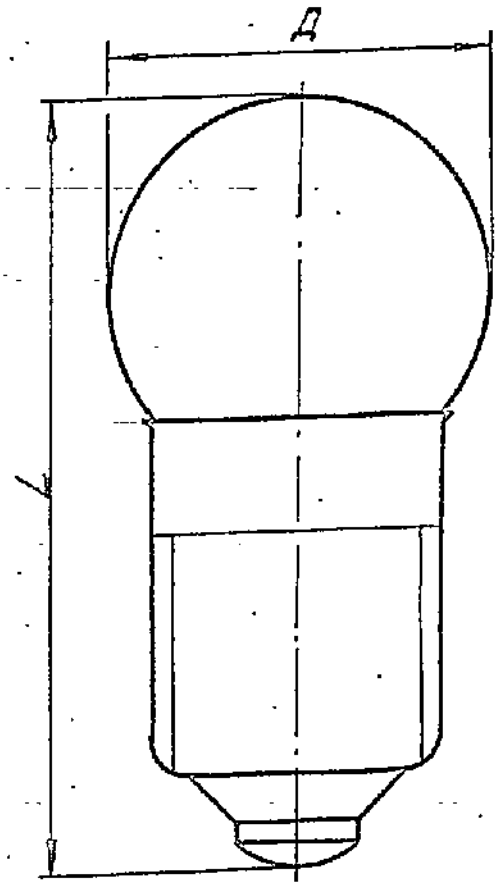
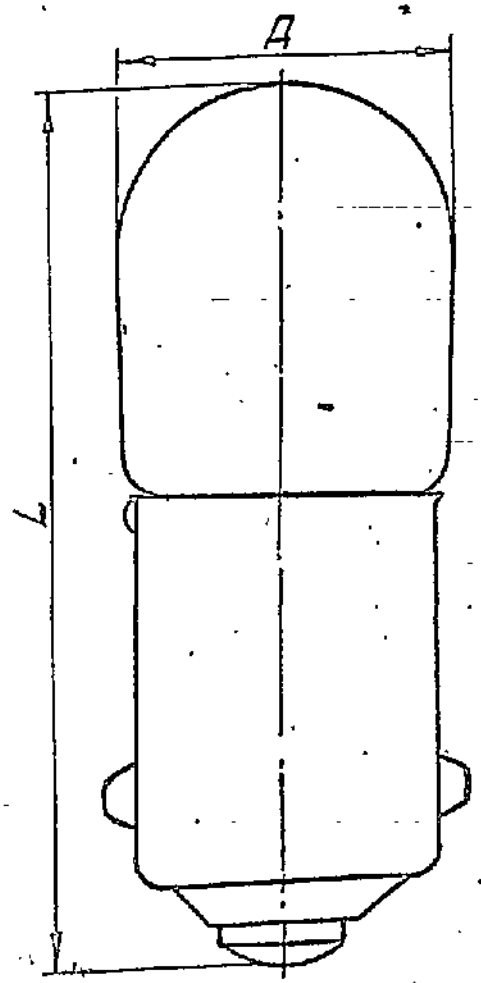


(1) Черт. 1
Dwg. 1
overall dimensions of lamp
MH 26-0 12-B-1



Dwg. 2
overall dimensions of
lamp MH 26-0 12-B

1 group of codes - rated operating voltage in volts;
2 group of codes - rated strength of current in amperes;

letter B - indicates the lamp belongs to vibro-impact resistance type

3 group of codes - modified type of lamp.

1.2 Electrical and light parameters of lamps should be in compliance with the values specified in table 2.

Table-2

Type of lamp	Ratings		Limiting values.		
	Voltage V	Luminous flux, lm	Current, A	Limiting Current, V, maximum	Luminous, flux minimum lm
MH 26-0,12-B	26	11	0,12	0,15	9
MH 26-0,12-B-1	26	10	0,12	0,15	8

1.3 An example of conventional designation of miniature incadescent lamps of type MH 26-0,12-B when writing in design documats.

"Lamps MH 26-0,12-B TY 16-535.174-68

2. TECHNICAL REQUIREMENTS

2.1 Lamps should comply with the requirements presents technical specification and be manufactured as per drawings of manufacturer who trac s them and which are approved in the established order.

2.2 Basic materials and semi-finished products should comply with the standards, technical specifications or standards and have the stamp, certificates or protocols of TID of plant- supplier and undergo incoming control at the manufacturing plant.

2.3 Lamps are intended for working in the following conditions
a) ambient temperature upto minus 50°C;
b) ambient temperatureupto 65°C;
c) emblic changes in temperature from minus 50°to 65°C;
d)

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d) increased humidity of air 98% at 35°C;
e) hoar frost and dew;
f) vibrations in the frequency range from 10 to 80 Hz at acceleration 4 g;
g) impact effects at accelration 15 g.

In this case there should be no breakage in air-tightness of lamps and corrosion on the caps hindering the operation of lamps.

2.4 Lamps should have mechanical strength and with stand;
a) vibration with frequency 25 Hz at accelration 2 g;
b) impact effects at accelration 15 g

2.5 Average duration of glowing of the lamp at rated voltage should be at least 280 hrs.

2.6 Minimum duration of glowing of each lamp at rated voltage should be at least 120 hrs.

2.7 Probability of no-failure operation is P2-0.9 during minimum guaranted period of glowing of 120 hrs at mark β=0.1 Indicated reliability is made more accurate by the test results of seres samples during the first two years of series production.

2.8 Defects of aassembly, damaging of the external appearance or lowering the service property of lamp should not be present the lamp.

2.9 The glass bulb of the lamp should be free from cracks, cords and foreign inclusions.

2.10. Leads of the lamp should be reliably soldered (using acid free flux) or welded to the cap contacts in such a way that they do not hinder the mounting or screwing of lamp in the corresponding gauge as per GOST 17100-71.

2.11 Fastening of cap to the bulb should be reliable and separating the cap from the bulb is not allowed when applying
2.11 torque to the cap and gradually increaing it to 0.01 kgf.m

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2.12 Design elements of the lamp should not be in resonance when vibrating in the frequency range from 10 to 25 Hz at amplitudes ranging from 0.5 to 0.8 mm.

2.13 Caps of the lamp should be made from materials that are resistant to corossion and have anticorossive coating.

2.14 Design of the lamps should ensure their working stability for 10 years ~~of storage.~~ at an average glowing Period of 200 hrs and 11 years of Storage.

2.15 Lamps should be resistant to storage for 11 years including:
a) storing for 1 year in barns and sheds with variations in temperature of air from minus 50 to 50°C and relative humidity 98% (at normal tempemature);

b) Storing for 10 years in chief heated premises with variations in air temperature from 5 to 39°C and relative humidity 85% (during normal temperature) Lamps should be stored in the package of the manufacturing plant .

3. ACCEPTANCE RULES

3.1 The following types of tests should be specified when checking t e compliance of lamp with the requirements of the present technical specification:
a) acceptance tests;
b) periodical tests;
c) check tests;
d) random tests.

3.2 Acceptance tests

3.2.1 Lamps submitted to the customer representative for acceptance tests are preliminarily (after maintaing for 5 days) Checked by TID of the manufacturing plant. 100% of the lamps from each batch are checked by TID as per the approved technical documents in compliance with the requirements of items 2.8; 2.9; 2.10 and at random as per items 1.1; 1.2; 5% from the batch but at least 50 pcs.

Lamps of same type submitted simultaneously for acceptance tests should be accepted for the batch.
The lamps should be annealed in normal climatic conditions for 20 minutes at rated voltage before checking the lamp by TID as per item 1.2.

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Lamps which are fit are submitted for acceptance to the customer representative as per the notification of specified sample with the certificate enclosed to the batch of lamps.

3.2.2 Customer representative carries out acceptance of the submitted lamps after 5 days from the moment of their submission in scope andsequence specified in table 3.

Table 3

	Description of tests	Items of technical specification Requirements	Procedure
1.	Checking of external appearance	2.8	4.2
2.	Checking of overall and connecting dimensions	1.1	4.2 4.2
3.	Checking the quality of glass of lamp bulb.	2.9	4.3
4.	Checking the quality of fastening of caps	2.11	4.4
5.	Measuring of light and electrical parameters	1.2	4.5
6.	Checking for vibration strength at fixed frequency. ~~5% of the lamps but at least 50 pcs selected at 5% of the~~	2.4 "a"	4.7

5% of the lamps but at least 50 pcs selected at random from each batch and submitted for delivery are subjected for acceptance tests.

3.2.3 Acceptance test results are considered satisfactory if during tests 100% of lamps meets the requirements of items 1.1; 2.9; 2.4 "a"; 2.11; 12 and at least 96% of lamps meet the requirements of item 2.8.

In case of unsatisfactory acceptance test results the lamps are returned to the TID of the manufacturing plant for c cent percent sorting out with the removal of defective lamps.

Returned batches are again submitted as per the notification signed by the director and head of TID of manu acturing plant. The notification should have the inscription " Repeated " on top with red mark below:

~~3.3 PERIODICAL TESTS~~

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3.3 PERIODICAL TESTS

3.3.1 Periodical tests are conducted once in 3 months and also when changing the lamp design and materials used.

3.3.2 Periodical tests are conducted in scope and sequence specified in table 4.

Table 4

Description of tests	Items of technical specification	
	Requirements	Procedure
1. Checking the weight of lamp	1.1	4.6
2. Measuring of light and electrical parameters	1.2	4.5
3. Testing on detection of resonance	2.12	4.8
4. Vibration resistance test in the freqency range	2.3"e"	4.9
5. Impact stability test	2.3"ж"	4.10
6. Testing for cyclic changes in temperature	2.3" в"	4.11
7. Moisture resistance test	2.3"р"	4.12
8. Cold resistance test	2.3"a"	4.13
9. Resistance test to the effects of hoar frost and dew	2.3"д"	4.15
10. Heat resistance test	2.3 "б"	4.14
11. Impact strength test	2.4" б "	4.16
12. Testing for duration ofglowing	2,5;2,6	4.17
13. Testing determining the quantitative index of reliability	2,7	4,18
14. storage test	2.15	4,19

Note: 1) Testing the lamp for resistance to mechanical and climatic effects, for impact strength, for duration of glowing are carried out using separate batches of samples, respectively.

2) Lamp is tested as per item 2.15 only once during periodical tests.

Contd..10/

3.3.3 For conducting the periodical tests, 60 pcs of lamps, are selected at random from the batches which are manufacturerd during three months and passed acceptance tests among which:

- 10 pcs of lamps are tested as per items 1.1(weight); 1.2; 2,12; 2,3"C"; 2,3"H"; 2,3 "B"; 2,3 "Г "; 2,3"a"; 2.3 "б"; 2.3 "A ".
- 10 pcs of lamps are tested as per items 1.2; 1.1 (weight); 2.4 "ʃ ";
- 20 pcs of lamps are tested as per items 1.2; 1.1(weight); 2.5;2.6;
- 20 pcs of lamps in case of repeated tests as per item 2.4 "ʃ " (for impact strength)

3.3.4 Results of periodical tests are considered satisfactory if all the lamps have passed these are tests in compliance with the requirements of present technical requirements.

3.3.5 During impact strength tests of the lamp if more than one of the submitted lamps fails to meet the requirements, then repeated tests are conducted on double the number of lamps.

Results of repeated tests are considered satsifactory if among the tested lamps not more than 1 lamp fails to meet the requirements of items 2.4, 2.5, 2.6 then the results of periodical tests are considered unsatisfactory. * while testing the duration of glowing of lamp, if even one lamp fails to meet the requirements of items 2.5 & 2.6 Repeatedtests are not conducted as per items 2.5; 2.6.

3.3.7 In case of unsatisfactory results of periodical tests further acceptance and dispatching of lamps is stopped until bringing the quality of lamp in compliance with the r requirements of technical specification and obtaining positive test results.

3.3.8 While estimating the test results those lamps which have gone out of order accidentally are not considered (switching on at improper voltages, breaking of bulb and others).

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3.4 CHECK TESTS

3.4.1 Check tests are conducted when getting familiar with series manufacture of articles with production interval of more than 1 year when changing the design or technology which influence changing of parameters.

3.4.2 Number of samples which are selected for check tests are specified by the customer representative together with the manufacturing plant.

3.4.3 Check tests are conducted as per the programme compiled by the manufacturing plant on agreement with the designer and approved by the chief engineer of the manufacturing plant and customer representative.

3.4.4. Tests are conducted as per those items of technical specification whose non-conformity may effect changes in design, technology and materials used .

3.4.5 Lamps which have passed the check tests are tested as per the programme of acceptance tests.

3.4.6 Methods of testing and criteria for estimation of serviceability when conducting the check tests are same as when conducting periodical tests.

3.5 RANDOM TESTS

3.5.1 Random tests are conducted by the scientific research institute of customer in case there is dudden increase of complaints for the given article.

4. TEST METHODS

4.1 All tests, if not specifically mentioned should be conducted in the following climatic conditions:

a) ambient temperature - 25 ± 10°C;

b) Relative humidity - 65 ± 15%

c) atmospheric pressure- 750 ± 30 mm. Hg

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When testing for effects of mechanical loads and climatic factors the following errors for maintaing mode are allowed:

a) for vibration frequecny in ~~i/n~~ the ~~Sell~~ frequency range from 10 to 50 Hz - ± 2 Hz .

b) for vibration frequency in the frequency range from 50 to 80 Hz - ± 5%

c) for vibration amplitude - ± 15%

d) as for accelration value - ± 20%

e) as per the ambient temperature value - ± 3°C (decreased and increased)

f) as per the relative humidity value - from minus 3 to plus 2%.

4.2 The lamp is visually checked for external appearance (item 2.8)

Overall and connecting dimensions (item 1.1) are checked with universal measuring tools or templates havin accuracy of 0.1 mm and by comparing with outline drawing.

4.3 Quality of glass bulb of lamp (item 2.9) is visually checked or by using lens of 5 powr magnification.

4.4 Fastening strength of caps to the bulb (item 2.11) is checked with device ensuring gradual increase in torque upto the value specified in item 2.11

In this case the lamps whose glass bulb has broken when testing are not considered for checking. These lamps should replaced.

4.5 Strength of current and luminous flux (item 1.2) should be measured at D.C or A.C in this case rated voltage should be maintained at the lamp contacts .
Error when measuring the strength of current should not exceed 2%. Luminous flux should be measured as per the method ensuring measuring accuracy not below 5%.

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4.6 Weight of the lamp (item 1.1) should be checked by weighing on scales with accuracy upto 0.01 gms.

4.7 The lamps is tested for vibration strength at fixed frequency (item 2.4 "a") on vibration stand.

After visual inspection the lamp should be rigidly fixed to the stand platform and connected to the rated voltage.

Testing is carried out in the plane coinciding with the axis of the lamp at frequency 25 Hz during an accelration of 2g. Duration of testing is 30 min. after testing the lamp is visually checked and is againswitched on for glowing at rated voltage.

Lamps are considered to have passed the test if:

a) no mechanical damage of lamp is detected by visual inspection:

b) for 3 minutes, during repeated switchingon for glowing the lamps maintain thier working- workability.

4.8 Lamp is tested on vibration stand for detection of resonance of structural elements (item 2.12)

After visual inspection the lamps are rigidly fixed to the platform of the stand and connected to rated voltage. Testing is carried out in the plane coinciding with the axis of the lamp as per the norms specified in table 5 when gradually chaninging the vibration frequency in each sub range.

Table 5

Subrange	Frequency, Hz	Amplitude, mm	Testing time, min
1	10-20	0,5-0,8	2
2	20-25	0,5-0,8	2

Visually check for the absence of resonance of structural elements of lamp when testing.

After testing, the lamps should be visually checked and switched on for glowing at rated voltage.

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a) Lamps are considered to have passed the test, if: in the frequency range specified in the table, resonance of lamp filament, leads and holders of lamp filament is absent or amplitude of these parts of the lamp does not exceed 2 times the amplitude of oscillations and its fastening points.

b). No mechanical damgge of lamp is detected by of visual inspect inspection.

c) for three minutes on switching on for glow they maintain their workability.

4.9 Lamp is tested on vibration stand for vibration resistance in the frequency range (item 2.3 "e").
After visual inspection the lamp is rigidly fixed to the stand platform and connected to rated voltage.
Testing is carried out in the plane coinciding with the axis of the lamp, when changing the vibration frequency in each of the sub-ranges specified in table 6.

Table 6

Subrange	Frequney Hz	Accelration, g	Amplitude mm	Testing time, min
1.	10-20	Do not check	2,0	2
2.	20-30	"	1.2	2
3.	30-40	"	0,6	2
4.	40-50	"	0,4	2
5.	50-60	4	In accordance with acceleration	2
6.	60-80	4	"	2

Vibration frequency is gradually changed in single direction Only from lower to higher frequency or vice versa

After testing, the lamps are visually checked and repeatedly switched on the at rated voltage for glowing.

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Lamps are considered to have passed the test, if:

a) mechanical defects of lamp are not detected on visual inspection ;

b) for 3 min on repeated switching on for glowing they maintain their workability.

4.10 Lamp is tested for impact stability (item 2.3."μ") on impact stand.

After visual inspection the lamps are rigidly fixed to the stand platform.

Testing is conducted in the plane coinciding with the axis of the lamp as per the norms:

duration of impact impulse - 5 to 10 m sec value of accelration - 15 g

impact frequency - 80 impacts / min

number of impacts - 20

Rated voltage is supplied tothe lamps when testing. Value of accelration indicated in norms is set with respect to the fastening places of lamp.

After testing, the lamp is visually checked and repeatedly switched on for glowing at rated voltage.

Lamps are considered to have passed the test, if:

a) no mechanical damages of lamp are detected on visual checking;

b) for 3 minutes on repeated switching on for glowing the lamps maintain their workability

4.11 Lamp is tested for resistance to cyclic changes in temperature (item 2.3 "B") in cool andheat chambers

After external inspection, the deenergized lamps are subjected to effect of three temperature cycles following one after another.

Each temperature cycle is carried out in the sequence and as per the mode specifed in table 7.

Table 7

Order of testing	Testing place	Characteristic of mode of testing	
		Temperature °C	Time hrs
1.	Cool chamber	Minus 50	1
2.	Heat chamber	65	1

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Temperature specified in the table is set in coil and heat chambers before loading them with lamps and the holdir time is considered from the moment of attaintivent of the given temperature in chambers after loading lamps.
Transist time of lamp from cool chamber to heat chamber and vice versa should be minimum, not more than 5 minutes.

After completing the last cycle, the lamps are removed from heat chamber aand maintained in normal climatic conditions for a 1 hr after which they are visually checked and switched on for glowing at rated voltage.
Lamps are considered to have passed the test, if:
a) no mechanical damages are detected by visual inspection;
b) for 3 min on switching on for glowing they maintain their workability

4.12 Moisture resistance test (item 2.3 " ") is carried out in humid chamber.
After visual inspection, the lamps in switched off, condition are placed in the chamber in which the temperature is set to 35°C.
After holding the lamp for 1.5 hrs at given in tempe ature the humidity in the chamber is set to 92 to 98%.

Set mode is maintained for 10 days.
Everday the lamps are switched on for glowing at rated voltage for 1 hr.

Insignificant falling of dew in the form of condensation and single water drops are allowed on the lamps when they are kept in the chamber.
After testing, the lamps are removed from the chamber and maintained in normal climatic conditions for 6 hrs after which they are checked visually and switched on at rated voltage for glowing.

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Lamps are considered to have passed the test, if:

a) the lamps are free from corrosion when they are kept in the chamber ~~aadaboo~~ and also after maintaining in normal climatic conditions;

b) for 3 minutes when switching on for glowing they maintain workability.

4.13 Cold resistance test (item 2.3 " a") is conducted in cool chamber.

After visual inspection the lamps are placed in a chamber whose temperature is lowered from room temperature to minus 50°C. After setting the given temperature condition the lamps are maintained in the chamber in disconnected condition for 2 hrs and when switched on at rated voltage for checking their glowing.

After testing, the chamber temperature is increased to normal and in this condition the lamps are maintained for 3 hrs, after which they areremoved from the chamber and checked visually and agains switched on for glowing at rated voltage

Lamps are considered to have passed test, if:

a) no mechanical damages of lamps are detected on visual inspection;

b) for 3 min, on repeated switchin on for glowing they maintain workability.

4.14 Heat resistance test (item 2.3 " ∫ ") is carried out in heat chamber.

After visual inspection the lamps are placed in the chamber and switched on at rated voltage. Temperature in the chamber is increased from normal upto 50°C. Holding time is 2 hrs.

After the holding time is over, the lamps are switched off and temperature in the chamber is increased to 65°C. Holding time is 2 hrs. Then normal climatic conditions are set in the chamber in which the lamps are again maintained for 2 hrs.

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After testing, the lamps are removed from the chamber and checked visually and switched on at rated voltage for glowing.

Lamps are considered to have passed the test, if:

a) no mechanical damages of lamps are detected on visual checking;

b) on switching on for glowing the lamps maintain workabili for 3 min.

4.15 Testing the lamps for resistance to effects of hoar frost and dew (item 2.3 "A") is combined with cold resistance test (item 4.12)

4.16 Impact strength test of lamps (item 2.4 "δ") is carried out on impact stand.

After visual inspection the lamps are figidly fixed stand platform and connected to rated voltage.

Testing is carried out in the plane coinciding with the adis of the lamps as per the norms:

a) duration of impact pulse- 5 to 10 μ.sec;

b) impact frequency - 80 impacts / min

c) accelration of impacts - 5,10,15g;

d) number of impacts - 40,20,7 thousand (respectively)

Value of accelration specified in the norms is set with respect to the fastening places of lamps

After testing, the lamps are visually checked and repeatedly switched on for glowing at rated voltage.

Lamps are considered to have passed the test, if:

a) no mechanical damage of lamps isdetected by visual checking

b) nn repeated switching on for glowing the lamps maintain their workability for 3 min

4.17 Testing the lamps for duration of glowing items 2.5; 2.6 is carried out at rated voltages of D.C of A.C in normal climatic conditions. Short duration fluctuation of voltage of lamp contacts when testing should not exceed $\pm$ 1% of rated.

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Testing the lamp for duration of glowing is conducted in vertical postion of the lamp with cap down wardds When testing the lamps should be switched off twice a day fo for atleast 15 min during each switching off. This time should not be included in the total number of glowing hrs of lamp. Test is considered to be completed after 125% from the time specified in item 2.5, i.e after 250 hrs.

4.18 Testing on determining quantitiative index reliability of lamp item 2.7 is carried out as per the procedure in compliance with the standards HO-005.05 Even one of the following causes of rejection is the criteria for failure of lamps:

a) breaking of lamp filament due to mechanical effects or while testing for duration of glowing upto 120 hrs;

b) separation of caps from bulb;

c) breaking of glass bulb, breakage of air-tightness of lamps.

d) corrosion of caps hindering the operation;

e) non-conformity of light and electrical parameters with ra values of tables 2 and basic constructional dimensions with values of table 1.

4.19 Storage test of the lamp (item 2.15) is carried out by cyclic effects of increased humidity and decreased temperature on lamps.

Before storage test the lamps are preliminarily tested as per the acceptance tests programme.

Storage test as per (item 2.15 "a") is carried out in humid and cool chambers. Lamps in manufacturer's packages are subjected to the effects of three cycles composition and sequence of testing in single cycle is as follows:

a) effect of increased humidity 95 to 98% at temperature 30 $\pm 2^{\circ}$C for 30 days (humid chamber);

b) effect of decreased temperature minus 40 $\pm$ 2°C for 8 to 10 hrs (cool chamber).

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After testing the lamps are checked for compliance with the requirements of items 1.1; 2.11; 1.2;
Lamps are considered to have passed the test, if:

a) when checking for compliance with the requirements of items 1.1.; 2.11; 1.2 all the lamps meet these requirements;

b) While switching on for glowing they maintain their workability for 3 min.

5. MARKING, PACKING AND TRANSPORTING

5.1 The following designations should be clearly marked on the caps of each lamp of the accepted batch;
- trade mark of the manufacturing plant;
- rated voltage in volts;
- rated strength of current in ampleres;
- index B;
- customer representative stamp.

Note: Additional index B is marked on lamps which are acc accepted by TID and are fit.

5.2 Lamps should be packed in boxes of corrugated cardboard of grade A as per GOST 7376-55 with grids of flat cardboard as per GOST 7420-69 protecting the lamps from mutual contact. 100 or 200 pcs the of lamps may be packed in each box- Each box is placed in polyethylene bag and sealed. Polyethylene bags are sealed at ambient temperature 25 ± 10°C , relative humidity 65 ± 15% and atmospheric pressure 720 to 780 mm. Hg.

5.3 Certificate containing the following data should be enclosed in each box with lamps:
-designation of type of lamps;
-number of lamps in the box;
-number of present technical specification;
-basic parameters;
-month and year of manufacturing;
-stamp of TID of manufacturing plat and customer representative.

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5.4 Label made by printing and containing the data specified in item 5.3 should be pasted to the box.

5.5 Boxes with packed lamps are wrapped in bitumen packing paper of ~~grade lamps are wrapped a~~ grade ~~of~~ Б as per GOST 515-56 or water proof packing paper of grade A as per GOST 8828-61 and tightly packed in boxes as per GOST 5884-68 of Corrugated cardboard of grades А or Т as per GOST 7376-65 which are preliminarily lines with bitumen packing paper. Boxes should be glued with paper tape of wrapping paper as per GOST 8273-57.

Note: Lamps may be sent by parcels in plywopd boxes of types 1 as per GOST 5959-71.

5.6 Boxes with lamps packed in them are checked by TID of the manufacturing plant and at random by customer representative before closing.

Lamps are re-packed in case of violation of requirements for packing.

5.7 Packing list should be enclosed in each box with the following indications:
-trade mark of the manufacturing plant;
-designation of type of lamp;
-number of boxes and total number of lamps in the box;
-month and year of packing;
-number of present technical specification.

Packing list is signed by those persons who have packed, TID representative and customer representative.

5.8 Boxes with packed lamps are sealed and stamped by TID representative of the manufacturing plant and customer representative and delivered to customer representative and delivered to the manufacturing plant for storage before their dispatching.

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5.9 The following inscriptions are marked on the boxes or other container with stenciled indelible paint: "Fragile-glass!", "Handle with care", "Top", "keep dry" and also the number and weight of the box and address of consigner and consignee should be specified.

5.10 Packing should ensure their transportation by any means of transport to any distance. While transporting, the boxes with packed lamps should be protected from atmospheric effects and mechanical damages.

5.11 Compliance of packing with the requirements of given section is checked by throwing the packed boxes with lamps having bottom downwards, cover and two lateral walls from height 80 cm on hard surface (cemented floor)

Packing is considered to have passed the test if after thr throwing it does not break and the lamps are not damaged.

6. GUARANTEE

6.1 Guaranteed service and storage period of lamps is set for 11 years while the average duration of glowing is 200 hrs and minimum duration of glowing is 120 hrs. Manufacturing plant gurantees

The compliance of manufactured lamps with the requirements of present technical specifications and free of charge replacement of all those which have gone out of order during the specified period of lamps.

. . . . . .