

Our Ref: CL/PP/ BID-05 (06-07)

Date: 25 Aug 2006

Subject: SUPPLY OF TEST EQUIPMENTS FOR BAYONET LAMP HOLDERS,

Dear Sirs,

Technical & Commercial Bids are invited for the supply of **TEST EQUIPMENTS FOR BAYONET LAMP HOLDERS**, in separate SEALED covers, which should reach the undersigned latest by 1700 h, on **14 Sep 2006**, at the following address.

Director & Head (Planning & Purchase)
BUREAU OF INDIAN STANDARDS
Central Laboratory
Plot No.20/9, Site-IV,
Sahibabad Industrial Area, Sahibabad,
Distt. Ghaziabad-201010 (U.P.)

2. The detailed specification(s) of the above mentioned equipment(s)/item(s) are given in **Annex-I**

3. Terms and conditions of supply are given in **Annex-II**

4. The technical Bids shall be opened in the **Conference Hall**, of the Central Lab, at the address mentioned above at **1500 h on 15 Sep 2006** and in the presence of such tenderers or their duly authorized representatives, who may like to attend.

5. Please note that the envelopes containing Technical & Commercial Bids are sealed properly i.e. either wax sealed or with adhesive cello tape on both ends. Unsealed and stapled envelopes shall not be accepted.

6. The specification and terms & conditions can also be downloaded from BIS Website – www.bis.org.in

Thanking you,

Encls: as above

Yours faithfully,

----sd----

**Scientist-‘F’ & Head
(Planning & Purchase)**

TERMS & CONDITIONS

1. The BUREAU gives FIRST PREFERENCE in its purchase to goods bearing ISI CERTIFICATION MARK and second preference to those which conform to the relevant Indian Standard Specifications.
2. The delivery of the stores is required to be made within 30 days of receipt of order. If, it is not possible for you to effect delivery within the period, you are required to specify the date by which you can guarantee delivery of the stores.
3. The Technical & Commercial Bids should be sealed and sent separately in sealed envelopes. Such Bids shall remain valid for a period of 90 days from the date of opening.
4. Quotations/Bids, qualified by indefinite expressions as “Subject to immediate acceptance, Subject to prior sale” etc. and incomplete quotations are liable to be summarily rejected.
5. The Bids should clearly give break-up of cost of each equipment. The rates quoted should separately indicate Basic Cost, Excise Duty, Sales Tax, P&F charges, Freight, Insurance, VAT etc. Rates quoted should specifically state Sales Tax, Excise Duty or any other taxes/charges. In absence of any such stipulation, it will be presumed that the prices include all such charges and no claim for the same shall be entertained.
6. Each tender document shall be accompanied with **EMD of 3% of cost of the equipment**. The demand draft for the EMD amount shall be drawn in favour of BUREAU OF INDIAN STANDARDS payable at Sahibabad/Ghaziabad. The sealed envelope containing EMD should be superscribed “**EMD**” and stapled separately with the envelope containing the commercial Bids.
7. BIS shall pay 90% of the cost after satisfactory installation & commissioning and the Balance of **10%** as **contract performance security** would be paid after expiry of warranty period. However other terms of payment for contract performance security can also be considered, if so stated clearly.
8. The warranty period of the equipments may be stated clearly in the Technical Bids. In case the same is not found stated, it will be presumed that warranty period as mentioned in their respective specifications of the tender document (if specified), is applicable
9. Please mention clearly in the Technical Bids regarding address of **arrangements for service/repair** of the equipments are available. Suppliers having such arrangements near Delhi/Ghaziabad would be preferred.
10. All goods received would be subjected to inspection, by BIS before or after receipt or commissioning (as applicable) and the decision of BIS shall be binding. Rejected items/goods/stores shall be removed by the supplier at his own cost and risk, within 30 days of receipt of notice for the removal of such goods, and no liability, whatsoever, on the Bureau shall be attached for the rejected/disapproved goods/items/stores.
11. The Bureau reserves the right to accept or reject summarily and or all tenders in whole or part without assigning any reason whatsoever.
12. The Bureau takes no responsibility for delay, loss or non-receipt of tenders after dispatch.
13. In case of non compliance with the Terms & Conditions of the contract, the Bureau reserves its right to:
 - a) Cancel/rescind/revoke the order if supply is not made in time and is not Conforming to the required specification.
 - b) Impose Penalty up to 1% of the total value of the order for a delay of every seven days after the schedule date subject to the ceiling of a maximum of 10% of the total value of the order.
14. All questions, disputes or difference arriving under, out of or in connection with this tender enquiry shall be subject to the exclusive jurisdiction of Delhi/ Ghaziabad Courts.

SPECIFICATIONS
ACCEPTANCE GAUGE FOR B22d CAPS INTENDED FOR AUTOMATIC
WIRE THREADING

Name of Equipment : Acceptance Gauge for B22d Caps intended for automatic wire threading.

Purpose : To check the suitability for automatic wire threading of B22d caps as shown in Data Sheet 7004-10.

Reference : Data Sheet No. 7006-3 on Page 55 of IS 1258:2005.

Features of the apparatus:-

- i) Gauges shall be designed as per drawing and dimensions given in Data Sheet No. 7006-3 on Page 55 of IS 1258:2005.
- ii) For a simple rounding off of the edges marked "Edges slightly chamfered", Data Sheet 7006-1 may be taken for reference.
- iii) Gauges shall have robust construction with anti-rust and anti-corrosion property.
- iv) Gauges shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- v) The supplier of the Gauges shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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GAUGES FOR CHECKING CONTACT POSITION AND CONTACT FORCE IN BAYONET LAMPHOLDERS

Name of Equipment : Gauges for checking contact position and contact force in Bayonet Lampholders

Purpose : To check the contact position and contact force in Lampholders

Reference : Cl. 13.1, Data Sheet No. 7006-15A on Pages 65 to 67 of IS 1258:2005.

Features of the apparatus:-

- i) Gauges shall be strictly as per Cl. 13.1, Data Sheet No. 7006-15A on Pages 65 to 67 of IS 1258:2005.
- ii) Gauges for checking contact position and contact force in B22d Bayonet Lampholders shall be as per drawing and dimensions given in Data Sheet No. 7006-15A on page 65 to 67 of IS 1258:2005.
- iii) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- iv) Gauges shall have robust construction with anti-rust and anti-corrosion property.
- v) Gauges shall meet the requirements of Cl. 13.1 of IS 1258:2005.
- vi) Gauges shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- vii) The supplier of the Gauges shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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GAUGES FOR METRIC ISO THREAD FOR NIPPLES

Name of Equipment : Gauges for Metric ISO Thread for Nipples

Purpose : To check the screw threads of threaded entries of lampholders

Reference : Cl. 9.2, Fig. 14, Pages 35, 36 & 37 of IS 1258:2005.

Features of the apparatus:-

- i) Gauges shall be strictly as per Cl. 9.2, Fig. 14, Pages 35, 36 & 37 of IS 1258:2005.
- ii) “Go” and “Not Go” Gauges for the screws shall be as per drawing and dimensions given in Fig. 14 on page 36 of IS 1258:2005.
- iii) “Go” and “Not Go” Gauges for the nut shall be as per drawing and dimensions given in Fig. 14 on page 37 of IS 1258:2005.
- iv) Basic Profile and Design Profile for the Nut and for the Screw of Nipple Thread for Lampholders are given in Fig. 13 on page 35 of IS 1258:2005 for reference.
- v) Gauges shall have robust construction with anti-rust and anti-corrosion property.
- vi) Gauges shall meet the requirements of Cl. 9.2 of IS 1258:2005.
- vii) Gauges shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- viii) The supplier of the Gauges shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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“NOT GO” GAUGES FOR CAPS B22 OF FINISHED LAMPS

Name of Equipment : “NOT GO” Gauges for Caps of finished Lamps B22

Purpose : To check the dimensions ‘A minimum’ of caps B22 on finished lamps

Reference : Data Sheet No. 7006-10 on Page 56 of IS 1258:2005.

Features of the apparatus:-

- i) Gauges shall be designed as per drawing and dimensions given in Data Sheet No. 7006-10 on Page 56 of IS 1258:2005.
- ii) For a simple rounding off of the edges marked “Edges slightly chamfered”, Data Sheet 7006-1 may be taken for reference.
- iii) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- iv) Gauges shall have robust construction with anti-rust and anti-corrosion property.
- v) Gauges shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- vi) The supplier of the Gauges shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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NEEDLE – FLAME TEST APPARATUS

Name of Equipment :	Needle-Flame Test Apparatus
Purpose :	To carry out Needle-Flame Test on Lampholders.
Type of Equipment :	Needle burner with Clamping Stand.
Reference of IS :	Cl. 20.4 of IS 1258:2005 & IS:11000 (Part 2/Sec 2)-1984
Features :	<ul style="list-style-type: none">i) The Needle-Flame Test Apparatus shall consist of Needle burner, Clamping Stand and Test Chamber as per IS:11000 (Part 2/Sec 2)-1984.ii) The Needle burner shall be as per Fig. 1, page 7 of IS:11000 (Part 2/Sec 2)-1984.iii) The burner to produce the test flame consists of a tube, which is at least 35 mm long and has a bore of 0.5 ± 0.1 mm and an outer dia not exceeding 0.9 mm. A hypodermic needle, the tapered end of which is cut off, shall be provided for the test.iv) Suitable means (clamping device) to fix the test specimen of Bayonet Lampholders and the burner in position shall be supplied with the equipment.v) The means to fix the specimen shall be such that it does not influence the effect of the test flame or the propagation of flames in a way other than that occurring under normal conditions of use.vi) The design of the burner shall be such that there must be no air admitted to the burner tube.vii) The burner tube shall be flexible enough to bent the burner to apply in the most unfavorable way.

PLUG GAUGES FOR LAMPHOLDERS (B22)

Name of Equipment : Plug Gauges for Lampholders B22.

Purpose : To check the dimensions and the diametrical position of the slots of Lampholders

Reference : Data Sheet No. 7006-12 Page 59 of IS 1258:2005.

Features of the apparatus:-

- i) Gauges shall be designed as per drawing and dimensions given in Data Sheet No. 7006-12 on Page 59 of IS 1258:2005.
- ii) Gauges shall be used for checking dimensions A minimum, A maximum, B minimum, D1 minimum, N maximum and the diametrical position of the slots of lampholders B22.
- iii) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- iv) Gauges shall have robust construction with anti-rust and anti-corrosion property.
- v) Gauges shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- vi) The supplier of the Gauges shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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SOLID STEEL TEST CAPS

Name of Equipment : Solid Steel Test Caps

Purpose : To carry out the test for general resistance to heat of Bayonet Lampholders.

Reference : Cl. 19.2, Data Sheet 7004-10 (B22d/22) on pages 44 to 45 of IS 1258:2005.

Features of the apparatus:-

- i) The Solid Steel Test Caps shall be made as per drawing and dimensions given in Data Sheet 7004-10 (B22d/22) on pages 44 to 45 of IS 1258:2005.
- ii) The Test Caps shall have robust construction with anti-rust and anti-corrosion property.
- iii) The Test Caps shall meet the requirements of Cl. 19.2 of IS 1258:2005.
- iv) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- v) The Test Caps shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- vi) The supplier of the test apparatus shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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TEST CAPS B22d - I

Name of Equipment	:	Test Caps B22d - I
Purpose	:	To carry out insulation resistance and High Voltage test on Bayonet Lampholders.
Reference	:	Cl. 15.3, Fig. 11 (B22d) on page 32 of IS 1258:2005.
Quantity	:	2 No.

Features of the apparatus:-

- i) The Test Caps shall be made as per drawing and dimensions given in Fig. 11 on page 32 of IS 1258:2005.
- ii) The Test Caps are intended only to operate contact plungers during insulation and High Voltage tests and not to prove lamp fit.
- iii) The Test Caps shall have robust construction with anti-rust and anti-corrosion property.
- iv) The Test Caps shall be suitable to carry out insulation resistance and High Voltage test on B22d Lampholders as per Cl. 15.3 of IS 1258:2005.
- v) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- vi) The Test Caps shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- vii) The supplier of the test apparatus shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

TEST SYSTEM TO TEST THE DEVICE FOR STRAIN-RELIEF AND TWISTING IN BAYONET LAMPHOLDERS

Name of Equipment	:	Test system to test the Device for strain-relief and twisting in Bayonet Lampholders.		
Purpose	:	To test the Device for strain-relief and twisting in Lampholders		
Reference	:	Cl. 13.8 & Table 4 of IS 1258:2005.		
Range	a) Pull	:	0 to 200 N	L.C. = 1 N
	b) Torque	:	0 to 1.00 Nm	L.C. = 0.01 Nm

Features of the apparatus:-

- i) The test system shall be strictly as per Cl. 13.8 of IS 1258:2005.
- ii) The system shall have provision to fix the Lampholder connected with flexible cord at one end and motorized pulling provision to the flexible cord with suitable grips at another end for different sizes of cords as per Table 4.
- iii) The grips shall be suitable for different sizes of flexible cords as specified in Table 4.
- iv) The motorized system shall apply the pulling force gradually without jerks.
- v) The pulling system shall have provision to automatically stop pulling at specified pulling force and release the force completely and repeat the same for adjustable number of cycles up to 500 cycles.
- vi) The system shall also have provision to apply a torque as specified in Table 4 to the flexible cord at the point as close as is practical to the cord entry in the most unfavorable direction.
- vii) The system shall have provision to automatically stop applying the torque at maximum specified torque and release the torque completely.
- viii) The system shall digitally display the pulling force, torque and number of cycles of pulling/release.
- ix) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.

MECHANICAL STRENGTH TEST APPARATUS (LOADING DEVICE)

Name of Equipment : Mechanical Strength Test Apparatus with loading devices

Purpose : To carry out Mechanical Strength test on Lampholders

Reference to IS : Cl. 16.1, Fig. 1 of IS 1258:2005

Features of the apparatus:-

- i) The Mechanical Strength Test Apparatus shall have the provision to mount the lampholder with the open end pointed vertically downwards at a height of at least 450 mm.
- ii) The apparatus shall be suitable to suspend a mass of 5 Kg from the bayonet slots by means of a loading device in such a way that the lampholder plungers will not make contact with the loading device.
- iii) The loading devices shall be designed for B22d lampholders as per drawing and dimensions given in Fig. 1 on page 22 of IS 1258:2005.
- iv) A mass of 5 Kg shall also be provided with suitable provision to suspend through loading device.
- v) The apparatus shall comply with all requirements as per Cl. 16.1 of IS 1258:2005.
- vi) The apparatus shall have robust construction with anti-rust and anti-corrosion property.
- vii) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- viii) The Dead Weights shall be supplied with calibration certificate for dimensions from NABL approved calibration agency.
- ix) The supplier of the test apparatus shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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“GO” GAUGES FOR CAPS OF FINISHED LAMPS B22

Name of Equipment	:	“GO” Gauges for Caps of finished Lamps B22
Purpose	:	To check the dimensions and the diametrical position of the pins of caps B22 on finished Lamps
Reference	:	Data Sheet No. 7006-11 on Pages 57 & 58 of IS 1258:2005.

Features of the apparatus:-

- i) Gauges shall be designed as per drawing and dimensions given in Data Sheet No. 7006-11 on Pages 57 & 58 of IS 1258:2005.
- ii) For a simple rounding off of the edges marked “Edges slightly chamfered”, Data Sheet 7006-1 may be taken for reference.
- iii) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- iv) Gauges shall have robust construction with anti-rust and anti-corrosion property.
- v) Gauges shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- vi) The supplier of the Gauges shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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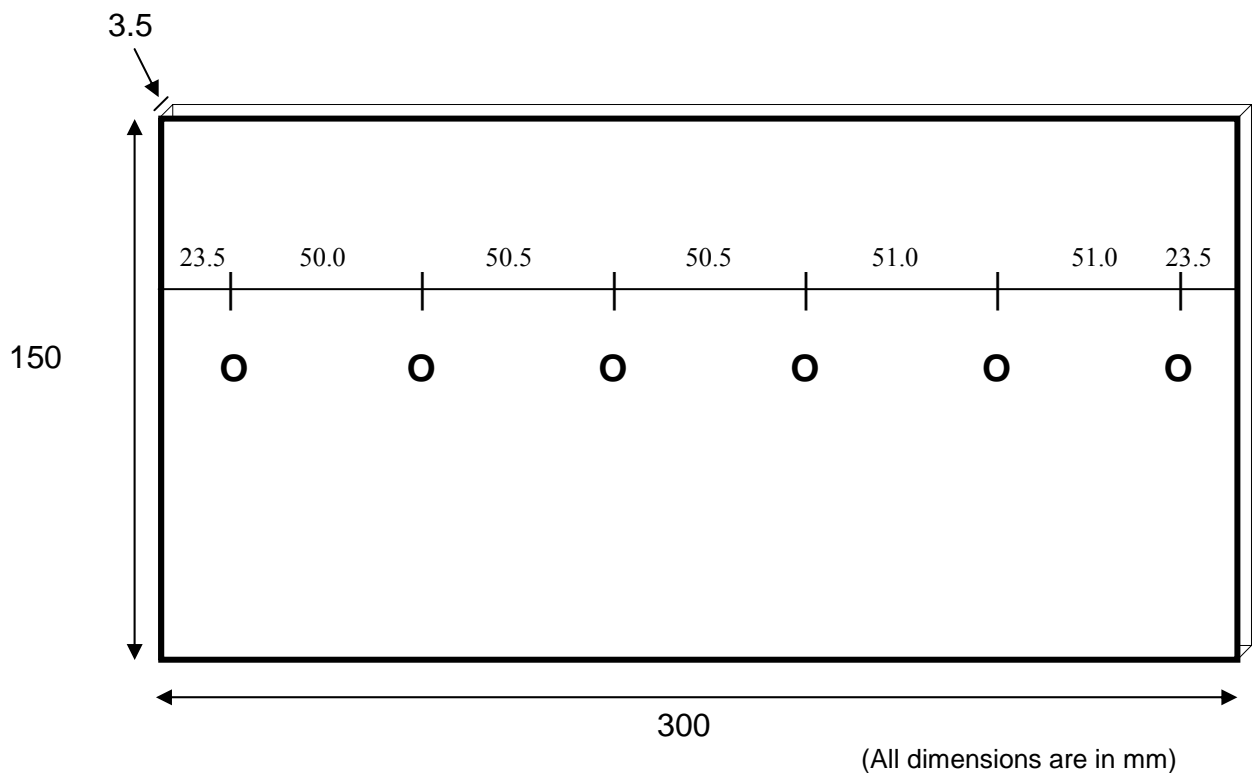
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RIGID FLAT STEEL SHEET FOR LAMPHOLDERS

Name of Equipment : Rigid Flat Steel Sheet for Lampholders
Purpose : To fix the Lampholders for testing of mounting screws.
Reference to IS : Cl. 16.8 of IS 1258:2005
Dimensions : 300 mm x 150 mm x 3.5 mm

Features of the apparatus:-

- i) Rigid Flat Steel Sheet shall have drilled and tapped holes to fix the Lampholder by means of M4 screws at the distance equal to 50.0 mm 50.5 mm and 51.0 mm as per Figure enclosed.
- ii) The Sheet shall have robust construction with anti-rust and anti-corrosion property.



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SEASON CRACKING / CORROSION TEST CABINET

Name of Equipment :	Season Cracking / Corrosion Test Cabinet
Purpose :	To carry out Season Cracking / Corrosion Test on Lampholders.
Reference of IS :	Cl. 21.1 of IS 1258:2005
Type of Equipment :	Electrically Operated Heating Cabinet.
Control of Temp :	With PID control.
Temp. range :	0 - 100 °C, L.C. = 1 °C
Inner Dimension :	Length = 600 mm. Breadth = 600 mm Depth = 600 mm.
Test Vessels :	Closeable glass vessels (desiccator vessels or simple glass troughs with ground rim and lid.
Volume of vessels :	At least 10 litres
Test Temp. (Normally used) :	30 °C
Accuracy :	± 1°C
Features :	<ul style="list-style-type: none">i) Digital display of temperature.ii) The cabinet shall be suitable to put the test vessels inside it without any obstruction.iii) The cabinet shall have natural replacement of air.iv) Front door of the heating cabinet shall have transparent glass window.v) The test vessels shall be suitable to cover its bottom by an ammonium chloride solution of pH value 10.

TEST CAPS B22d

Name of Equipment : Test Caps B22d - II

Purpose : To carry out the test for general resistance to heat of Bayonet Lampholders.

Reference : Cl. 19.3, Fig. 6 (B22d) on page 27 of IS 1258:2005.

Quantity : 2 No.

Features of the apparatus:-

- i) The Test Caps shall be made as per drawing and dimensions given in Fig. 6 on page 27 of IS 1258:2005.
- ii) The Test Caps shall be suitable to carry out test for resistance to heat on B22d Lampholders as per Cl. 19.3 of IS 1258:2005.
- iii) The Test Caps shall have robust construction with anti-rust and anti-corrosion property.
- iv) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- v) The Test Caps shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- vi) The supplier of the test apparatus shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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TORQUE TEST APPARATUS (For Bayonet Lampholders)

Name of Equipment	:	Torque Test Apparatus for Bayonet Lampholders.
Purpose	:	To carry out torque test on different parts of Lampholders
Reference	:	Cl. 16.2 & 16.3 of IS 1258:2005
Range	:	0 to 5.00 Nm L.C. = 0.01 Nm

Features of the apparatus:-

- i) The torque test apparatus shall be as per Cl. 16.2 & 16.3 of IS 1258:2005.
- ii) The apparatus shall have suitable adjustable grips to grip the different parts (size up to 100 mm) of lampholders, such as dome, union ring, screw shade ring, skirt, backplate, conduit for threaded entry lampholders, cord grip of cord grip lampholders etc.
- iii) The grips shall not damage the test specimens of lampholders.
- iv) The apparatus shall have provision of pre-set to apply specified torque in clockwise and anti clockwise direction at different parts of lampholders.
- v) The apparatus shall preferably have motorized provision to automatically stop applying the torque at set / specified torque and release the torque completely.
- vi) The apparatus shall digitally display the torque.
- vii) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- viii) The apparatus shall have robust construction with anti-rust and anti-corrosion property.
- ix) The apparatus shall comply with the requirements of Cl. 16.2 & 16.3 of IS 1258:2005.

BENDING APPARATUS

Name of Equipment	:	Bending Apparatus
Purpose	:	To check the strength of the connection between dome and threaded entry of Lampholders.
Reference	:	Cl. 16.4, Fig. 2 of IS 1258:2005

Features of the apparatus:-

- i) The Bending Apparatus shall be as per Cl. 16.4, Fig. 2 on page 23 of IS 1258:2005.
- ii) The equipment shall be designed as per drawing and dimensions given in Fig. 2 on page 23 of IS 1258:2005.
- iii) The equipment shall be suitable to check the strength of the connection between dome and threaded entry of lampholder.
- iv) Provision shall be provided to fix the specimen to the threaded entry in horizontal position.
- v) A device having the maximum dimensions acceptable for caps, and with other dimensions according to Fig. 2, shall be provided to insert into the lampholder and to fix as shown in the drawing.
- vi) Loads of 1 Kg and 2 Kg with attachment as per drawing (Fig. 2) shall be supplied with the equipment.
- vii) A scale of 100 mm as per Fig. 2 shall be provided to measure the sag of mandrel.
- viii) For details of Lampholders B22d, Data Sheet No. 7005-10 on pages 48 to 50 of IS 1258:2005 may be taken for reference.
- ix) The apparatus shall have robust construction with anti-rust and anti-corrosion property.

GAUGES FOR HOLES FOR BACKPLATE LAMPHOLDERS SCREWS

Name of Equipment : Gauges for Holes for Backplate Lampholders
Purpose : To check the holes on base of Backplate Lampholders
Reference : Cl. 13.11, Fig. 3, Page 24 of IS 1258:2005.
Quantity : 2 Nos.

Features of the apparatus:-

- i) Gauges shall be strictly as per Cl. 13.11, Fig. 3, Page 24 of IS 1258:2005.
- ii) Gauges shall be made as per drawing and dimensions given in Fig. 3 on page 24 of IS 1258:2005.
- iii) Gauges shall have robust construction with anti-rust and anti-corrosion property.
- iv) Gauges shall meet the requirements of Cl. 13.11 of IS 1258:2005.
- v) Gauges shall be supplied with calibration/ verification certificate for dimensions preferably from NABL approved calibration agency.
- vi) The supplier of the Gauges shall give warranty of at least 3 years of satisfactory performance from the date of purchase.

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