



**PLANT STANDARD
HYDERABAD**

HY7780575

Rev. No. 00

PAGE 1 OF 3

LOW ANKLE SAFETY SHOES WITH LACE (PU SOLE – STEEL TOE)

1.0 SCOPE

This standard covers the requirement of Low Ankle Safety Shoes – Polyurethane (PU) sole with Steel Toe & Lace to protect the feet and ankle in heavy engineering industry.

2.0 COMPLIANCE WITH STANDARDS

- a) Upper of the shoe shall conform to IS: 5677 – 1986 Reaffirmed 1997.
- b) Bottom shall be good quality of PU to IS: 15298 – 2004.
- c) Inner toe tongue side lining 1.5 mm – IS: 3840 – 1996 Reaffirmed 2002.
- d) Insole –IS-3840 – 1996 Reaffirmed 2002.
- e) Carbon steel toe cap IS: 5852 – 2004.
- f) Corporate Standard PPE'S Specification Manual 2012.
 - Authenticated photo copies of the latest test certificates from OEMs, National Accredited Test Laboratories to be submitted along with the offer.
 - Vendor/bidder to furnish authorization letter from Principle/OEM against the enquiry quoted.
 - Vendor/bidder to submit along with the offer, authenticated copy of latest certificate of product conformity to relevant IS/EN/ANSI standards.
 - For each PPE specification, the vendor/bidder shall confirm their acceptance to the BHEL specification by signing and stamping on it.

3.0 TECHNICAL REQUIREMENTS

- a) The boot upper and bottom sole shall be joined together by direct injection process.
- b) Upper leather shall be good quality chrome tanned plain grain Cow / Buffalo leather 1.5mm +/-0.1 mm thickness Brown / Black in colour.

Revisions:

Issued :

**STANDARDS ENGINEERING & IPR
COORDINATION DEPARTMENT**

Rev.No. 00

Amd. No.

Reaffirmed:

Prepared:
Sr.Manager/
Safety Engg.

Approved:

Sr.DGM (TS)

Date of 1st Issue:

AUG. 2014

Dt.

Dt.

Year:

**PLANT STANDARD
HYDERABAD**



- c) The shoe shall be provided with lasting inner sole to the thickness of 3mm+/-0.2 mm (Leather / leather board)
- d) Vegetable Tanned soft Grain Leather, shall be used for insole (Sock lining) toe lining and side, tongue inner lining to the thickness of 1 mm. Natural yellow in colour.
- e) The Eye lets shall be of Brass/Aluminum 3 numbers .inner dia 6mm, outer dia 12mm.
- f) The shore hardness of the bottom sole shall be 55 to 65 A.
- g) The shoes are to be machine-stitched and no Nails shall be used.
- h) Total weight shall not be exceeding 1000 grams for Size 8 pair. The weight can be increased or decreased by 50 gms for higher or lower sizes.
- i) It shall be provided with cotton lace of 6mm width and 630mm length.
- j) The Safety Shoes shall be designed and manufactured as per drawing given in Page # 3.

4.0 SAMPLE

Free sample shall be supplied along with offer for evaluation and approval.

5.0 TEST CERTIFICATE

5.1 Suppliers shall submit the test certificates along with the bulk supply.

- a) Leather quality
- b) Heat resistance
- c) Impact resistance
- d) Penetration resistance
- e) Electrical resistance
- f) Oil and chemical resistance

5.2 Test Certificate shall also indicate Batch No. & date

6.0 PACKING

The shoes shall be packed in good quality card board box with Two Pairs of Cotton Lace and polythene carry bag.

7.0 MARKING

The shoe shall be marked with the following information

- a) Size of the shoe
- b) BHEL logo
- c) ISI/EN/ANSI marks
- d) Suppliers identity
- e) Batch, Month and the year of the manufacturing.

8.0 INSPECTION

Inspection will be carried out at supplier's works with reference to the approved sample and test reports.

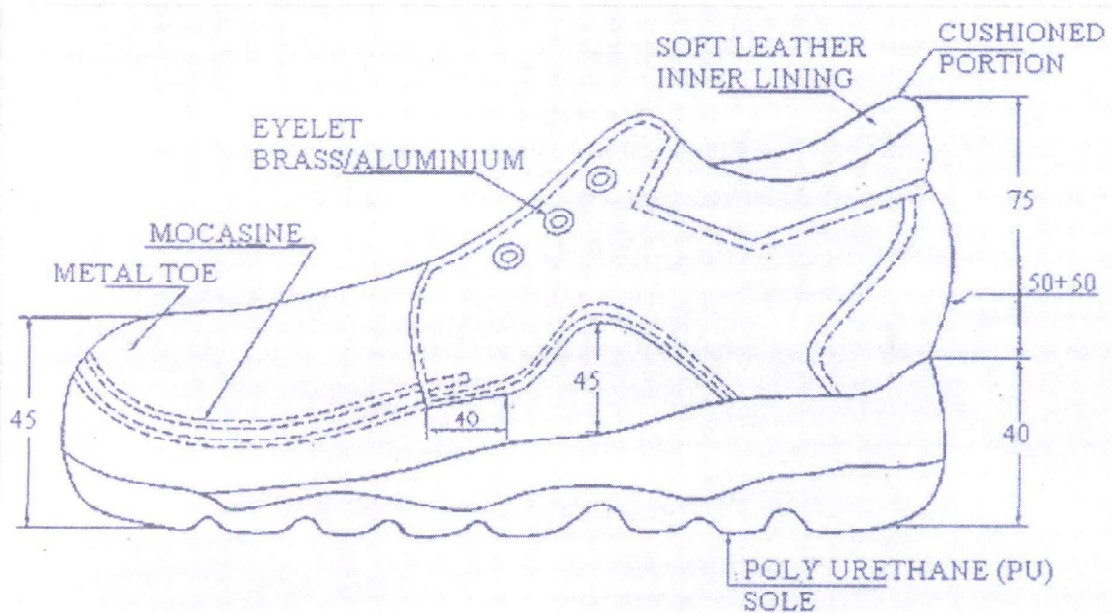
9.0 GUARANTEE CERTIFICATE

Guarantee Certificate to be given for any manufacturing defects along with its consignment from the date of receipt at stores for free replacement with in Twelve months.

10.0 ENQUIRY SPECIFICATION

The Enquiry shall also have the copy of the specification as "Low Ankle Safety Shoes with Lace (PU) sole" as per BHEL standard.

Copyright and Confidential
 The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.
 It must not be used directly or indirectly in any way detrimental to the interest of the company



ALL DIMENSIONS IN MM

FIG. NOT TO SCALE

Fig: Safety Shoes-PU Sole with Lace.



**PLANT STANDARD
HYDERABAD**

HY7780560

Rev. No. 01

PAGE 1 OF 2

LOW ANKLE ELECTRICIAN SHOE WITH LACE (WITHOUT STEEL TOE)

1.0 GENERAL:

This standard covers the requirement of Low Ankle Safety Shoes – Polyurethane (PU) sole with lace and without steel toe for electricians.

2.0 COMPLIANCE WITH STANDARDS:

- 2.1 Upper of the shoe shall conform to IS 5677-1986.
- 2.2 Bottom of the shoe shall be good quality of polyurethane conforming to IS 15298-2002.
- 2.3 Inner toe tongue side lining shall be 1.5 mm and shall conform to IS 3840-1996. Insole of shoe shall also conform to IS 3840-1996.


3.0 TECHNICAL AND QUALITY REQUIREMENTS:

- 3.1 The shoe upper and bottom sole shall be joined together by direct injection process.
- 3.2 Upper leather should be good quality cow or buffalo leather having 1.5 mm thickness and shall be black / brown in colour.
- 3.3 The shoe shall be provided with an inner sole of 3 mm thickness made of leather or leather box and should be long lasting.
- 3.4 Eyelets shall be made of brass or other non-conducting material of inner diameter 6 mm and outer diameter 12 mm.
- 3.5 The shore hardness of the shoe shall be 55 to 65A.
- 3.6 No nails should be used in the manufacture of the shoe.
- 3.7 Total weight of the shoe shall not exceed 950 grams/pair for size 8. The weight can increase or decrease by 50 gms for higher or lower size.
- 3.8 Shoe shall be provided with a cotton lace of 6 mm width and 630 mm length.
- 3.9 The design and manufacture shall be as per IS 15298 Part 2 - 2002 figure 1.
- 3.10 Toe portion of the shoe should be provided with hard packing of fibre/PVC.

Revisions: Cl. 1.0, 3.4, 3.7, 5.1, 6.0, 6.1 and 7.0 modified. Cl. 3.10 added.

**Issued :
STANDARDS ENGINEERING & IPR
COORDINATION DEPARTMENT**

Rev. No. 01	Amd. No.	Reaffirmed:	Prepared: Sr. Manager, Safety Engg.	Approved: Sr.DGM (TS)	Date of 1st Issue: OCT. 2005
Dt. AUG. 2014	Dt.	Year:			

<p>HY7780560</p> <p>Rev. No.01</p> <p>PAGE 2 OF 2</p>	<p>PLANT STANDARD HYDERABAD</p>	
<p>3.10 The shoe sole shall have to withstand 30 KV (rms) for 1 minute. Test certificate from govt. lab to be submitted.</p> <p>4.0 TEST CERTIFICATES:</p> <p>4.1 Supplier shall submit following test certificates along with bulk supply.</p> <p style="margin-left: 40px;">a) Leather quality. b) Abrasion resistance. c) Oil resistance. d) Electrical resistance. e) Penetration resistance.</p> <p>4.2 Test certificate shall indicate</p> <p style="margin-left: 40px;">a) BHEL P.O. number. b) Batch number and date.</p> <p>5.0 PACKING AND MARKING:</p> <p>5.1 The shoes shall be packed in good cardboard boxes to prevent damage during transit and provided with polythene carry bag.</p> <p>5.2 The cardboard box shall also have two pairs of spare laces.</p> <p>5.3 The shoe shall be marked with the following information.</p> <p style="margin-left: 40px;">a. Size of the shoe. b. BHEL logo. c. Supplier's name and reference. d. BHEL order no. e. Batch, month & year of manufacture.</p> <p>6.0 Supplier shall submit free sample for technical evaluation and approval.</p> <p>6.1 Inspection will be carried out at Supplier's works with reference to the approved sample and IS 15298-Part-2-2002 and test reports of government laboratories.</p> <p>7.0 Guarantee certificate: Supplier shall give a guarantee certificate to replace the shoes with manufacturing defects within Twelve months of supply.</p>		

Copyright and Confidential
 The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.
 It must not be used directly or indirectly in any way detrimental to the interest of the company.



**PLANT STANDARD
HYDERABAD**

HY7780569

Rev. No. 01

PAGE 1 OF 2

LADIES' (BELLY TYPE/SLIP-IN) SHOES

1.0 GENERAL:

This standard deals with ladies belly type/slip-in safety shoe with polyurethane sole.

2.0 TECHNICAL & QUALITY REQUIREMENTS:

- 2.1 Shoe upper shall be made of good quality grain leather and black in colour. Ankle height shall be 62 mm and thickness 1.5 mm. The shoe upper should conform to IS 5677-1986. For shoe upper material test certificate from government laboratory should be submitted along with sample and suppliers.
- 2.2 Toe portion of the shoe should be provided with hard packing of fibre/PVC.
- 2.3 The bottom sole of the shoe shall be provided with good quality polyurethane sole, shore hardness 55 to 65 A with anti-skid design. Material test certificate to be submitted for sole from government laboratory.
- 2.4 Shoe shall be of belly type with strap and buckle for fitting.
- 2.5 **Insole material:** Shoe shall be provided with lasting inner sole to the thickness of 3 mm.
- 2.6 **Lining material:** Vegetable tanned soft grain leather should conform to IS 3840-1996. Toe lining and side tongue inner lining should be of thickness 1 mm.
- 2.7 The shoe upper and bottom sole shall be joined together by direct injection process.
- 2.8 The shoe upper and sole after joining should withstand adhesion test (27 kg at toe and 35 kg at heel).
- 2.9 The shoe upper shall be provided with folded type cushion arrangement.
- 2.10 No nails should be used in the manufacture of shoe.
- 2.11 The dimensions of the shoe shall be as per IS 1638-1969.
- 2.12 Each part of ladies shoe shall be embossed with trade mark, month, year of manufacture, batch no. and size (English).

Revisions: Title, cl. 2.2, 2.14, 2.15 and 4.1 modified.

**Issued :
STANDARDS ENGINEERING & IPR
COORDINATION DEPARTMENT**

Rev. No. 01	Amd. No.	Reaffirmed:	Prepared: Sr. Manager, Safety Engg.	Approved: Sr. DGM (TS)	Date of 1 st Issue:
Dt. AUG. 2014	Dt.	Year:			DEC. 2005

HY7780569

Rev. No. 01

PAGE 2 OF 2

**PLANT STANDARD
HYDERABAD**



- 2.13 Shoe shall be marked with BHEL emblem.
- 2.14 Inspection shall be carried out at supplier's works by BHEL's representative with reference to the approved sample and relevant Indian Standard (IS).
- 2.15 Free sample shall be submitted for technical evaluation and approval.
- 3.0** Supplier shall submit the following information at the time of supply.
- a) BHEL order no.
 - b) Plant standard no. HY7780569
 - c) Batch no.
 - d) Identification mark/no.
 - e) Supplier's name & reference no.

4.0 PACKING AND MARKING:

- 4.1 Each pair of shoes shall be packed in good polythene cover and cardboard box indicating English size of shoe with a polythene carry bag.

5.0 WARRANTY:

Free replacement shall be given by supplier if any manufacturing defect is found within Twelve months of supply.



FOOT PROTECTION

COTTON SOCKS

CORPORATE STANDARD PPE
SPECIFICATION MANUAL

Rev. No.: 01

Rev. dt.: 30/05/2012

SCOPE

This standard covers the requirement of Cotton socks suitable for industrial usage along with Safety Shoes.

COMPLIANCE WITH STANDARDS

It shall comply with IS:3329- 1973.

- Authenticated photo copies of the latest test certificates (from OEMs, National Accredited Test Laboratories) to be submitted along with the offer.
- Vendor/bidder to furnish authorization letter from Principal/OEM against the enquiry quoted.
- Vendor/bidder to submit along with the offer, authenticated copy of latest certificate of product conformity to relevant IS/EN/ANSI standards.
- For each PPE specification, the Vendor/Bidder shall confirm their acceptance to the BHEL specifications by Signing and Stamping on it.

TECHNICAL REQUIREMENT

- 1) It shall be made out of 2/40 cotton threads.
- 2) It shall have the construction as per the drawing.
- 3) The measurements shall be as follows for Size 29:
 - a) Foot length 290 mm
 - b) Leg length 290 mm
 - c) Width of foot (M-N) 95 mm
 - d) Width of Leg (K-L) 95 mm
 - e) Height of the top 50 mm
 - f) Width of top (Q-R) 60 mm
- 4) It shall be of ribbed type, having ribs not less than 24 in Nos.
- 5) The top portion shall be securely linked as per the IS.
- 6) The linking yarn shall conform to the S. No. 2.
- 7) The linking portion shall be free from the lumps and knots.

REVISIONS:

Approved by:

CORPORATE PPE STANDARDISATION COMMITTEE

PPE Rev. No.:

Amnd. No.:

Reaffirmed:

Prepared by:

Issued by:

Issue date:

Date:

Date:

Year:

Corporate HSE

Corporate Office

25.08.2006



FOOT PROTECTION

COTTON SOCKS

CORPORATE STANDARD PPE
SPECIFICATION MANUAL

Rev. No.: 01

Rev. dt.: 30/05/2012

- 8) It shall be spliced at the heel and toe.
- 9) It shall have Elastic band of double elastic type, having the minimum of 70 Nos. of elastic band.
- 10) The colour shall be dark blue.

SAMPLE

Sample shall be supplied along with offer for approval. (Test certificate of sample to be submitted for approval).

TEST CERTIFICATE

- 1) The supplier shall submit the test certificate along with the bulk supply for
 - a) Quality of the socks
 - b) Quality of the elastic
- 2) The test certificate shall also Batch No. & Date

PACKING

The socks shall be supplied packed individually for protection from dust & damage.

MARKING

The socks shall be marked with the following information

- a) Supplier identity
- b) Month & year of manufacturing

INSPECTION

Inspection will be carried out at our works with reference to the acceptable sample and test reports. BHEL will inspect at works wherever required.

GUARANTEE CERTIFICATE

Guarantee Certificate to be given for any manufacturing defects along with its consignment for free replacement within six months from the date of receipt at stores.

ENQUIRY SPECIFICATION

REVISIONS:			Approved by: CORPORATE PPE STANDARDISATION COMMITTEE		
PPE Rev. No.:	Amnd. No.:	Reaffirmed:	Prepared by: Corporate HSE	Issued by: Corporate Office	Issue date: 25.08.2006
Date:	Date:	Year:			



FOOT PROTECTION

COTTON SOCKS

CORPORATE STANDARD PPE
SPECIFICATION MANUAL

Rev. No.: 01

Rev. dt.: 30/05/2012

The PI and Enquiry shall have the latest copy of the specification as "COTTON SOCKS" as per BHEL Corporate standard _____.

REVISIONS:

Approved by:

CORPORATE PPE STANDARDISATION COMMITTEE

PPE Rev. No.:

Amnd. No.:

Reaffirmed:

Prepared by:

Issued by:

Issue date:

Date:

Date:

Year:

Corporate HSE

Corporate Office

25.08.2006



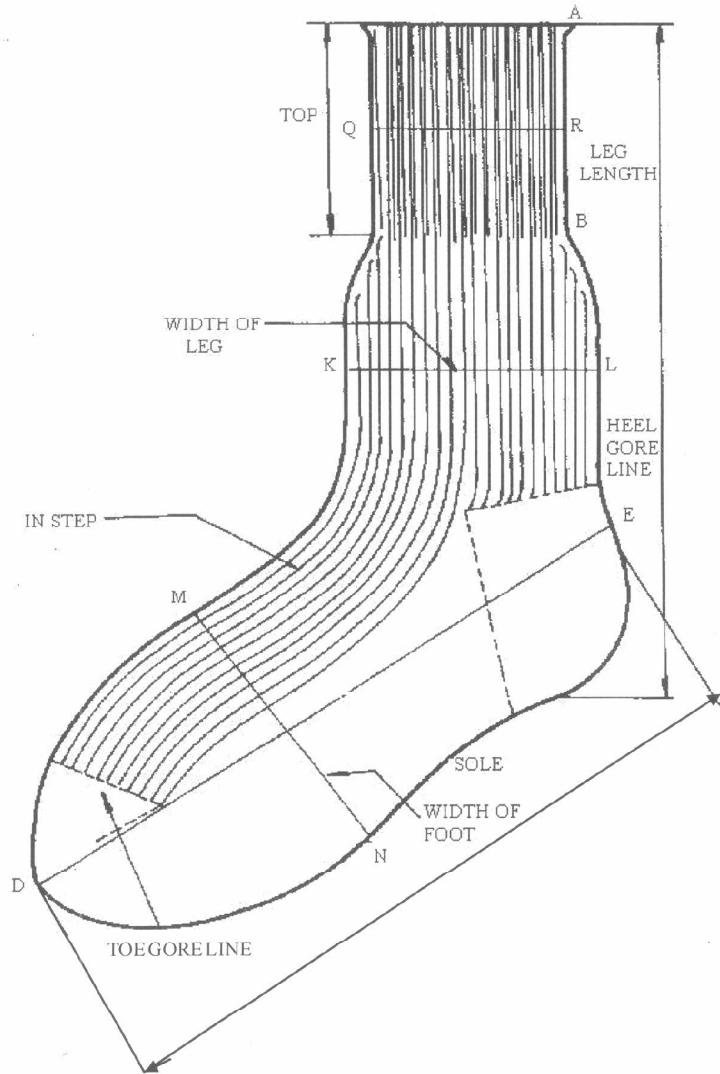
FOOT PROTECTION

COTTON SOCKS

CORPORATE STANDARD PPE SPECIFICATION MANUAL

Rev. No.: 01

Rev. dt.: 30/05/2012



ALL DIMENSIONS IN MM
FIG. NOT TO SCALE

REVISIONS:			Approved by: CORPORATE PPE STANDARDISATION COMMITTEE		
PPE Rev. No.:	Amnd. No.:	Reaffirmed:	Prepared by:	Issued by:	Issue date:
Date:	Date:	Year:	Corporate HSE	Corporate Office	25.08.2006