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GOVERNMENT OF INDIA MINISTRY OF DEFENCE

SPECIFICATION

ON

SNOW SHOES TRUGER, MK-2 (DS Cat No. 8465-000214)

Departmental Specification No. IND/GS/1706(b)

ISSUED BY

Address of AHSP

THE CONTROLLER,
CONTROLLERATE OF QUALITY ASSURANCE
(GENERAL STORES),
POST BOX NO. 127,
KANPUR – 208 001

RECORD OF AMENDMENTS

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Amendment No.	Date	Details of Amendments	Amendment Carried out by (Name & Date)
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0.0 FOREWORD

- 0.1 This Deptt. Specification No. IND/GS/1706(b) has been prepared by the Controllerate of Quality Assurance (General Stores), P.B. No.127, Kanpur-208004 on behalf of Director General Quality Assurance, Ministry of Defence, New Delhi.
- 0.2 This Specification Supersedes Drawing No.

0.3 This Specification shall be used for tender enquiry, procurement, manufacture & Quality assurance of the store for which it is intended.

QA Authority for this store covered by this specification is the CQA (GS) Post Box No. 127 Kanpur-4 Enquiries regarding this specification related to technical or any other contractual conditions shall be referred to QA Authority name in the purchase document viz. tender or contract.

1.0 SCOPE

1.1 This specification covers the requirements of Snow Shoes Truger Mk-2 (8465-000214) and provides guidance to contractors/suppliers manufactures. Quality Assurance agencies and stockists/indentors etc.

2.0 RELATED SPECIFICATION / REFERENCES

2.1 Reference is made in this Specification to the following documents:-

(a)	IS: 580-1973	Specification for Harness Leather.
	(Second Revision)	
	Reaffirmed 1990	

- (b) IS:1398-1982 Packing Paper Waterproof, Bitumen Laminated. (Second Revision) (Reaffirmed 1994)& CQA (GS) /SS/363/(a)
- (c) IS:1720-1978 Cotton Sewing Threads. (Second Revision)
 Reaffirmed 1991
- (d) IS:1912-1984 Country jute Twine (Second revision)
 Amendment No.1,
 Reaffirmed 1995
- (e) IS:2102-1993 (Part I) General tolerances for Linear & Angular dimensions without individual tolerance indications.
- (f) IS:2500-1992 (Part I) Sampling Inspection procedures: Attributes (Second Revision) Sampling Plans indexed by Acceptable Quality Lavel (AQL) for lot-by-lot inspection.
- (g) IS:3252-1987 (Part I) Shroud laid Cotton line. (Second Revision) Reaffirmed 1993
- (h) IS:6488-1987 (Part I) Cotton webbing for Personal Web Equipments. (Second Revision)
 Reaffirmed 1992
- (j) Specification No. CQA Paint RFU, War Equipment, Brushing, ,Air

(M) /SS/95(a)

Drying, White Arctic.

(k) Specification No. CQA (GS) /US/460

Boxes, fibre Board, Rigid, Corrugated Triple wall 7 Ply.

(l) Specification No. IND /GS/1683(a)

Polypropylene Strapping 0.55 mm thick X 12 mm wide.

(m) JSS: 8030-2-1971 (Reaffirmed -1992) Dubbin Protective.

2.2 Note: Specification of various series mentioned above can be had on payment from the addresses as shown below:-

Specification		Source
I.S. Series		Director General, Bureau of Indian Standards, Manak Bhawan, 9, Bahadur Shah Zafar Marg, NEW DELHI-110 002. Or his Regional Offices at Bombay, Calcutta, Madras and other branch offices. Or its Regional Establishments
IND/GS/series JSS & Supple. Schedule in CQA(GS)/SS Series	The Controller, Controllerate of (GS), PB No.127, KANPUR-208 001.	1. Sr. Quality Assurance Officer S. Q. A. Estt. (GS), Hastings, CALCUTTA - 700 022.
IND/SL series	The Controller, Controllerate of (GS), PB No.127, KANPUR-208 001.	2. Sr. Quality Assurance Officer S. Q. A. Estt. (GS), DGQA Complex, LBS Marg, Vikhroli, BOMBAY - 400 083
IND/TC series	The Controller, Controllerate of Quality Assurance (T&C), PB No. 294, KANPUR-208 001.	3. Sr. Quality Assurance Officer, S. Q. A. Estt. (GS), P.B. No. 307, KANPUR-208 001.
IND/SL series for petroleum products (if required).	The Controller, Controllerate of Quality Assurance (petroleum products), P.B. No. 244, KANPUR-208 001.	4. Sr. Quality Assurance Officer, S. Q. A. Estt. (GS), DGQA Complex, Pazhavanthangal, MADRAS-600 114.
'DMSRDE' series (if required)	The Director, DMSRDE, GT Road, KANPUR-208 013.	5. Sr. Quality Assurance Officer, S. Q. A. Estt. (GS), Anand Parbat, NEW DELHI-110 005.
		6. Sr. Quality Assurance Officer, S. Q. A. Estt. (GS),

Shahjahanpur - 242 001.

3.0 TERMINOLOGY, DEFINITIONS AND SYMBOLS

3.1 For the purpose of this specification definitions and terminology given in relevant Indian Standard should apply.

4.0 STANDARD PATTERN

4.1 Standard pattern of Snow Truger Mk-2 (DS Cat No. 8465-000214) held by the Controllerate of Quality Assurance (General Stores), Post Box No.127, Kanpur shall constitute the standard as regards any particulars or properties, not noted or defined in this specification.

5.0 MATERIAL

5.1 The Items shall be manufactured from the following materials:-

Sl. No. Store/component		Material & Grade if any	Specification	
(a)	Frame	Timber	The Frame shall manufactured from an of the Timbers give Appx. 'A' .The timber be of good quality seas to a moisture content exceeding 15 % reasonably straight grained. The sloe of shall not exceed 1 in shall be free from sape Decay (rot) or other for insect attack, knots, splits, shakes, cand other objection defects.	
(b)	Rings	Mild Steel Galvanised	Beat trade quality to be	
(c)	Spikes	Mild Steel Galvanised	approved by Quality	
(d)	Buckles	Mild Steel Galvanised	Assurance officer.	
(e)	Cross Bars	Mild Steel Galvanised		
(f)	Hinges	Mild Steel Galvanised		
(g)	Leather Sleeve	Leather Harness Cow 2 mm thick.	IS: 580-1973	
(h)	Foot Rest	Web white Thick 114 mm	IS: 6488-1987	
(j)	Heel Strap	Web white Thick 63 mm	IS: 6488-1987	
(k)	Strap	Web white Thick 19 mm	IS: 6488-1987	
(l)	Line Cotton	Line cotton undyed 4mm dia (Rot	IS: 3252-1987	

		proofed with Zinc Naphthenate).	
(m)	Sewing cotton	Sewing Cotton white 270 d tex X 9	IS: 1720-1978
(n)	Paint	Paints RFU, War Equipment, Brushing, Air Drying. White Arctic (Cat No. 8010-000247)	Suppl. Sch. No. CQA (M)/SS/95(a)
(0)	Protective Material	Dubbin Protective (Cat No. 8030-000048)	JSS: 8030-2-1971 Reaffirmed 1992

5.2 Test certificates of materials from recognized laboratories shall be obtained showing physical and chemical properties if the manufacturer does not have his own laboratory.

6.0 PROCESSING

- 6.1 Snow Shoes Truger Mk-2 shall be manufactured to the shape and design as shown in the relevant plate attached to this specification.
- 6.2 The wooden frame shall be made in two pieces, each bent to the shape as shown in the drawing attached to this specification. The bends in the frame shall be free from splits and fractured or crippled places. The holes in the frame shall be cleanly drilled and countersunk on the outer face. All sharp edges shall be slightly rounded off. The hinges shall be securely and neatly fitted to the frame, and shall work freely without undue play. The Cross Bars shall be straight and shall be neatly riveted and snapped over the hinges as shown in the drawing attached to this specification. The spikes shall be correctly positioned and securely riveted to the frame. The stringing shall be done in the manner as shown in the drawing attached to this specification. The leather sleeves shall be neatly and evenly stitched. The rings shall be properly welded. The rings, spikes, buckles, hinges and cross bars shall be properly and smoothly galvanized after manufacture of these components. The purity of the zinc used shall not be less than 98.5 % All parts shall be smoothly finished. Before assembly, the Line Cotton shall be treated by dipping for five minutes in Dubbin Protective.

7.0 DIMENSIONS AND TOLERANCES

- 7.1 Dimensions
- 7.1.1 The store shall conform to the dimension shown in the plate attached to this specification.
- 7.2 <u>Tolerances</u>
- 7.2.1 Unless otherwise specified, general Tolerance to IS: 2102 (Pt-1) 1993 as given below shall apply.

Tolerance	Class		
Designation	Description	Applicable on Components/parts	
C	Coarse	For all linear dimensions.	

WORKMANSHIP AND FINISH

- 8.1 After assembly, the timber and metal components shall be given two coats of Paint RFU, War Equipment, Brushing, Air Drying, White Arctic. The second coat to be applied after the first has thoroughly dried. The painting shall be carried out on properly dried frames.
- 8.2 The general workmanship and finish shall be of a high standard and similar to sealed pattern.

9.0 PRE-INSPECTION OF SUPPLIES BY THE PRODUCER

- 9.1 Advance Sample: If required the manufacturers shall submit 5 Nos. of advance samples of acceptable quality fabricated from specified material for approval by CQA(GS) prior to commencement of bulk production.
- 9.2 Manufacturers/contractors must satisfy themselves first that the store manufactured are in accordance with the contract and fully conform to the specification, by carrying out thorough preinspection of each lot/batch before actually tendering the same for inspection to the Quality Assurance Officer nominated under the terms of the contract.
- 9.3 A declaration by the Contractor that necessary pre-inspection tests have been carried out on the stores tendered and the same are fit for inspection and test, shall be rendered along with the challan. The declaration shall include the method followed in pre-inspection showing features checked/tested.

10.0 QUALITY ASSURANCE

- 10.1 Examination of sample taken from any portion of a consignment or during surveillance inspection. Shall conform to the requirements when tested in accordance with the methods mentioned against each in this specification.
- 10.2 Control samples shall be forwarded to CQA(GS) from bulk supplies to check / monitor the quality whenever required.

11.0 PRODUCT SPECIFICATION

11.1 Sampling Procedure

- 11.1.1 The suppliers shall arrange the units of the homogeneous lot in such a way that all the units are easily accessible to the Quality Assurance Officer to enable him to draw samples from any portion of the homogeneous lot.
- 11.1.2 Sampling of stores shall be done adopting appropriate sampling method as per IS: 4905-1968 so that samples drawn as per Table I and II given for assessing various quality requirements, are truly representative of the lot.

11.2 Scale of Sampling

11.2.1 The number of sample-units to be drawn for assessing the quality of the store, characteristic wise, should be in accordance with the Table I for dimensional/non destructive/visual inspection and

able II for detailed laboratory testing.

- All the sample units as specified in Table I and II are required to be tested / inspected irrespective of the rejection number (= Ac+1) being achieved earlier.
- 11.4 The Quality Assurance Officer shall draw samples as per Table I for dimensional/nondestructive/visual inspection to assess the quality of the lot. If the quality of the lot indicates conformity to the standard as laid down in table I, sampling for laboratory testing will be done. Otherwise the lot shall be straightway rejected.

11.5 Sampling For Laboratory Testing

11.5.1 If the lot is considered conforming to the quality standards as specified in table I sampling for laboratory testing shall be carried out as per table II and the samples shall be subjected to the laboratory tests.

11.6 Bulk Inspection

- 11.6.1 If the laboratory test report indicates that the lot does not conform to the standards as specified in Table II, the whole lot shall be rejected.
- 11.6.2 The lot shall be considered conforming to the specified quality if the number of defective units observed in the sample is not more than the respective acceptance number of each class of defects.
- 11.6.3 When the sample size equals or exceeds lot size, do 100% Quality Assurance.
- 11.6.4 The number of sample units to be sampled for laboratory testing should be a multiple of the number of Characteristics / tests which can not be carried out simultaneously on the same sample units.

11.7 Sampling and Formation of Lot

11.7.1 The delivery shall be visually inspected by the Quality Assurance Officer at the spot in the first instance to ascertain its homogeneity in respect of nature, size, shape, source and year of manufacture. If it is homogeneous, the delivery shall be treated as one lot. If not, it shall be segregated by the supplier into separate groups so that each group which is homogeneous within itself forms a lot.

TABLE I SAMPLING PLAN FOR VISUAL INSPECTION BASED ON LQ 5%

Lot Size	Sample Size (n)	Acceptance Number (Ac)
Up to 25	25	0
26 to 50	28	0
51 to 90	34	0
91 to 150	38	0
151 to 280	42	0
281 to 500	50	0
501 to 1200	80	1



1201 to 3200	125	3
3201 to 10000	200	5
10001 to 35000	315	10

SOURCE: IS:2859/2-1985(E): (Sampling procedure for inspection by attribution part –2 sampling plan indexed by limiting Quality LQ for isolated lot inspection.

TABLE II
SAMPLING PLAN FOR LABORATORY TESTING BASED ON AQL 2.5%

Lot Size	Inspection Level S-2 Sample Size (n)	Acceptance Number (AC)	Inspection Level S-3 Sample Size (n)	Acceptance Number (Ac)
Up to 50	3	0	3	0
51 to 90	3	0	5	. 0
91 t0 150	3	0	5	0
151 to 280	5	0	8	0
281 to 500	5	0	8	0
501 to 1200	5	0	13	1
1201 to 3200	8	0	13	1
3201 to 10000	8	0	20	1
10001 to 35000	8	0	20	1

SOURCE: IS: 2500 (Pt-I) 1992 (2nd Rev.)-Sampling inspection procedure.

Note:-

- i) When the sample size equals or exceeds lot size do 100% .Inspection / non –destructive testing with zero acceptance Number.
- ii) The rejection number (Re) will always be one more than the acceptance number (Ac).
- iii) Inspection level S-2 for Chemical tests and Inspection level S-3 for Physical tests (individual samples to be tested).

12.0 SAMPLING PROCEDURE

- 12.1 Sampling of the stores shall be carried out by adopting as per Sampling plans.
- 12.2 The classification levels of sampling AQL fixed by AHSP to be strictly adhered.
- 12.3 Sample size will depend on the chosen AQL.

13.0 CRITERIA FOR CONFORMITY

- The lot shall be considered to be in conformity with There required standard, if the samples drawn for lab test, static and dynamic inspection and on visual examination is found satisfactory.
- 13.2 The rejected stores shall be marked in such a way that the same cannot be re-offered/mixed with accepted stores.

14.0 TEST METHOD

14.1 Only approved test methods shall be used to ensure high degree of reproductivity and repeatability. Standardized and published test methods by leading technical societies, trade associations and Govt. agencies may be referred.

15.0 MARKING

- 15.1 Marking by the Supplier
- 15.1.1 Each Snow Shoes Truger Mk-2 shall be legibly and indelibly marked with:-
 - (a) Manufacturer's name, initials or recognised Trade Mark.
 - (b) The year of manufacture
 - (c) D.S. Catalogue number of the store
- 15.1.2 The foot rest shall be marked TOE, HEEL and RIGHT or LEFT, as the case may be in black, as shown in the drawing plates attached.
- 15.2 Marking by the Quality Assurance Officer
- 15.2.1 Each accepted Snow Shoe Truger Mk-2 shall be legibly and indelibly marked by the Quality Assurance Officer adjacent to the manufacture's marking using a steel stamp of letter size 6 mm.
- 15.2.2 The final rejection may be marked by the Quality Assurance Officer by stamping the letter 'X' on both sides of the manufacturer's marking thus:-

8465-000214 X M---- & CO. X 2001

16.0 PRESERVATION AND PACKING

16.1 PACKAGING

16.1.1 <u>Material</u>

(a) Boxes fibre Board, rigid, Corrugated Triple wall 7 ply 525 mm X 525mm X 525 mm.

(b) Paper Wrapping, Waterproof, Plain

(c) Twine Jute 3 ply

Conforming to

Specn. No. CQA(GS)/(US)/460

IS: 1398-1982& SS No. CQA (GS)/SS/363(a).

IS: 1912-1984(2nd Revision)

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- (d) Polypropylene Strapping 0.55mm thick X 12 mm wide
- (e) Label Card Board 45 X 25 mm with tie on tag.

Amdt.1 Reaffirmed 1995. Specn. No. IND/GS/1683(a)

0.89 mm thick, Average Bursting Strength 775 kPa based on at least five tests.

16.2 Method

- 16.2.1 Each accepted pair of Snow Shoe Truger Mk-2 shall be securely tied with Twine Jute with spikes facing inside. Ten such pairs shall be suitably arranged and placed in Boxes, Fibre Board Rigid, Corrugated Triple wall 7ply lined with Paper Wrapping Waterproof Plain.
- 16.2.2 One of the pairs in each box shall be identified by a Label Cardboard 45 mm X 25 mm size affixed by means of tie-on-tag on which shall be entered the DS Cat. No. and designation of the store./ Empty spaces if any, shall be filled with any suitable cushioning / stuffing material to prevent movements of the contents during transit.
- 16.2.3 The Boxes fibre Board Rigid, Corrugated Triple wall 7ply shall be strapped with Polypropylene Strapping at least at four places, two on each side so as to make the boxes compact and secured. The straps shall be further sealed with tamperproof seal, such as crimped metal seal or permacel seal.
- 16.3 Marking on package
- 16.3.1 Each final package shall be legibly and indelibly marked as under:-
 - (a) Front and Top
 - i) D.S. Cat. No. and designation of the store.
 - ii) Qty packed, preceded by the abbreviation 'QTY'.
 - (b) Back
 - Name and address of the consignee as given in the contract.

ii) Mass of the package in kilogram preceded by the abbreviation 'Kg'.

iii) Mark of the individual package and total number of packages in the consignment

i.e. 1 of 4, 2 of 4,

3 of 4 and 4 of 4 when the consignment consists of 4 packages.

- (c) Left end
 - i) Consignor's name, initials or recognised Trade Mark.
 - ii) Month and year of packing.
 - iii) A/T, S/O or Ext No and Date.
 - iv) I/Note No. & Date.

17.0 TECHNICAL LITERATURE / DOCUMENTS

For proper exploitation and maintenance of equipment relevant literature/ documents shall be provided free of cost.

18.0 WARRANTY

18.1 The Stores supplied against this specification shall be deemed to bear the warranty of the contractor against defective design material, workmanship and performance for a period as agreed between purchaser & supplier from the date of receipt of store at consignee end and shall be replaced immediately with serviceable store at site free of charges or as decided by purchasing officer on recommendation of consignee/Quality Assurance Authority, if found defective.

19.0 DEFENCE STORES CATALOGUE NUMBER

19.1 The stores covered by this specification shall bear the following DS Cat No.

Sl. No. DS Cat No.

Nomenclature

(i) 8465-0

8465-000214

Snow Shoes Truger Mk-2

20.0 DRAWINGS / SKETCHES

Attached with the Specification

21.0 SUGGESTIONS FOR IMPROVEMENT

21.1 This specification is a live document and subject to Change/updating. Any suggestion for improvement of this document may be sent to:-

The Controller, Controllerate of Quality Assurance (General Stores), P.B. No. 127, Kanpur – 208004

22.0 DETAILS OF ABBREVIATIONS USED

AHSP : Authority Holding Sealed Particulars

Amdt : Amendment

A/T : Acceptance of Tender

CQA : Controllerate of Quality Assurance

DGQA : Director General Quality Assurance

G : Gram

Gd: Grade

GS : General Store

i

IND : Indian

IS : Indian Standard

Kg : Kilogram : Millimeter

P.B. No. : Post Box Number

Pt : Part

Reaff : Reaffirmed

Rev. : Revision
SL : Store Lab

Specn : Specification

SS : Supplementary Schedule

T&C : Textiles & Clothing

U/S : Unsealed Specification







