

ब्रह्म विनिर्दिष्ट
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Specification No. IND/GS/1795

RECORD OF AMENDMENTS

Amendment Srl. No	Date dd/mm/yy	Details of Amendments	Amendment Carried out by & Date
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For
Buckles, Pack Outer
(PTR-M)

FOR CONTROLLER


(11) Controllerate of Quality Assurance

एन डी सी-12, 1995

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2/10/1

CONTENTS

Sr1 No.	Contents	Page No.
0.	Foreword	1,2
1.	Scope	2
2.	Related Specifications / References Drawings and Sketches	2
3.	Standard Pattern	2
4.	Materials	3
5.	Processing	3
6.	Dimensions and Tolerances	3,4
7.	Workmanship and finish	4
8.	Pre-inspection of Supplies by producer	4
9.	Quality Assurance	4
10.	Sampling Procedure	4
11.	Scale of Sampling	5
12.	Criteria for conformity	5,6,7
13.	Marking	7
14.	Packaging	7,8
15.	Technical Literature/Documents	8
16.	Warranty	9
17.	Drawings/Sketches	9
18.	Suggestions for improvement	9


FOR CONTROLLER

भारत सरकार द्वारा नियंत्रित
Controllerate of Quality Assurance (CQA)

एच. डी. रोड-127, बंगलूर
Post Box No. 127, BANGLORE

0.0 FOREWORD

0.1 This specification has been prepared by Controllerate of Quality Assurance (General Stores), Kanpur on behalf of the Director General Quality Assurance, Ministry of Defence, New Delhi.

0.2 This specification supersedes U/S Drg. No. CIGS/US/219.

0.3 This specification shall be used to guide procurement, manufacture & Quality Assurance of the store for which it is intended.

0.4 The Quality Assurance Authority for the store covered by this specification is the Controller, Controllerate of Quality Assurance (General Stores), P.B.No.127, Kanpur-208 001. Enquiries regarding this specification related to technical or any other contractual conditions shall be referred to the Quality Assurance Authority named in the purchase document viz. tender or contract.

0.5 This Specification is a live document and is, therefore, likely to undergo changes. Any major change in design should have the approval of General Staff/Users, financial concurrence in the form of DGQA approval. Thus, it may involve some price difference. Therefore, a specification issued holds good only for the supply order for which it is issued.

0.6 Copies of any other reference documents such as specification/drawing instructions/guides etc. can be obtained 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 its Regional Offices at Mumbai, Calcutta, Chennai and Kanpur.
IND/GS/series JSS & Supple. Schedule in CQA(GS)/SS. Series	Or their Regional Establishments 1. Sr. Quality Assurance officer S. Q. A. Estt.(GS) Hastings, CALCUTTA - 700 022.
IND/SL series	2. Sr. Quality Assurance officer S. Q. A. Estt.(GS) DGQA Complex, LBS Marg Vikhroli, MUMBAI - 400 083.
IND/TC series	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).	4. Sr. Quality Assurance Officer S. Q. A. Estt (GS) DGQA Complex, Pazhavanthangal, CHENNAI - 600 114 (1) Controllerate of Quality Assurance P.B. No. 127, Kanpur

'DMSRDE' series The Director,
(if required) DMSRDE, 6T 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.

1.0 SCOPE

1.1 This specification covers the requirements of Buckles, Pack Outer (PTR-M) DS Cat No. 5340 - 006724 and provides guidance to contractors/suppliers, manufacturers, Quality Assurance Agencies and stockists/indentors etc.

2.0 RELATED SPECIFICATIONS AND DOCUMENTS

Sr1.No.	Specification No.	Title / Subjects
(a)	IS:1570-1961 (Amdt-5) (Reaffirmed-1993)	Schedules for wrought steel for general engineering purposes.
(b)	IS:1068-1993 (3rd Revision)	Electroplated coatings of Nickel plus Chromium and Copper plus Nickel plus Chromium on Iron & steel.
(c)	IS:2771(Pt-I)-1990 2nd Revision, Amdt.1	Fibre Board Boxes, Corrugated Fibre Board Boxes.
(d)	IS:4185-1989 (1st Rev.) & SS No. CIGS/SS/185(b)	Adhesive paper tapes.
(e)	JSS:8115-1 with Amdt No.1 & SS No.CIGS/SS/27(e)	Boxes Rigid Collapsible Covered Type 'D'.
(f)	JSS:9330-2 with Amdt. list-1 & SS No. CIGS/SS/313(a)	Polythene film 0.04 mm thick.
(g)	IND/GS/1683(a)	Polypropylene Strapping (0.55 mm thick x 12 mm width)
(h)	JSS:7530-1 (Aug 86) with SS No.CQA(GS)/SS/427	Label Carton 50 x 25 mm
(i)	Bursting Strength 775 KPa	Label Card Board 45 x 25 mm with tie-on-tag.
(j)	IS:2102:1993(Pt-I) (3rd Revision)	General tolerances, tolerances for linear & angular dimensions w/o individual tolerance indications.
(k)	IS:4905-1968 Amdt-No.1 (Reaffirmed-1991)	Method for Random Sampling.
(l)	IS:2500 Pt-I 1992 (2nd Revision)	Sampling Inspection procedures, attribute sampling plans indexed by acceptance quality level (AQL) for lot by lot inspection.
(m)	IS:3748-1990 (2nd Revision)	Tool & die steels.

FOR CONTROLLER
INSTRUMENTATION
(Controller of Quality Assurance)
IND 921 86-1-12/1992
No. 187, KANPUR

3.0 STANDARD PATTERN

3.1 Standard pattern of Buckles pack Outer (PTR-M) (DS Cat No.5340-006724 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.

4.0 MATERIAL

4.1 The item shall be manufactured from the following materials :

Srl No.	Store/component	Material & Grade if any	Specification
(a)	Complete store	(a) 40Cr1Mo28 or (b) 40Cr1Mo60 or (c) T40Ni2Cr1Mo28	Schedule IV of Table XXI of IS:1570-1961 Schedule VI of Table XLVII of IS:1570-1961

Note:- Sulphur & phosphorus shall not exceed 0.04% each.

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

4.3 Material utilised for the manufacture of the store shall be free from decarburization.

5.0 PROCESSING

5.1 Buckles Pack outer (PTR-M) shall be manufactured to the shape and design as shown in the relevant plate attached to this specification.

5.2 Heat Treatment - All Buckles Pack outer (PTR-M) shall be heat treated to ensure that:-

- (a) A tensile strength of 119.5 Kg/sq mm to 133.5 Kg/sq mm is achieved.
- (b) All buckles Pack outer (PTR-M) have a hardness of 360-410 VHN.
- (c) All Buckles Pack outer (PTR-M) satisfy the proof load requirements.
- (d) Optimum microstructure and other mechanical properties in relation to the requirements at (a) above are achieved.

5.3 Plating - The Buckles Pack outer (PTR-M) shall have a plating conforming to service condition No.3 classification code Fe/Cu15 Ni25 PCrr of Table 1B to IS:1068-1993 (3rd Rev.). The plating shall conform to clause 7.3 (Adhesion Test) and clause 7-4 (Corrosion Resistance Test) to IS:1068-1993.

6.0 DIMENSIONS AND TOLERANCES

6.1 DIMENSIONS

6.1.1 The store shall conform to the dimension shown in the plate attached to this specification.

FOR CONTROLLER

भारत सरकार द्वारा नियंत्रित (व्यापक)
Controllerate of Quality Assurance

पंजीकृत कार्यालय - 127, पोस्ट बॉक्स
नं. 127, कानपुर

6.2 Tolerances

6.2.1 Unless otherwise specified, general tolerances to IS:2102 (Pt-I)-1993 (2nd Revision) as given below shall apply.

Tolerance	class	
Designation :	Description	: Applicable on Components/Parts
C	: Coarse	: complete store except where specified
	:	: in drawing.

7.0 WORKMANSHIP AND FINISH

7.1 General workmanship and finish shall be similar to that of sealed/certified samples held by the AHSP.

7.1.1 Each Buckle Pack outer (PTR-M) should be free from Fins, Pits burrs, and sharp edges.

7.2 The general workmanship and finish shall be of a high standard and similar to sealed pattern.

8.0 PRE-INSPECTION OF SUPPLIES BY THE PRODUCER

8.1 ADVANCE SAMPLE : If required the manufacturers shall submit three (3) advance samples of acceptable quality fabricated from specified material for approval by CQA(GS) Kanpur prior to commencement of bulk production.

8.2 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 pre-inspection of each lot/batch before actually tendering the same for inspection to the Quality Assurance Officer nominated under the terms of the contract.

8.3 A declaration by the Contractor that necessary pre-inspection test 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.

9.0 QUALITY ASSURANCE

9.1 Examination of samples taken from any portion of the consignment or during surveillance inspection, shall conform to the requirement when tested in accordance with the methods mentioned against each in this specification.

9.2 Control samples shall be forwarded to CQA(GS) Kanpur from bulk supplies to check/monitor the quality whenever required.

10.0 SAMPLING PROCEDURE

10.1 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.

10.2 Sampling of stores shall be done adopting appropriate sampling method as per IS:4905-1968(Amdt.1) Reaffirmed 1991 so that samples drawn as per Table I and II given for assessing various quality requirements, are truly representative of the lot.

Control Office of Quality Assurance
 (4)
 22nd Floor, 21, Indira
 No. 127, KANPUR

11.0 SCALE OF SAMPLING

11.1 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 Table II for detailed laboratory testing.

12.0 CRITERIA FOR CONFORMITY

12.1 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.

12.2 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.

12.3 Sampling for Laboratory Testing

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

12.4 Bulk Sentencing

12.4.1 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.

12.4.2 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.

12.4.3 When the sample size equals to the lot size, do 100% Quality Assurance.

12.4.4 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.

12.5 Sampling and Formation of Lot

12.5.1 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.


FOR CONTROLLER

भारत वास्तुसूत्र प्रयोजनालय (सामान्य)
Institute of Quality Assurance

ए.पी. रोड - 12, मुंबई
Phone No. 197, K.A.N.

12.6 Sampling Tables

Table I
Sampling plan for visual inspection
(Based on General Inspection Level II, AQL 4%)

Lot Size		Sample Size (n)		Acceptance Number(Ac)	
Up to	50	8		1	
51 to	90	13		1	
91 to	150	20		2	
151 to	280	32		3	
281 to	500	50		5	
501 to	1200	80		7	
1201 to	3200	125		10	
3201 to	10000	200		14	

Table II
Sampling plan for Laboratory Testing, AQL 4%

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

Note : i) When the sample size equals 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) Level S-2 for Chemical Tests (Individual Sample to be tested).

iv) Level S-3 for Physical Tests (Individual Sample to be tested).

v) Lots more than 1000 Nos. offered for inspection shall be split into sublots of 1000 Nos. or below.

Source : IS:2500 (Pt-I)-1992 (2nd Rev.) : (Sampling Inspection Procedures).

12.7 Test Methods

12.7.1 Physical tests : Design, shape and dimensions.

12.7.2 Chemical Tests : Chemical analysis, thickness/amount of plating/coating. Plating as per Clause 5.3 under title 'Processing'.

12.7.3 Performance test

12.7.3.1 Proof Load Test - 100% of the Buckle Pack outer (PTR-M) shall be load tested after finishing and prior to plating to the proof load of 1140 Kg specified in the drawing. The load shall be applied gradually to the Buckles Pack outer (PTR-M) required to be tested and shall be maintained at the proof load specified for a period of not less than 10 seconds.

The Buckle Pack outer (PTR-M) shall be examined after testing for any sign of permanent set or sign of damage 100% of the Buckles Pack outer (PTR-M) may again be subjected to proof load test after plating and they shall satisfy the proof load test requirements.

12.7.3.2 Crack Detection Test - There shall be no cracks in the heat treated and finished Buckles Pack outer (PTR-M) after proof loading all Buckles Pack outer (PTR-M) required to be proof load tested shall be tested for cracks after finishing & prior to plating the crack detection will be done by the use of suitable magnetic crack detector. The complete magnetic Crack detection equipment shall be subjected to the approval of the Inspector. After crack detection test, the Buckles Pack outer (PTR-M) shall be fully demagnetized by the supplier.

13.0 MARKING

13.1 Marking by the supplier

13.1.1 The store 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

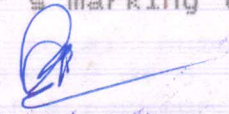
13.2 Marking by the Quality Assurance Officer

13.2.1 Each accepted store shall be legibly and indelibly marked using stencil plate or Rubber / Steel stamp of letter size 6 mm depending upon the size of the store/component.

13.2.2 In case of small components, where steel stamping or stencilling is not possible, the rubber acceptance mark shall be stamped on individual packages containing the items for this purpose, each package shall be sealed by a continuous piece of gummed tape such that ends overlap each other. Acceptance marks shall be affixed on the joint of the tape end partly covering the package.

13.3 The final rejections may be marked by Quality Assurance Officer by stamping the letter 'X' on both sides of the manufacturer's marking thus :

5340-006724
X M - - - & CO X
1998


Controller of Quality Assurance
Reg. No. 185, S.A.M.S.

14. PACKAGING

14.1 Packing Materials

Material	Conforming to
(a) Corrugated Fibre Board Boxes	IS:2771 (PtI)-1990 (2nd Rev.) (Amdt. 1).
(b) Adhesive Paper Tapes	IS:4185-1989 (1st Rev.) & SS No. CIGS/SS/185(b).
(c) Boxes Rigid Collapsible Covered Type 'D'	JSS:8115-1 with Amdt. No.1 & SS No. CIGS/SS/27(e).
(d) Polythene Film 0.04 mm thick (low density bag)	JSS:9330-2 with Amdt. list No.1 SS No. CIGS/SS/313(a).
(e) Polypropylene Strapping (0.55 mm thick x 12 mm width)	IND/GS/1683(a).
(f) Label Carton 50 mm x 25 mm	JSS:7530-1 (Aug 86) with SS No. CQA(GS)/SS/427
(g) Label Card Board 45 x 25 mm with tie-on-tag	Bursting Strength 775 KPa.

4.2 Method of packaging

4.2.1 Each Buckle Pack outer (PTR-M) shall be individually packed in polythene bag 0.04 mm thick sheet of suitable size 20 (twenty) such packs shall be kept in one carton of suitable size i.e boxes rigid collapsible and dully sealed with tape paper brown gummed and stamped with acceptance mark of 12 mm size. 12 (twelve) such boxes or cartons shall be packed in a corrugated fibre board box of suitable size then each box shall be strapped with polypropylene strap widthwise at two places.

4.2.2 Each final package shall be strapped / wired at two places as mentioned below :

- (i) Box Fibre Board, Rigid, Corrugated - Polypropylene Strapping.

Note - The Polypropylene strappings are further sealed with a crimped metal seal or permacel seal.

4.2.3 Mass of any Fibre Board, shall not exceed 40 Kg. In order to maintain the limit of mass the number of items in the package may be altered at the discretion of the QAO.

4.3 Marking on package case:-

4.3.1 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) Quantity packed preceded by the abbreviation 'QTY'.

(b) Back

- i) Name and address of the consignee as given in the contract.
 ii) Mass of the package in Kilogram preceded by the abbreviation 'Kg'.
 iii) Number 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/D or Extract No. and Date.
 iv) I/Note No. and Date.

15.0 TECHNICAL LITERATURE / DOCUMENTS

15.1 Illustrated spare parts list History sheet/maintenance manual shall be supplied with each store wherever required/demanded.

16.0 WARRANTY

16.1 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 of twelve months from the date of receipt of store at consignee end, and if during the specified period, the store supplied are found to be defective, the same shall be replaced immediately with serviceable store by the contractor at site free of any charges as may be decided by the purchasing officer, on recommendation of consignee/Quality Assurance Authority.

17.0 DRAWING / SKETCHES

Srl. No.	Sheet No.	Detail No.	Component/Assembly
1	1	--	Complete store

18.0 SUGGESTIONS FOR IMPROVEMENT

18.1 This specification is a live document and subject to change/updating. Any suggestions for improvement of this document may be sent to the Controller, CQA(GS) Kanpur.

CONTROLLER

CONTROLLERATE OF QUALITY ASSURANCE (GS)

POST BOX NO.127.

KANPUR - 208

<gs1795>

(9)

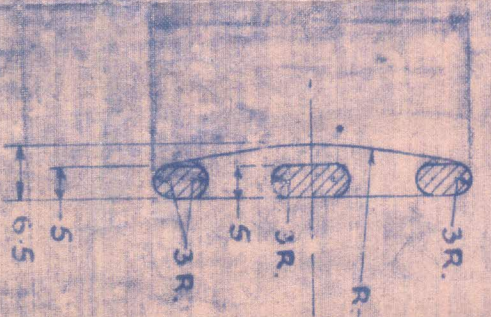
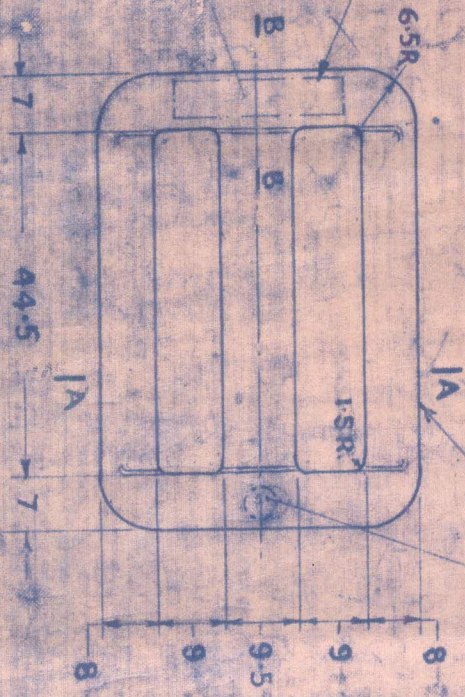
[Handwritten Signature]
 29/6/01
 FOR CONTROLLER
 CONTROLLERATE OF QUALITY ASSURANCE (GS)
 IN POST BOX NO. 127, KANPUR

SEALED DRG. No. CIG.5/US/219 PLATE ATTACHED TO SPECN No. 1MD/GS/1795

PLACE FOR MANUFACTURER'S MARKING
AND YEAR OF MANUFACTURE.

5340-006724
M. R. CO
1958

PROOF LOAD :- 1140 Kgs



- NOTES:-
- (1) TOLERANCES ON ALL DIMENSIONS FOR CROSS-SECTIONS OF MATERIALS 10% ± 0.5mm UNLESS OTHERWISE SPECIFIED
 - (2) TOLERANCES ON ALL DIMENSIONS OF SLOTS 10% ± 0.5mm UNLESS OTHERWISE SPECIFIED
 - (3) MATERIALS/HEAT TREATMENT, PROOF LOAD, WORKMANSHIP & FINISH AND OTHER DETAILS AS PER "SEPARATE UNSEALED SPECN. IN CIG.5/US. SERIES."
 - (4) ALL SHARP EDGES TO BE REMOVED

CONTROLLED BY
C. A. C. S.
DIRECTOR,
A. D. D. E., AGRA

D.S. CAT. No. 5340-006724
BUCKLES, PACK OUTER
(PTR-M)

CASE No. S/11947/G-5
STORAGE No.

DGN	DATE	NAME
DRN		(CHAIRMAN LAL)
CHD.		(MANAGER & T. SINGH)
TRD		(K. S. SINGH)
COMP.		Jadhav
PASSD.		

SCALE :- 1/1

THIRD-ANGLE PROJECTION
DIMENSIONS IN MILLIMETRES
APPROVED

SECTION

DC (M)	DATE	NATURE

SEALED, O.C. (1)

PROV. - C. I. T. & C. / TG-19/B (A)
DRG. No. ADDE/49