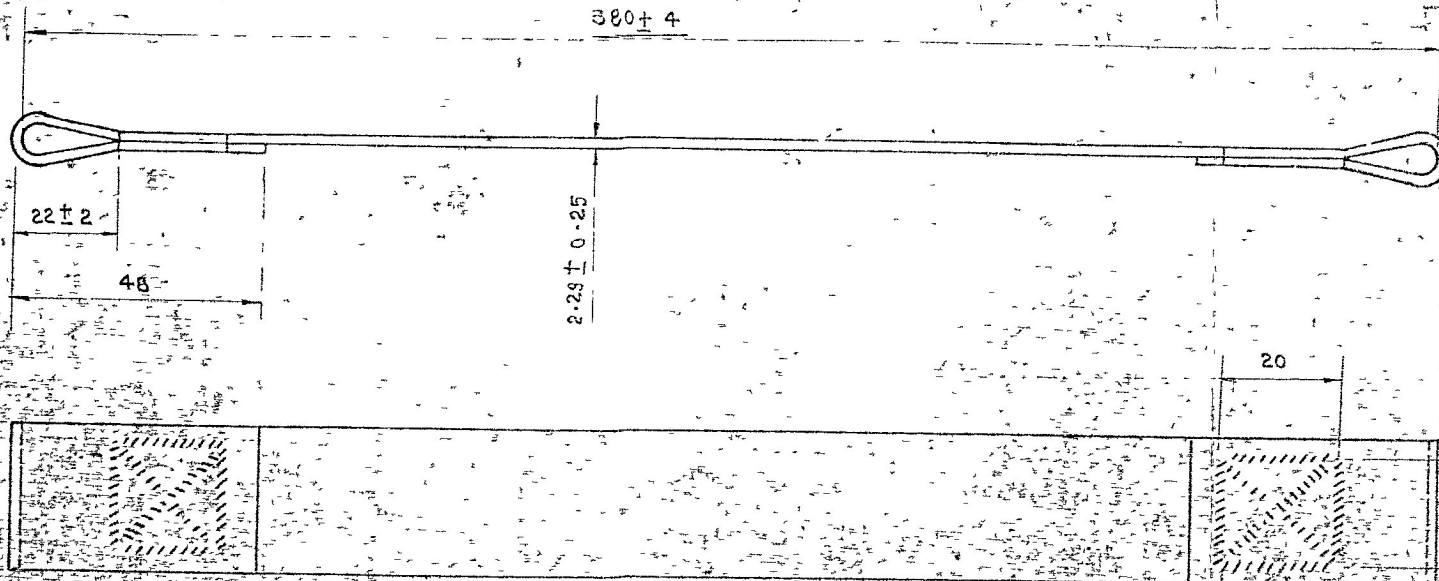


VS 91 VSI

DRG CONVENTIONS CONFORM TO IS SPECS.  
DIMENSIONS ARE IN MM

DCI 33298-A  
DCI 33777-A



NOTE 1) STITCHING LINE SHOWING THUS // // // // //  
2) ALL SEWING TO BE WITH THREAD COTTON SEWING 16 TEX. 76 (OR 365/6)  
DYED O.G. AND PROOFED TO SPEC. JSS 8310-02-1976 (D'S CAT. NO 8310-400026)  
OR SEWING COTTON 16 TEX X G OLIVE GREEN PROOFED TO SPEC. IS 1720-1976 (REAFFIRMED IN 1991)  
VARIETY - NO 29

TECHNICAL REQUIREMENT:  
AS PER SPEC. CIA 2804 (S) K

MATERIAL WEAVING COTTON PROOFED DYED O.G. TO SPECN. JSS 1-69-07 (Q)

22-1-94	D.C. 35657-A	DRG FORMAT BOX ENTRIES ADDED IS SPECS WAS IS 696 TECHNICAL REQUIREMENT NOTE ADDED. SPECS. UP DATED			
29-1-93	DC 35439-A	MATERIAL NOTE AMENDED			
9-7-85	DCI 33777-A	PART ISV 466A APPROX. JSS 1-69-07 COLUMN ONE			
31-7-82		TRACED WITHOUT CHANGE			
21-8-82	D.C.I. 33298-A	DRG. SEALED. PROV			
R. NO	DATE	AUTHORITY	REVISION	ZONE	ARSP DO SIGN
DRG	SEALED	31-7-85			
		31-11-94	35855-A		SPEL UP DATED

DRU RMS	CHD. VRS	TRD M-A-K	COMP. 6/6	ASSY DR
SD/	SD/4	SCALE: 1/1		
CD'MAN	Q/050	EST. MASS: 27.5 g		
	SD/	GAGE SCHD. NOT APPLICABLE		
	FOR CQA(A)	DATE: 22-8-80		
		MATL. AS ABOVE		
		PROTECTIVE FINISH - NOT APPLICABLE		

ISV 470 A  
ISV 466 A  
DESIGNER'S REF  
CIA/AMN/2162  
PIP

HANDLE CARRYING

ISV-176-SA  
NOT APPLICABLE  
ARSP - C QUAL. DRG

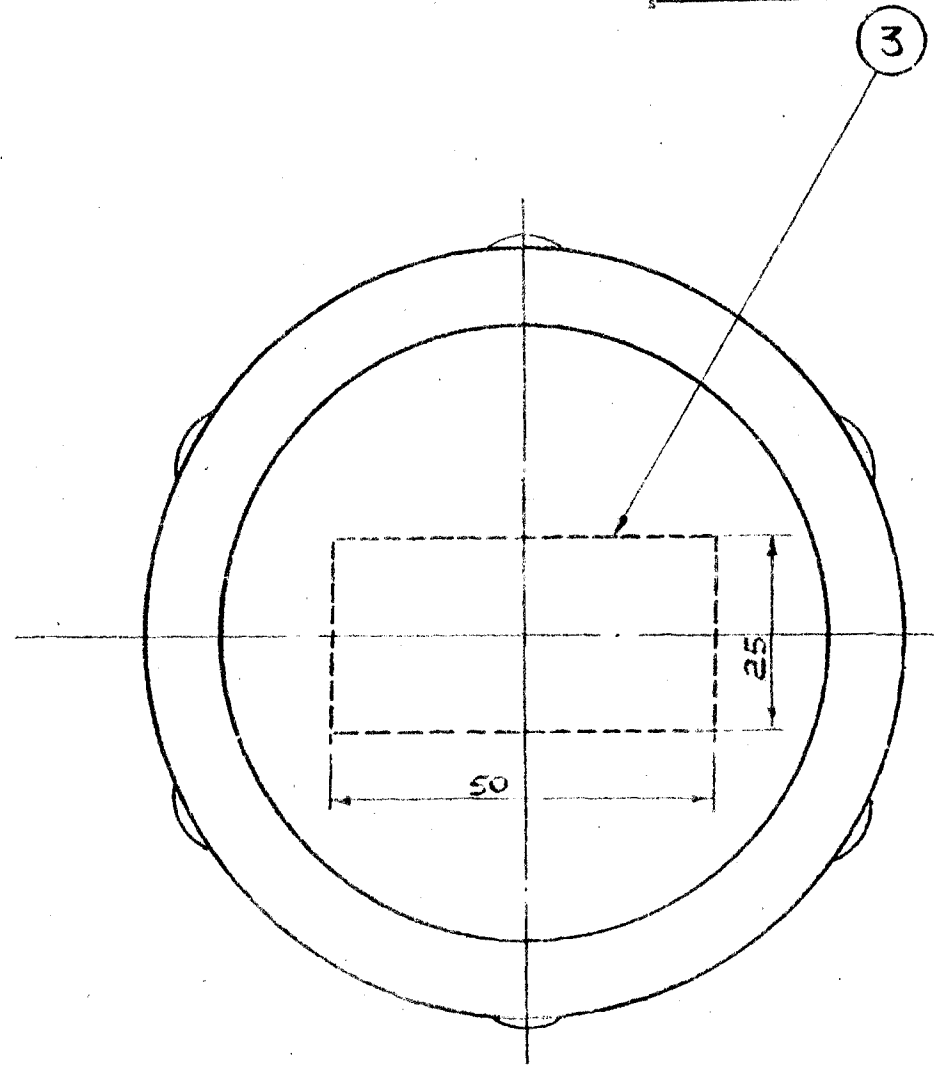
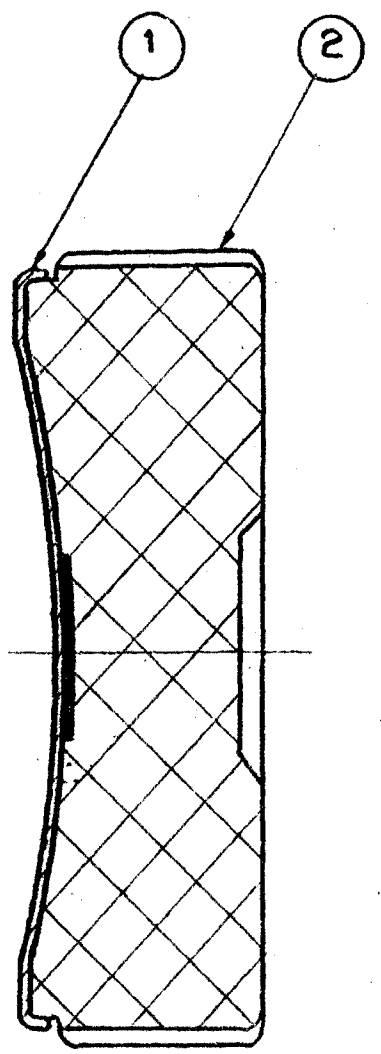
DRG. CONVENTIONS CONFORM TO IS: SPECIFICATIONS.  
DIMENSIONS ARE IN MM

D.C.I. 32718-A  
D.C.I. 33777-A

UNLESS OTHERWISE STATED :- TOLERANCE AS PER  
RADIUS  
CHAMFER

LIST OF COMPONENTS

ITEM No	DESCRIPTION	PART No	DESIGNER'S REF	NO PER SET
1	SHOCK ABSORBER PLATE	ISV 1569	CIA/AMN/2009 DET-5/1	1
2	SHOCK ABSORBER BODY	ISV 1570	CIA/AMN/2009 DET 5/2	1
3	ADHESIVE TAPE TWO-SIDE COMMERCIAL QUALITY	NOT APPLICABLE	NOT APPLICABLE	1



TEHNIICAL REQUIREMENT :-  
AS PER SPEC CQA(A) 2804(K)

R.No	DATE	AUTHORITY	REVISION	ZONE	A/HSP	D.O.	SIGN
	23-11-94	DC 35855-A	DRG FORMAT BOX ENTRY ADDED. SPEC UPDATED				
	24-1-94	DC 35658-A	DRG CONV: -- SPECS ADDED. DRG FORMAT BOX ENTRIES ADDED UNDER LIST OF COMP. ISBM N93 NOT APPLICABLE IN PART NO. 3. DESIGNER'S COLUMN. TECH. REQ. NOTE ADDED.				
	9-7-85	D.C.I. 33777-A	DRG SEALED				
	31-3-82	D.C.I. 33298-A	ITEMS DESCRIPTION & DIMENSIONS AMENDED				
	3-3-79		TRACED WITHOUT CHANGE.				
	9-9-78	D.C.I. 32718-A	DRG SEALED PROV.				
DRG SEALED :- 9-7-85							

DRN B 9 J	CHD. VRS.	TRD. M A K	COMP. B.
SD/- CD'MALL	SD/- O/C D.O.	SCALE:- 1:1	EST MASS:- 60g
	SD/- FOR CQA(A)	GAUGE SCHD:- NOT APPLICABLE	DATE:- 5-5-78
MATL:- NOT APPLICABLE			
PROTECTIVE FINISH:- NOT APPLICABLE			

ASSY DRG  
ISV 468 A

DESIGNER'S REF.  
CIA/AMN/2009 DET-5

PART No.  
ISV 140 SA

D.S. CAT No

AHSP: C.Q.A(A) KIRKEE

**SHOCK ABSORBER ASSEMBLY**

DC No. 36202-A  
Dt. 07 Nov 96

SPECIFICATION NO CQA(A)2804(m)

PLASTIC CONTAINER (RIGID) AND CARRIER (RIGID)  
FOR AMMUNITION STORES

A) 1990/01/01  
उ. व. स. अनुभाग  
L. P. C. SECTION  
आ. नि. खमरिया जबलपुर  
O. F. N. JABALPUR  
प्र. संख्या CQA(A)  
दिनांक 4/10/06  
बिल संख्या  
दिनांक 6/10/06  
दिनांक.....को प्राप्त

ISSUED BY  
THE CONTROLLERATE OF QUALITY ASSURANCE (AMMUNITION)  
KIRKEE, PUNE -411003

GOVERNMENT OF INDIA  
MINISTRY OF DEFENCE  
CONTROLLERATE OF QUALITY ASSURANCE (AMMUNITION)

PLASTIC CONTAINER (RIGID) AND CARRIER (RIGID)  
FOR AMMUNITION STORES

Specification to govern manufacture, inspection and supply

Approved on 14-7-80

THIS SPECIFICATION IS THE PROPERTY OF THE MINISTRY OF DEFENCE AND MUST BE RETURNED TO THE CONTROLLER OF QUALITY ASSURANCE (AMMUNITION) KIRKEE, PUNE-411003 IMMEDIATELY AFTER THE TENDER HAS BEEN DECLINED OR ON COMPLETION OF THE CONTRACT OR ON DEMAND.

This specification or any other information issued in connection therewith, may only be used for specific enquiries tenders or orders placed by a competent authority, on behalf of the Ministry of Defence. It is not to be used for any other purpose whatsoever without the express written sanction of COA(AMN), KIRKEE, PUNE - 411003.

Any question relating to the drawing, pattern or this specification should be referred to the COA(AMN) KIRKEE, PUNE or other QUALITY ASSURANCE OFFICER duly authorised to act on behalf of him.

Obtainable from :-

The Controller  
Controllérate of Quality Assurance (AMN)  
Government of India  
Ministry of Defence  
KIRKEE : PUNE - 411003.

## 1. SCOPE

This specification governs the manufacture, repair and Inspection of Plastic Containers/Carriers (Rigid).

## 2. RELATED DOCUMENTS

2.1 This specification is to be read in conjunction with the drawing/drawings quoted in the contract/order.

2.2 Wherever a reference is made to any document in this specification it should be taken as a reference to the latest edition of the documents unless otherwise stated.

2.3 Copies of related documents are obtainable as follows:-

- |                             |  |
|-----------------------------|--|
| (a) Indian Standard Specn.  | Indian Standards Institution,<br>Manak Bhavan, 9, Bahadur Shah<br>Zafar Marg, NEW DELHI-110 001.               |
| (b) British Standard Specn  |  |
| (c) IND/ME Specifications - | The Controller,<br>Controllerate of Quality<br>Assurance (ME), KIRKEE,<br>PUNE - 411 003.                      |
| (d) Joint Services Specs.:  |  |
| (e) DEF Specification       | The Manager, H.E.S.O. Sales<br>Section, British Information<br>Services, Chanakyapuri,<br>NEW DELHI - 110 002. |
| (f) IA Specifications       | The Controller,<br>Controllerate of Quality<br>Assurance KIRKEE,<br>PUNE - 411 003.                            |

## 3. STANDARD PATTERN

3.1 Any sample lent to the Manufacturer shall be used only as a guide to workmanship and not as a guide to details. However, a standard pattern, if obtainable from the Purchasing or Quality Assurance Authority, will constitute the standards as regards particulars or properties stipulated in this specification.

## 4. MATERIALS

4.1 The materials shall conform to the specifications as mentioned below unless otherwise stated in the relevant drawings.

Sl.No.	Material	Specn.
1.	Polyethylene Low Density; Liner Low Density and High Density	JSS 9330-03-1995 Revision-1
2.	Sponge Rubber Vulcanised	IND/ME/645(a)

- |    |                       |   |
|----|-----------------------|---|
| 5. | Rivets                | IS 2998 :1982 (fir<br>revision) (reaffirmed in 198  |
| 6. | Webbing Cotton        | JSS 8305-18 1993                                    |
| 7. | Thread Cotton, Sewing | JSS 8310-2  |
| 8. | Canvas Cotton         | IS 1424 :1983 (thir<br>revision) (reaffirmed in 198 |
| 9. | Leather Harness       | IS 580 :1973 (seco<br>revision) (reaffirmed in 199  |

#### 5. MANUFACTURE

5.1 The dimensions and form of the store and components shall in conformity with the drawings issued. The components must free from flaws, burrs or sharp edges.

5.2 Injection moulded parts shall be manufactured in machine operating in accordance with established modern principles a giving an adequate reproducibility of the manufacturing cycle.

5.3 Injection moulded parts made at the start of a run, before continuity has been achieved, shall be rejected.

5.4 The moulded components shall be free from cavitation or blow holes. At the discretion of the Inspection Officer two samples each component per lot may be sectioned to ensure freedom from blow holes and cavitation.

5.5 Inner and outer surfaces should be smooth and free from material projections or any other imperfections.

5.6 'O' Rings/Sealing Rings should conform to relevant drawing and shall be free from blow holes, blisters, cracks or any other imperfections/surface defects.

5.7 Thickness of 'O' Rings/Sealing Rings shall be uniform all over.

#### 6. ASSEMBLY

6.1 The components shall be assembled as shown on the relevant drawings. 'O' Rings/Sealing Ring should be properly positioned ensure proper sealing and before assembly the rings shall be greased with silicone grease.

6.2 Lids and bodies must be interchangeable.

6.3 The tightening stops (where applicable) shall be so located that when the two lids of the carrier have been screwed again the stops, the locking device shall readily fit between the outside serrations on the lids.

#### 7. PROTECTIVE TREATMENT

7.1 Rivets used should be to specification IS 2998 :1982 (fir

7.2 Webbing cotton, sewing cotton used in the manufacture of containers/carriers will be rot-proofed by an approved process to the satisfaction of the inspection authority such as being soaked in a 5% solution of copper naphthenate dispersion in ammonia or white spirit or kerosene oil superior conforming to current approved specification or by any other process approved by the Quality Assurance Officer. The period of immersion should be sufficient to ensure complete penetration of the preservative.

7.3 Canvas cotton should be fungus proofed by approved process.

7.4 Leather should be leather harness curried tanned.

## 8. SAMPLES AND INSPECTION

### 8.1 Arrangement for inspection.

8.1.1 The manufacturer shall notify the Quality Assurance Officer when he is in a position to start work and shall inform him of all sub orders in connection with the order at the time they are placed.

8.1.2 The Quality Assurance Officer shall have access at all times to all departments of manufacturing plants which are concerned with the production and storage of material or components under the order, at the works either of the manufacturer or of the sub-contractors who shall arrange for inspection to be carried out by the Quality Assurance Officer/his representative as he considers necessary.

### 8.2 Inspection of Materials

8.2.1 Before proceeding to undertake manufacture, all materials will be submitted to the Quality Assurance Officer in batches. Each batch shall contain quantity of material prepared under uniform conditions in respect of composition and manufacturing processes.

8.2.2 The Manufacturer will not take into use any material or component until it has been accepted for the purpose by Quality Assurance Officer who may require the bulk material or the components to be sealed or bonded until results of test or analysis of samples are available.

### 8.3 Samples for Testing

8.3.1 The Manufacturer shall supply and prepare, free of charge, the materials or components required by the Quality Assurance Officer for testing purposes and shall provide the facilities and apparatus which may be required for carrying out the tests called for by the drawing or by this and/or other standard specifications.

8.3.2 The test pieces or samples will invariably be selected by the Quality Assurance Officer on his own initiative.

8.4.1 The Manufacturer shall submit for inspection the material, components or assemblies called for in the order, in convenient sized batches. The quantum of material or number of units that comprise batch may be decided by the Quality Assurance Officer after consultations with the Manufacturer.

8.4.2 If the Quality Assurance Officer's examination of a portion/batch of material, components, or assemblies submitted to him reveals departure from relevant drawings and/or specifications, the whole batch may be rejected.

#### 8.5 Resubmission of Rejected Batches

8.5.1 Rejected batches may be re-submitted with the approval of the Quality Assurance Officer. Where re-submission is permitted and the Manufacturer elects to re-submit, the manufacturer shall first inspect the rejected batch, either for the particular types or classes of defects that caused the batch to be rejected, or for all types and classes of defects, as directed by the Quality Assurance Officer, and shall repair or remove all defectives of these types or classes. The Quality Assurance Officer may inspect a resubmitted batch for these types or classes of defects, using normal or tightened inspection at his discretion.

#### 8.6 Replacement by Manufacturer

8.6.1 Formal acceptance of material or components, by the Quality Assurance Officer, shall not relieve the Manufacturer of his responsibility for any parts which may subsequently prove to be defective. If material or components from batches accepted after sampling inspection prove to be subsequently defective during examination or assembly, the Manufacturer shall replace the defective material or components free of cost.

8.6.2 If the materials or finished or partly finished stores are expended or damaged during examination or test as stipulated as a condition of acceptance, the Manufacturer will be required to replace the number so expended or damaged (which become the Property of the Government), free of charge.

#### 8.7 Method of Inspection

8.7.1 The acceptance inspection shall be in accordance with Specn DEF 131A. Extracts from the relevant tables from this specification used by the Quality Assurance Authority may be supplied to the Manufacturer on request. A list showing classification of defects and AQLs to be adopted is attached to this Specn as APPENDIX 'A'.

8.7.2 The Quality Assurance Authority reserves the right to inspect any unit of product within the batch in addition to operating sampling plan or plans associated with the specified AQL/AQLs.

8.7.3 The Quality Assurance Authority may draw one or more



8.7.4 The Manufacturer shall provide and maintain an effective quality assurance system acceptable to the Quality Assurance Officer governing the supplies against the order. The written description of the system will be considered acceptable when as a minimum it provides the quality assurance required by this specification and the related documents. Results of all examinations and tests performed under this quality assurance system shall be made available to the Quality Assurance Officer. The Manufacturer shall notify to the Quality Assurance Officer and obtain approval for any change into written procedure that affects the degree of assurance required by this specification and other documents referred to therein.

8.7.5 The designation of an AQL does not imply that the supplier has the right to supply knowingly any defective unit of product.

8.7.6 In case of disputes about the Q.A. characteristics of an item the verdict of the Quality Assurance Authority shall be final and binding upon the Manufacturer.

## 9. TESTS

9.1 Samples must be representative of bulk supply for following sequential tests. The containers/carriers must be packed with appropriate dummies/inert contents and closed/sealed in the manner shown in the relevant drawings.

### 9.2 Assembly Test

9.2.1 Interchangeability:- Individual components like lids, bodies, sealing rings, discs etc. should be interchangeable.

9.2.2 In case of containers/carriers which are required to be packed in an outer box/crate, one such complete set, would be subjected to assembly tests as given in 9.2.3 and 9.2.4.

9.2.3 The dummy should accommodate itself in the container without interference with hermetical closure.

9.2.4 These containers/carriers will then be packed in specified outer box/crate. Only those packing fitments which are specified on the drawing will be used and box should close as indicated in the relevant method of packing drawing without undue force.

### 9.3 Air Tightness Test

9.3.1 Complete container/carrier shall withstand air pressure between 0.21 kg/sq.cm to 0.35 kg/sq.cm for 30 seconds. Test shall be carried out without damaging container/carrier by vacuum or by Air pressure method.

9.3.2 In the absence of above facilities to carry out air tightness test by air pressure/vacuum, this test may be carried out as follows:

9.3.3 Carriers will be immersed in 305 cms of water head for 5

9.4 Rough Usage Test :: Complete weighed assemblies (containers/carriers packed with dummies as per method of packing) packed in their appropriate outer box/crate, as applicable, will be submitted for the following jolt and drop tests.

9.4.1 Jolt :: The complete package resting on its side or base will be jolted for 8 hours in a jolting machine having a lift of 50 mm and frequency 60 jolts/min. Alternatively 5000 bumps each in three different orientations allowing 25 mm free drop per bump be given in bump test machine.

9.4.2 Drop Test (for Container only) :: The same package will then be dropped from a height of 1350 mm on concrete/hard surface successively on its base, top, sides and any one of the corners and/or any other position at the discretion of the Quality Assurance Officer.

9.4.3 Drop Test (for Carrier only) :: Carriers jolted as per para 9.4.1 will be dropped individually on concrete/hard surface as follows:-

(a) Drop from a height of 1.5 m at 45 deg base down orientation.

(b) Two successive drops each on side, lid and base from a height of .3m (six drops).

9.4.4 Drop Test (for Carriers only) at - 20 deg C :: Two carriers per lot duly packed with dummies as per method of packing will be individually subjected to -20 deg C conditioning test for 24 hours followed by drop test as per para 9.4.3 (a) and (b).

9.5 Water Immersion Test :: At the conclusion of drop test the containers/carriers shall be examined for cracks by immersing the container/carrier in 305 cm of water head for 5 minutes. The interior of container / carrier shall be free from liquid water and there shall be no sign of inert stores in the container/carrier having got wet.

9.6 Handle Test :: The Handle/Shoulder Strap shall withstand a rapidly applied load of five times the filled mass of complete carrier/container, which shall be applied for five minutes. There should be no failure of the Handle or Shoulder Strap or permanent deformation of the fastenings.

9.7 Separation Test :: This test will be carried out with rivetted twin carriers only. The carriers should not separate when a rapidly applied load of five times the filled mass of complete carrier/containers is applied for 5 minutes.

9.8 Acceptance criteria for tests  
As per Appendix 'A' to this specification.

10. PACKING AND DELIVERY

10.1 The store shall be delivered in lots consisting of 2000 numbers carriers and 5000 numbers for containers, plus the number required for destructive tests.

10.2 The store shall be packed so as to provide an effective protection from damage/dirt or moisture during transit and to ensure that the store reaches the consignee in serviceable condition.

10.3 Each package must be clearly marked with the Order No, nature and number of contents and the manufacturer's initials or recognised trade mark and any other marking which the Quality Assurance Officer may direct.

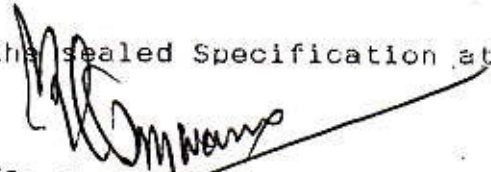
11. RESPONSIBILITY OF SAFETY

11.1 Nothing in this specification shall relieve the manufacturer of the responsibility for the safety of his operations.

Kirkee, Pune 411 003  
Dated 14.7.80

Sd/- xxxxxxxx  
(IF D' CUNHA)  
LT COL  
ACI(A)  
for CONTROLLER OF INSPECTION (AMN)

Correct copy of the sealed Specification at this date

  
(R.C. SONAWANE)  
DSS JTO  
D/ ASSIST CONTROLLER  
for CONTROLLER OF QUALITY ASSURANCE  
(AMN)

Kirkee, Pune 411 003  
Dated 03 -10-2006

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QUALITY ASSURANCE PROVISIONS  
VISUAL, DIMENSIONAL AND TEST DEFECTS  
ACCEPTABLE QUALITY LEVELS

## 1. DEFECTS-DEFINITIONS

1.1 Defect: A defect is non-conformance of the unit of product to specified requirements.

1.2 Critical Defect: A critical defect is a defect that judgement and experience indicate is likely to result in hazardous or unsafe conditions for individuals using, maintaining, or depending upon the product; or a defect that judgement and experience indicate is likely to prevent performance of the tactical function of a major end item such as a ship, aircraft, tank, missile or space vehicle.

1.3 Major Defect: A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

1.4 Minor Defect: A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose but is a departure from established standard having little bearing on the effective use or operation of the unit.

## 2. EXAMINATION

2.1 Examination shall be performed as indicated below:

2.1.1 Major and Minor Defects: Examination for major and minor defects shall be performed on a class basis in accordance with classification of defects using applicable sampling plans and acceptance criteria of specification DEF 131 A, General Inspection Level II (Initially).

## 3. ACCEPTABLE QUALITY LEVELS

The Acceptable Quality Levels for defects shall be as follows:

Defect Classification	Percent
Major	2.5
Minor	6.5

## 4. CLASSIFICATION OF DEFECTS

4.1 The visual, and other defects shall be classified as follows. The AQLs for major and minor defects are applicable groupwise.

Store	Assembly/Component	Classification and feature
Plastic Containers	Body and Lid	<p>MINOR DEFECTS (AQL 6.5% defectives applies to this group)</p> <p>Visual</p> <p>(a) Surface flaws/scratches not resulting in leakage. (b) Damaged threads not affecting closure. (c) Absence of or incorrect/illegible marking.</p> <p>Gauging</p> <p>(a) Overall length H &amp; L not affecting packing. (b) Overall dia H &amp; L not affecting packing.</p> <p>MAJOR DEFECTS (AQL 2.5% defectives applies to this group)</p> <p>Functional</p> <p>(a) Failure in Assembly test. (b) Failure in air tightness test. (c) Failure in water immersion test.</p> <p>Visual</p> <p>(a) Cracks or blow holes. (b) Incorrect location of threads affecting hermetical sealing.</p> <p>Gauging</p> <p>(a) Internal/External length H&amp;L affecting packing. (b) Internal dia/outer dia H&amp;L affecting packing.</p>

Store	Assembly/Component	Classification and feature
Rubber O Rings/ Washers	O Rings/ Washers	<p>MINOR DEFECTS</p> <p>(AQL 6.5% applies to this group)</p> <p>Visual</p> <p>Surface flaws not resulting in leakage.</p> <p>Gauging</p> <p>(a) Internal dia H not resulting in loose fitting.</p> <p>(b) Thickness H not affecting assembly of lid.</p>
		<p>MAJOR DEFECTS</p> <p>(AQL 2.5% defectives applies to this group)</p> <p>Visual</p> <p>(a) Surface flaws resulting in leakage.</p> <p>Gauging</p> <p>(a) Internal dia H resulting in loose fitting.</p> <p>(b) Thickness H affecting assembly of lid.</p>
Plastic carriers		<p>MINOR DEFECTS</p> <p>(AQL 6.5% defectives applies to this group)</p> <p>Minor defects mentioned against containers also apply to this group in addition to following:</p> <p>Unsatisfactory treatment:</p> <p>(i) Proofing of webbing and canvas.</p> <p>(ii) Tanning/currying of leather items.</p> <p>(iii) Rust proofing of rivets etc. not affecting functioning.</p>

---

Assembly/Component

Classification and feature

---

MAJOR DEFECTS

(AQL 2.5% defectives applies to this group)

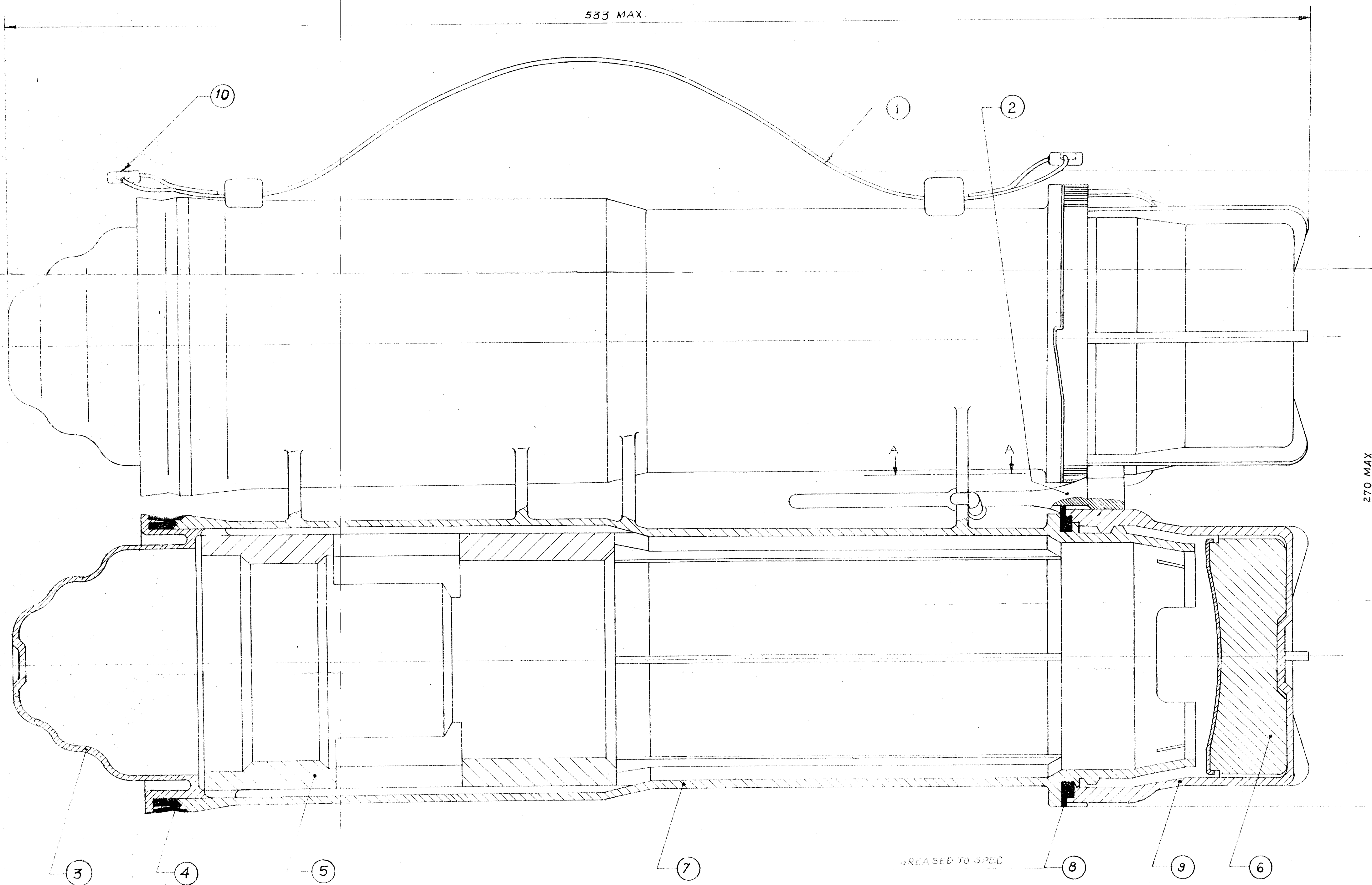
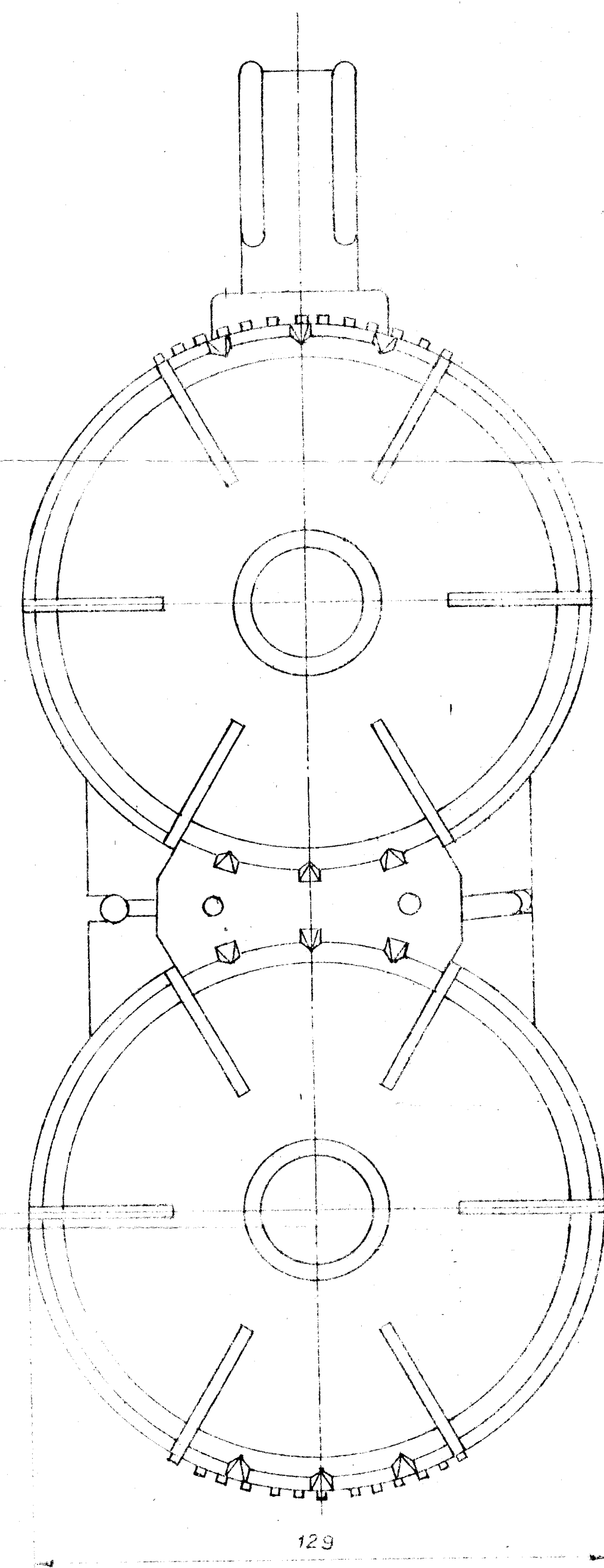
Major defects for containers also apply to this group in addition to following defects:

- (a) Loose rivetting causing detachment of the handle/shoulder straps/carriers.
  - (b) Length of handle/shoulder strap less than specified affecting handling/transportation.
  - (c) Damaged buckles causing complete detachment of shoulder straps.
-

ISV 468 A  
 PART NO  
 DIMS ARE IN mm.

D.C. 32718-A  
 D.C. 33777-A

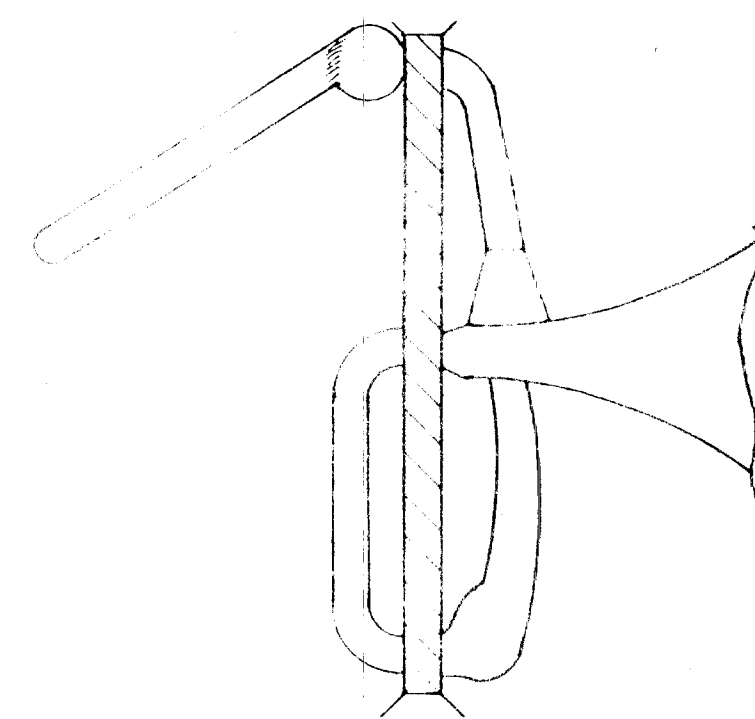
533 MAX



- NOTE :-
- (A) FINISHED PRODUCT TO SPEC CQA(A) 2804 (K)
  - (B) DUMMY ROUND 84 mm ILLUMINATING WITH A MASS 3.1 kg SHALL READILY FIT IN THE CARRIER WITH SUPPORTS FITTED. MAXIMUM FORCE TO PULL OUT THE ROUND AT NORMAL TEMP. 5.1 kgf
  - (C) THE STARTING TORQUE REQUIRED TO TIGHTEN AND UNSCREW THE LID FROM THE CARRIER IN WHICH THERE SHALL BE TWO ROUNDS, SHALL NOT EXCEED 3.0 kgf/M
  - (D) "STICKER LABEL SIZE 10 X 50 CONTAINING TYPE & LOT NO TO BE AFFIXED ON BODY"

TECHNICAL REQUIREMENT  
 AS PER SPEC CQA(A) 2804 (K)

ITEM NO	DESCRIPTION	PART NO	DESIGNER'S REF	NO PER SET
1	HANDLE CARRYING	ISV 176 SA	CIA/AMN/2162	1
2	LOCKING DEVICE	ISV 1566	CIA/AMN/2009DET 2	1
3	NOSE	ISV 1567	CIA/AMN/2009DET 3	2
4	ADDED MATERIAL	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
5	PAD	ISV 1568	CIA/AMN/2009DET 4	2
6	SHOCK ABSORBER ASSEMBLY	ISV 140 SA	CIA/AMN/2009DET 5	2
7	BODY	ISV 1571	CIA/AMN/2009DET 6	1
8	SEALING RING	ISV 1572	CIA/AMN/2009DET 7	2
9	LID	ISV 1573	CIA/AMN/2009DET 8	2
10	LINK	ISV 1528	ARDE 1589 DET 8	2



SECTION A-A

27-10-71	D.C. 37090-A	SY. NO 2 & 3 DESIGNER'S NET FIG UPDATED							
23-11-94	DC 35855-A	DRG FOR MATERIAL ENTRY UNDER SPEC'S UPDATE 1							
24-3-71	DC 35658-A	DRG FOR MATERIAL ENTRY UNDER SPEC'S UPDATE 1							
3-11-92		RETRACTED WITHOUT CHANGE. PREVIOUS D.C. NOS 32718-A, 33031-A, 33298-A, 33777-A & 34512-A							
RNS	DATE	AUTHORITY	REVISION	ZONE	APPROV	D.C.	DRG	NO	DESIGNER'S REF
									CIA/AMN/2009
DRG. SEALED :- 9-7-85								PART NO ISV 468 A	
CARRIER, AMMUNITION 11 A								D.S. CAT NO. NOT APPLICABLE	
PLASTIC FOR AMMUNITION, CONTAINER, ASSEMBLY, 122 A AND 130 A								AHSP - CQA (A) KIRKEE	



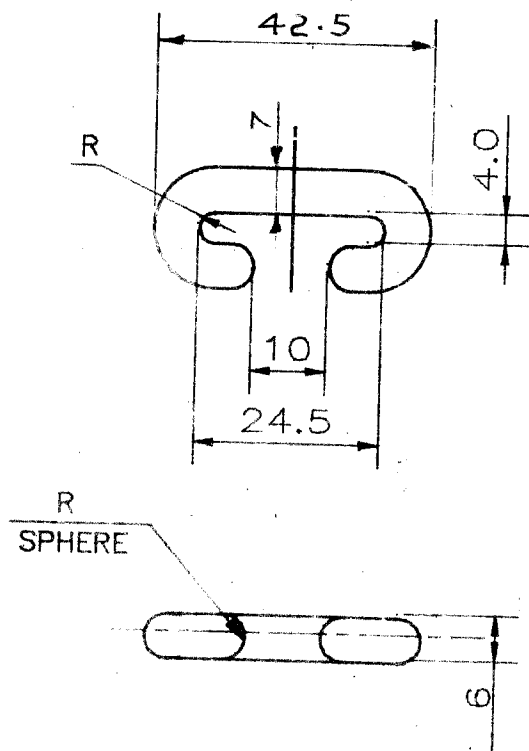
8291 ASI

PART NO.

DRG. CONVENTIONS CONFORM TO IS: SPECIFICATIONS.

DIMENSIONS ARE IN mm.

DC.32275-A, DC.32938-A.



**MATERIAL:-**

HDPE, TYPE I. TO SPEC. ISS 9330-05-1995  
 REVISION NO.1, 2 TO 3% CARBON BLACK TO SPEC.  
 IND/ME/344 (PROV) IS TO BE ADDED, TO THE BASIC  
 MATERIAL TO ACHIEVE BLACK COLOUR.

R.No.	DATE	AUTHORITY	REVISION	ZONE	AHSP	D.O.	SIG
3 4-97	DC 36268-A		CIRCULAR CROSS SECTION AMENDED DIMS 42.5 AND 7 ADDED.				July
28-996	DC 36177-A		NOTE REG. MATERIAL AMENDED.				July
19/9/96	DC 36174-A		REDRAWN WITHOUT CHANGE AND FRESH MASTER COPY REPLACED IN SUPERSESSION OF EXISTING DILAPIDATED COPY.				July
			PREVIOUS DC.s NOs. 32275-A, 32938-A, 33777-A, 35331-A, 35370-A, 35400-A & 35469-A.				SD/-

DRG. SEALED:- 7/2/77 (PROV) 1/1/80.

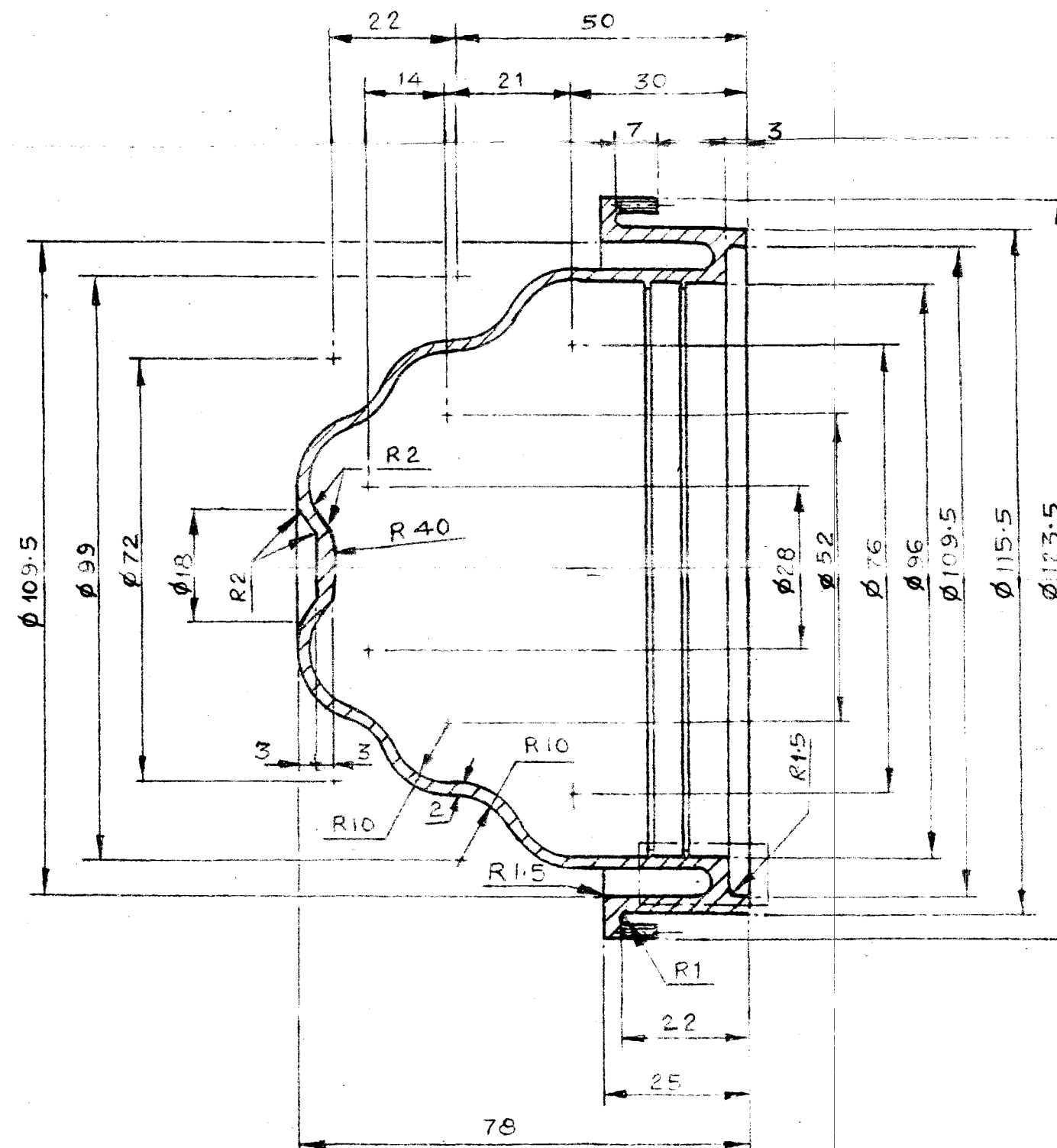
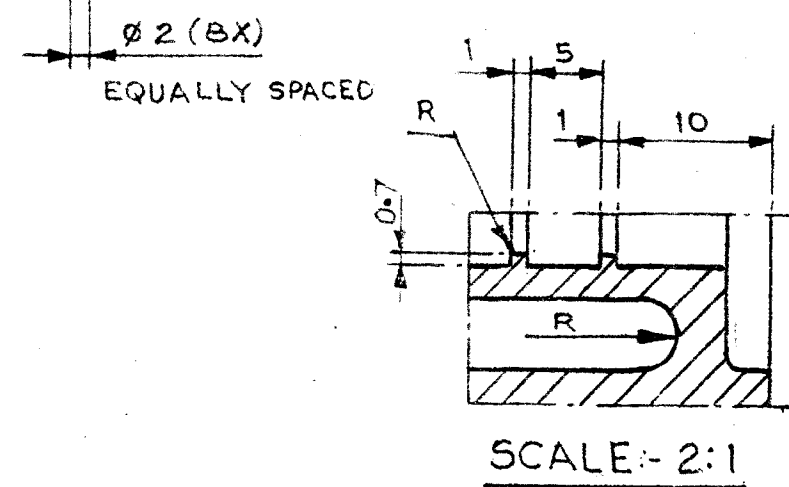
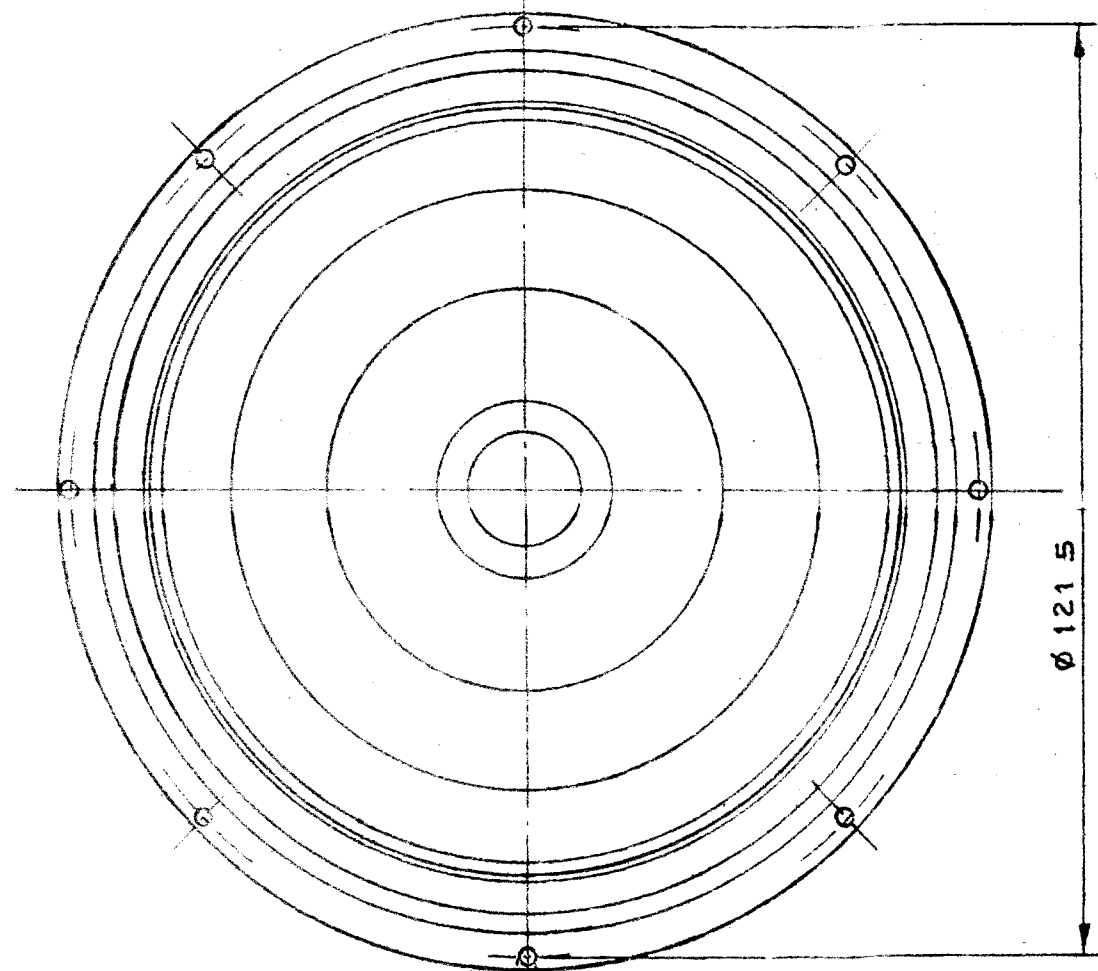
DRN:- ALP	CHD:-	TRD:-	COMP:-	ASSY DRG.
C.D'MAN	SD/- O I/C D.O	SCALE:- 1:1		ISV 459A, 468A, 495A, 508A & ISV 532A
APPD	SD/- FOR CQA(A)	EST.MASS:- 1.332g		
		GAUGE SCHD:- N.A.		
MATERIAL:- AS ABOVE				DESIGNER'S REF
PROTECTIVE FINISH:- NOT APPLICABLE				ARDE1589 DET.NO.8
<b>LINK</b>				PART No.
				ISV 1528
				D.S.CAT NO
				NOT APPLICABLE
				AHSP:- CQA(A) KIRKEE

ISV 1567  
PART NO

DRG CONVENTIONS CONFORM TO IS: SPECIFICATIONS.  
DIMENSIONS ARE IN mm.

DCI 32718-A  
DCI 33777-A

UNLESS OTHERWISE STATED:- TOLERANCE AS PER JS 15  
RADIUS  
CHAMFER



TECHNICAL REQUIREMENT :-  
AS PER SPEC. CQA(A)2804 (K)

MATERIAL :-  
HDPE, TYPE-2, TO SPEC. JSS 9330-03-1995 REVISION NO. 1. 2.03%  
ARBON BLACK TO SPEC. IND/N/E/944 (PROV.) IS TO BE ADDED  
TO THE BASIC MATERIAL, TO ACHIEVE BLACK COLOUR.

R.N.	DATE	AUTHORITY	REVISION	ZONE	AHSP D.O. SIGN.
	28-9-86	DC 36177-A	NOTE RE. MATERIAL AMENDED		
	23-11-84	DC 35855-A	SPEC. UP-DATED		
	24-1-84	DC 35658-A	DRG. CONV. -- SPECS. ADDED. DRG. FORMAT BOX ENTRIES ADDED TECH. REQ. NOTE ADDED.		
	24-10-82	DC 35401-A	MATERIAL NOTE AMENDED.		
	11-4-82	DC 35298-A	MATERIAL NOTE AMENDED.		
	10-6-87	DCI 34156-A	MATERIAL NOTE AMENDED		
	9-7-85	DCI 33777-A	DRG. SEALED.		
	31-3-82	DCI 33298-A	MATERIAL AMENDED		
	19-3-79		TRACED WITHOUT CHANGE		
	9-9-78	DCI 32718-A	DRG SEALED RROV.		

DRG. SEALED:- 9-7-85.

DRN:-R.M.S	CHD:- SD/-	TCD:-MRS	COMP:-	ASSY. DRG.
SD/-	SD/-	SCALE:- 1:1		ISV 468 A
C.D'MAN	O/YC.D.O	EST MASS:- 700 g.		
APPD	SD/-	GAUGE SCHED:-	DATE:- 5-5-78.	
		FOR CQA(A)		
		MATL:- AS ABOVE.		
		PROTECTIVE FINISH:- NOT APPLICABLE		
		DESIGNER'S REF.		
		CIA/AMN/2009 DET.3		
		PART NO		
		ISV 1567		
		D.S.CAT. NR		
		NOT APPLICABLE		
		AHSP. C.Q.A(A) KIRKEE		

NOSE

9991 ISI

DRG. CONVENTIONS CONFORM TO IS: SPECIFICATIONS.

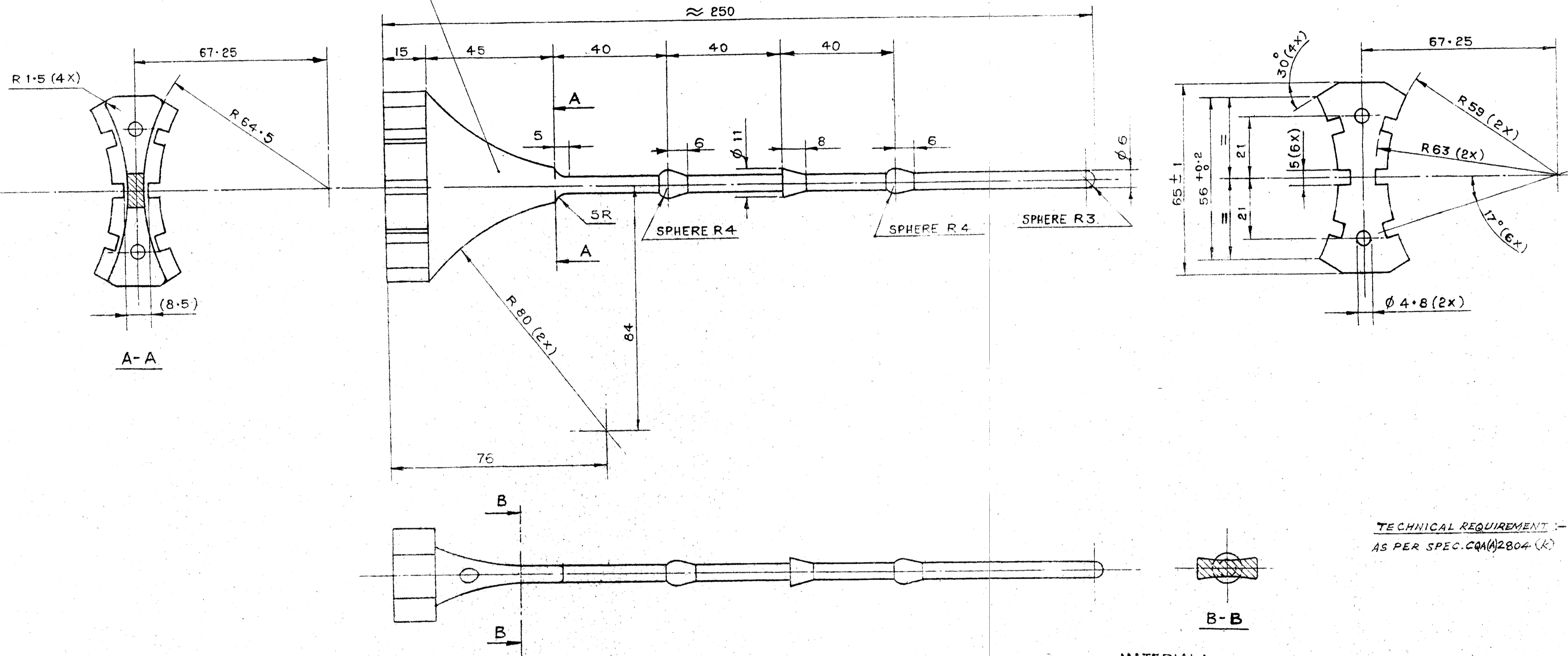
ON PART DIMNS. ARE IN MM

D.C.I. 32718-A  
D.C.I. 33777-A

UNLESS OTHERWISE STATED - TOL. AS PER  $\pm IT 14/2$

RADIUS  
CHAMFER

PLACE FOR ARTICLE NO MARKING AND  
CAVITY MARKING.  
CHARACTERS RAISED 0.2 mm  
HEIGHT OF CHARACTERS  $\approx 3$  mm



TECHNICAL REQUIREMENT :-  
AS PER SPEC. CQA(A)2804 (K)

MATERIAL :-  
NATURAL VULCANISED RUBBER CLASS 'C' TO SPECN. IND/ME/584 (f)

23-11-94	DC 35855-A	SPEC. UPDATED			
24-1-94	DC 35659-A	DRG. CONV. --- SPECS. ADDED. DRG. FORMAT BOX ENTRIES ADDED. TECH. REG. NOTE ADDED.			
9-7-85	D.C.I. 33777-A	DRG. SEALED			
31-3-82	D.C.I. 33298-A	MATERIAL AMENDED			
10-3-79		TRACED WITHOUT CHANGE			
9-9-78	D.C.I. 32718-A	DRG. SEALED PROV.			
R. No	DATE	AUTHORITY	REVISION	ZONE	AHSP SIGN.
DRG. SEALED :- 9-7-85					

DRN. RMS	CHD. VRS	TCD. HDW	COMP.	ASSY. DRG.
SDI	SDI	SDI	SDI	ISV 468 A
C D'MAN	0 1/2 D.O	SCALE :- 1:1	EST MASS :- 40g	
APPD.	FOR CQA(A)	GAUGE SCHD :- NOT APPLICABLE	DATE :- 5-5-78	
MATERIAL :- AS ABOVE				
PROTECTIVE FINISH :- NOT APPLICABLE				

DESIGNER'S REF.	CIA/AMN/2009	DET 2
PART NO	ISV 1566	
D.S. CAT NO	NOT APPLICABLE	
AHSP.	C.Q.A(A) KIRKEE	

**LOCKING DEVICE**

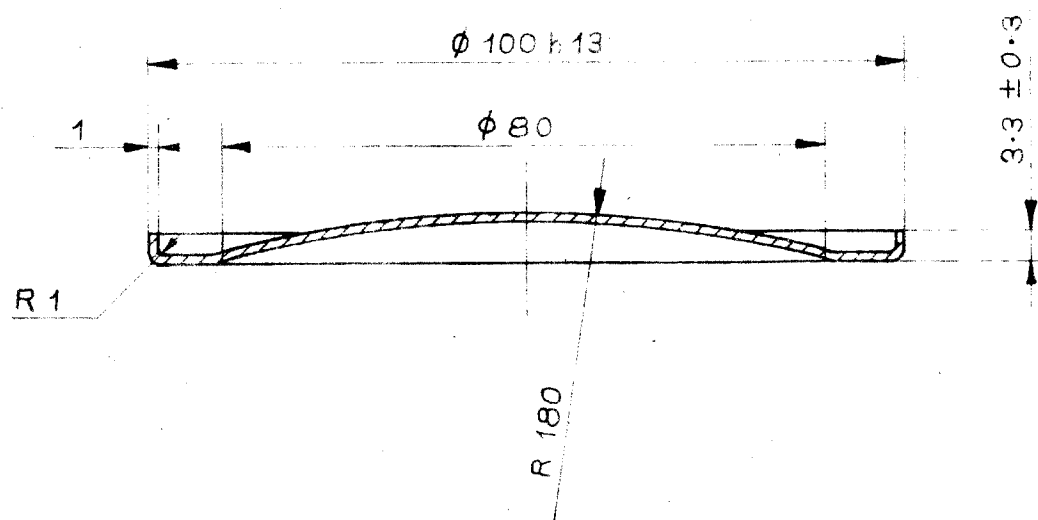
8 7 6 5 4 3 2 1

**6991 ISI**  
ON PART NO

DRG CONVENTIONS CONFORM TO IS : SPECIFICATIONS  
DIMENSIONS ARE IN mm

F D.C. 32718-A  
D.C. 33777-A

UNLESS OTHERWISE STATED:- TOLERANCE AS PER  $\pm IT 15/2$   
RADIUS/CHAMFER



**MATERIAL :-**

- 1. STEEL SHEET/STRIP TO SPEC.  
IS : 513 : 1988 (REAFFIRMED IN 1992) COLD ROLLED & ANNEALED BEST SURFACE TYPE 'D' OR
- 2. IS : 1079 : 1988 (REAFFIRMED IN 1992) HOT ROLLED & ANNEALED GRADE Fe 330

**TECHNICAL REQUIREMENT :-**

AS PER SPEC CQA(A) 2804(k)

**PROTECTIVE TREATMENT :-**

ZINC PLATED IN ACCORDANCE WITH SPEC IS : 1573 : 1986 (REAFFIRMED IN 1991) SERVICE CONDITION 2, CLASS Fe Zn 12 AND CHROMATED.

22-2-2000	D.C. 36648-A	EST.MASS 66.00g APPROX. WAS 47.5g							
2-3-95	DC. 35928-A	RETRACED WITHOUT CHANGE.							
PREV. D.C <sup>s</sup> Nos :- 32718-A, 33101-A, 33298-A, 33777-A, 35658-A & 35855-A.									
R.No	DATE	AUTHORITY	REVISION	ZONE	AHSP	SDI-	D.O.		
					SIG.				
DRG SEALED:- 9-7-85									

DRN:- B.B.J.	CHD:- SDI-	TRD:- R.G.K.	COMP:-
SDI- C.D'MAN	SDI- 0 1/2 D.O.	SCALE :- 1:1	ASSY. DRG.
APPD.	SDI- FOR C.Q.A(A)	EST.MASS: 66.00g APPROX	ISV 140 SA
		GAUGE SCHD:- NOT APPLICABLE.	
		DATE :- 5-5-78	DESIGNER'S REF.
		MATL:- AS ABOVE.	CIA/AMN/2009 DET. 5
		PROTECTIVE FINISH:- AS ABOVE.	PART No.
			ISV 1569
			D.S. CAT No.
			NOT APPLICABLE
			AHSP:- C.Q.A(A) KIRKEE

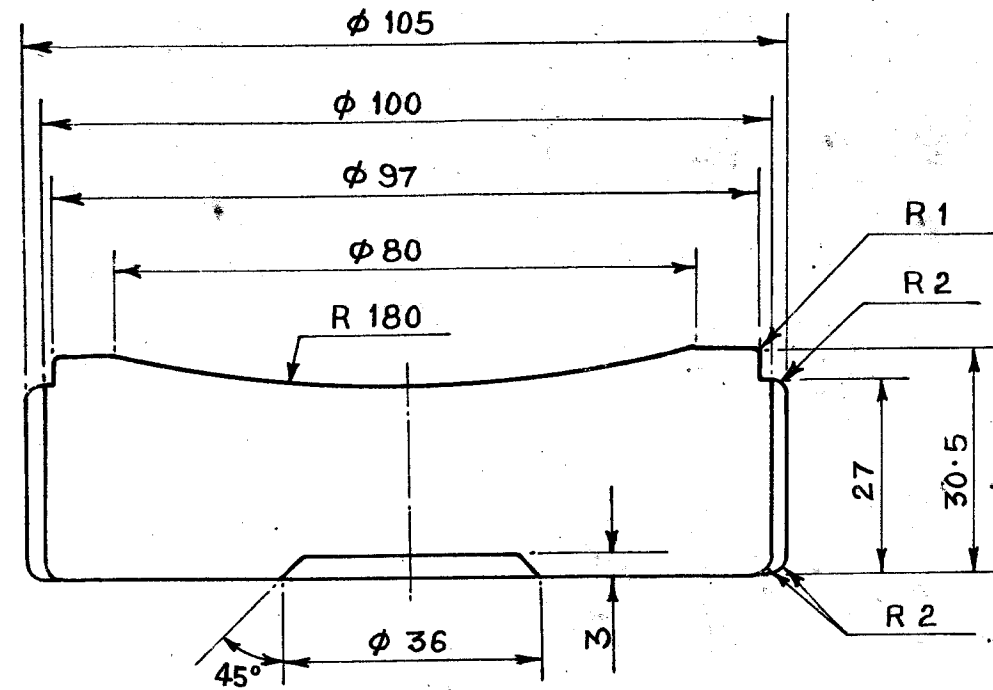
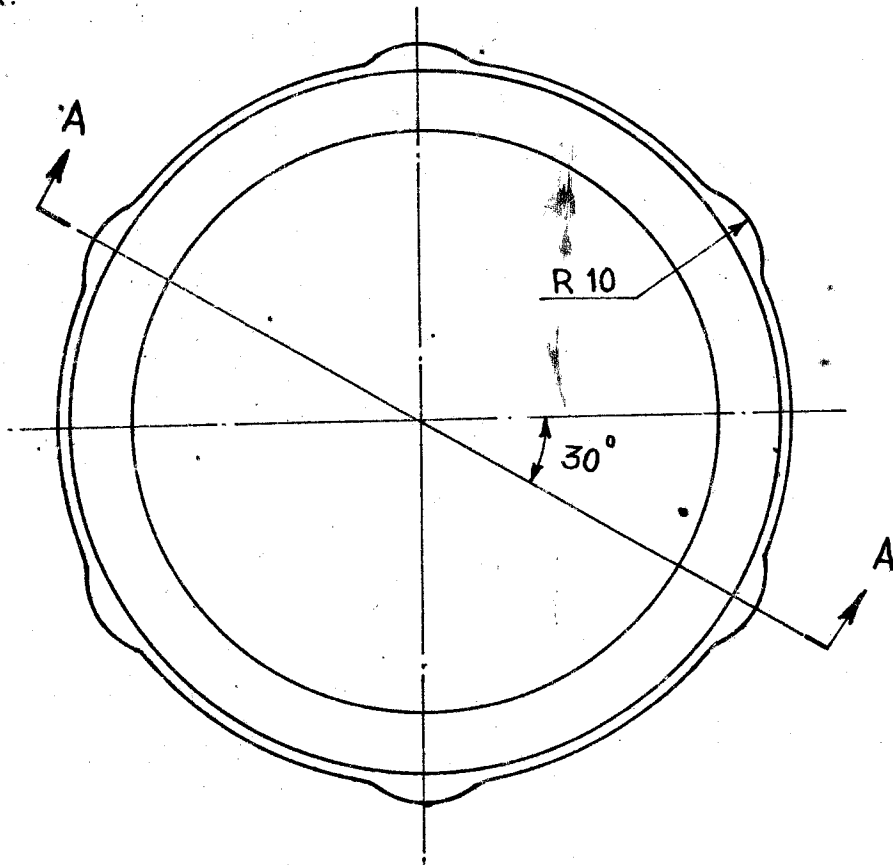
**SHOCK ABSORBER PLATE**

0791 ASI  
PART NO

DRG. CONVENTIONS CONFORM TO IS: SPECIFICATIONS.  
DIMENSIONS ARE IN mm

UNLESS OTHERWISE STATED :- TOLERANCE AS PER  $\pm IT : 15/2$   
RADIUS  
CHAMFER

DCI 32718-A  
D.C.I. 33777-A.



SECTION A-A

TECHNICAL REQUIREMENT.  
AS PER SPEC. CQA(A)2804 (K)

MATERIAL :-

EXPANDED POLYSTYRENE UNCOLOURED  
DENSITY : 50 kg/m<sup>3</sup>  
DRIED TO A MOISTURE CONTENT OF  
MAX. 8 GRAMS OF WATER PER kg  
OF MATERIAL

BASED ON FFV F 1301-051990 B Dt: 2-7-71

RNO	DATE	AUTHORITY	REVISION	ZONE	AHSP SIGN.	D.O.
	23-11-94	DC 35855-A	SPEC. UPDATED.			
	24-1-94	DC 35658-A	"DRG CONV. --- SPECS." ADDED. DRG. FORMAT BOX ENTRIES ADDED. TECH. REQ. NOTE ADDED. SPECIFIED.			
	9-7-85	D.C.I. 33777-A	DRG. SEALED.			
	5-3-79		TRACED WITHOUT CHANGE			
	9-9-78	D.C.I. 32718-A	DRG. SEALED PROV.			
DRG. SEALED :- 9-7-85						

DRN: BBJ	CHD: VRS	TCD: MNJ	COMP: Pz
SD/-	SD/-	SCALE :-	1:1
C.D'MAN	O/C D.O.	EST. MASS: 9g	
APPD.	SD/-	GAUGE SCHD: NOT APPLICABLE	
	FORCQA(A)	DATE: 3-5-78	
MATERIAL :- AS ABOVE.			
PROTECTIVE FINISH :- NOT APPLICABLE			

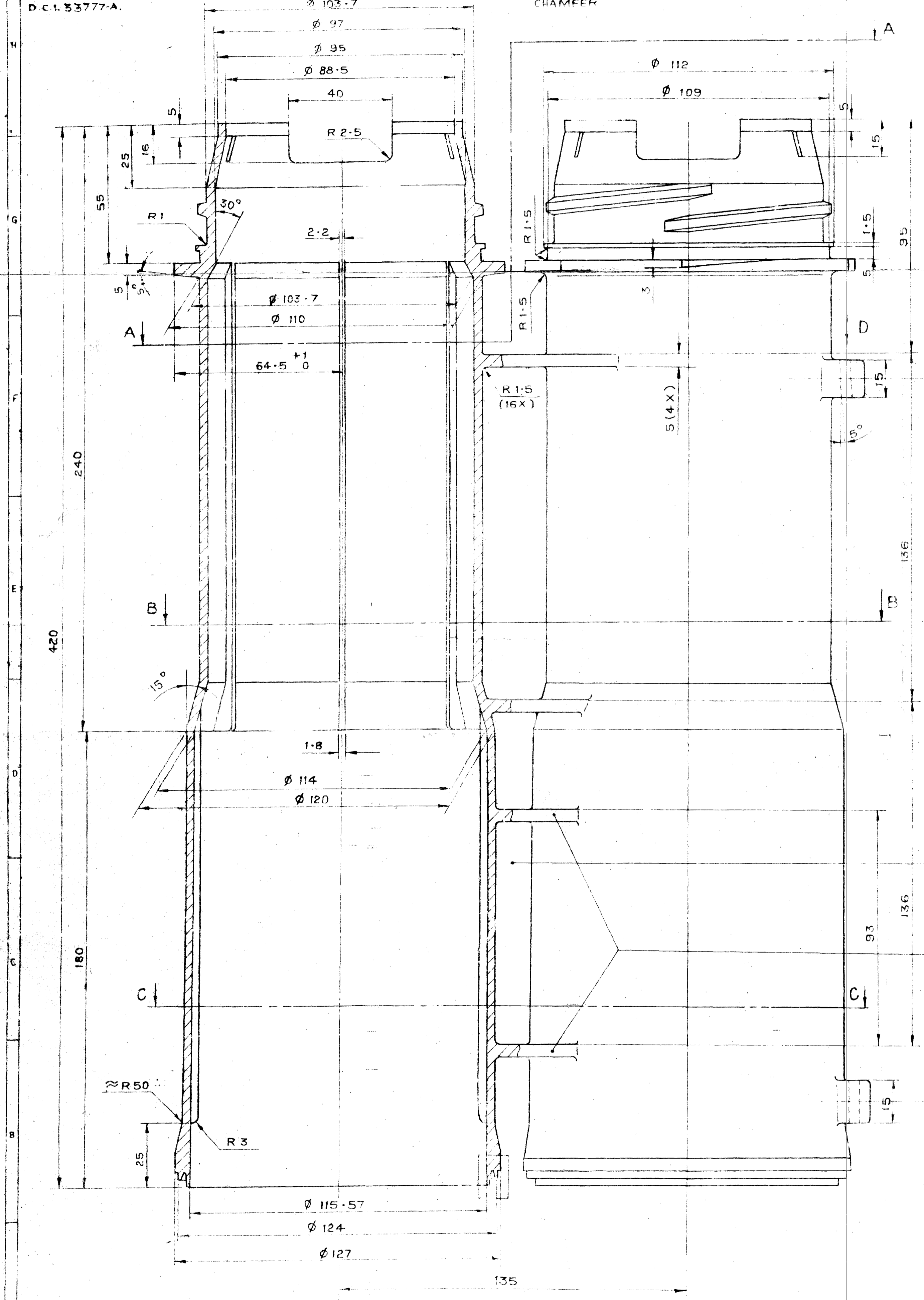
ASSY DRG :	ISV 140 SA
DESIGNER'S REF :	CIA/AMN/2009 DET. 5/2
PART NO :	ISV 1570
D.S. CAT NO :	NOT APPLICABLE
AHSP :-	CQA(A) KIRKEE

**SHOCK ABSORBER BODY**

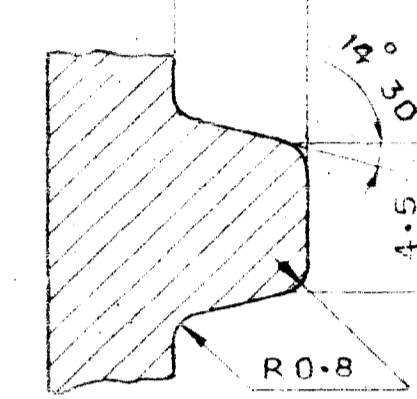
ILSI ASI.  
ON PART  
DCI 32718-A  
DCI 33777-A

DRG. CONVENTIONS CONFORM TO IS: SPECS.  
DIMMS ARE IN MM.

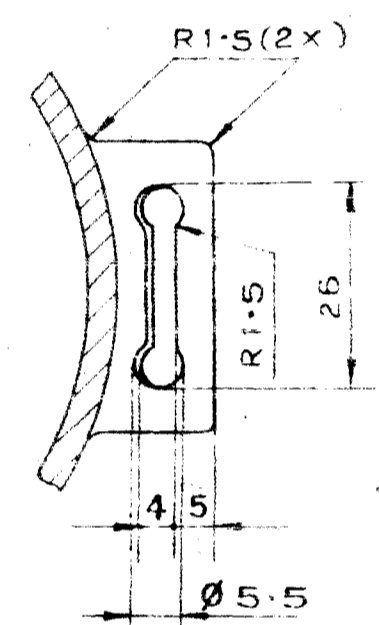
UNLESS OTHERWISE STATED  
TOL AS PER JS 15  
RADIUS  
CHAMFEK



FORM OF THREAD  
LEAD ANGLE 6°  
NUMBER OF STARTS 3



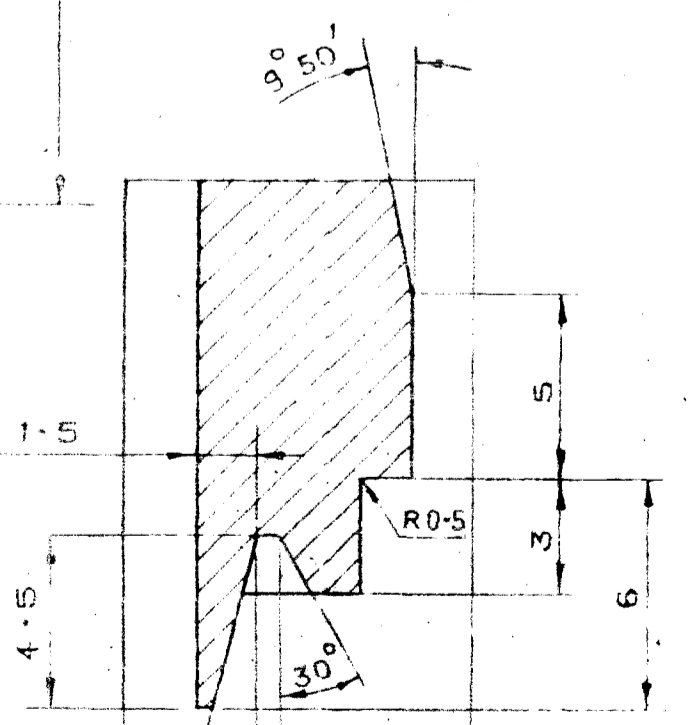
SCALE: 5:1



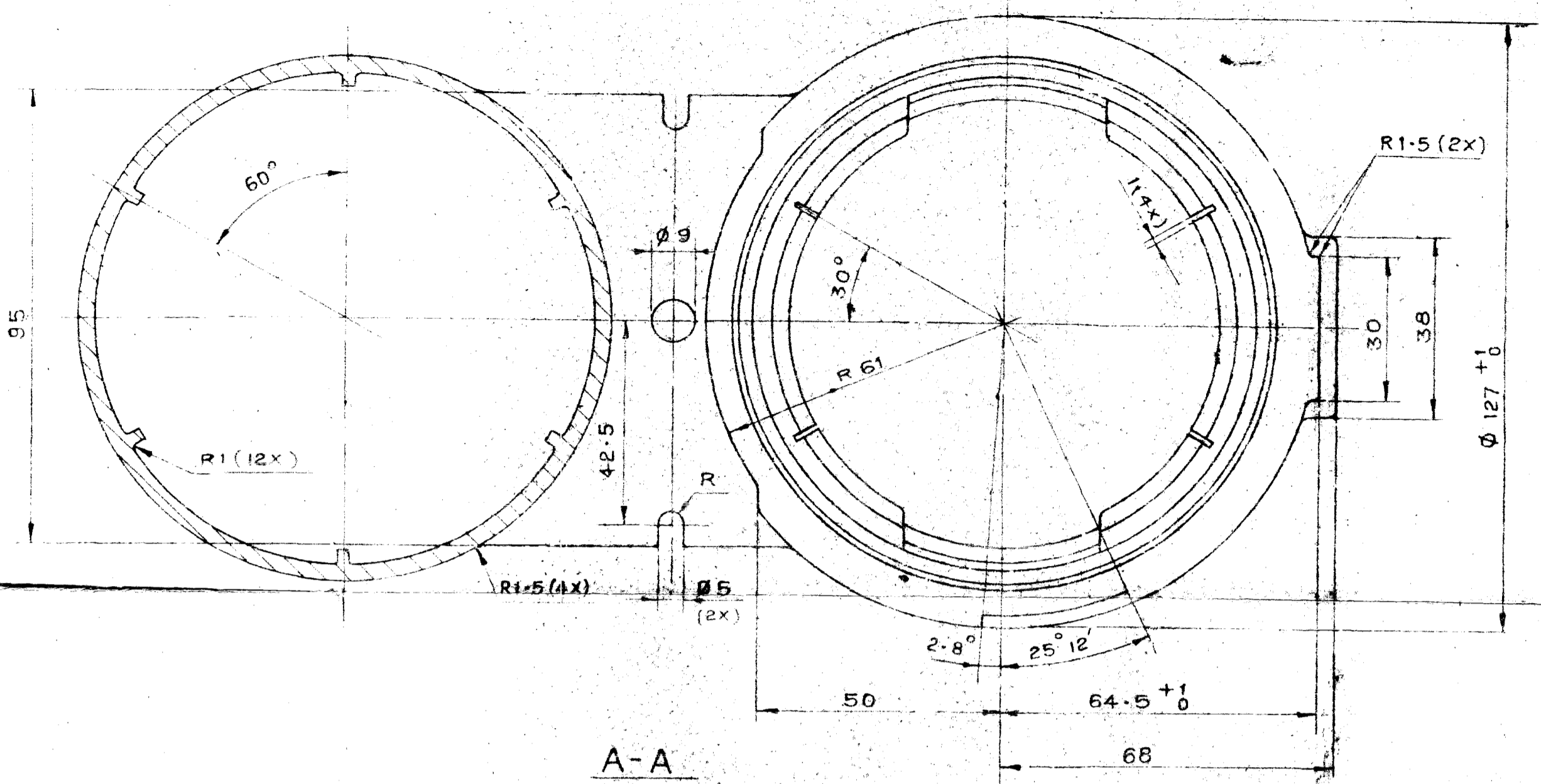
VIEW D

LONGITUDINAL RIB IN  
ACCORDANCE WITH  
SECTION C-C

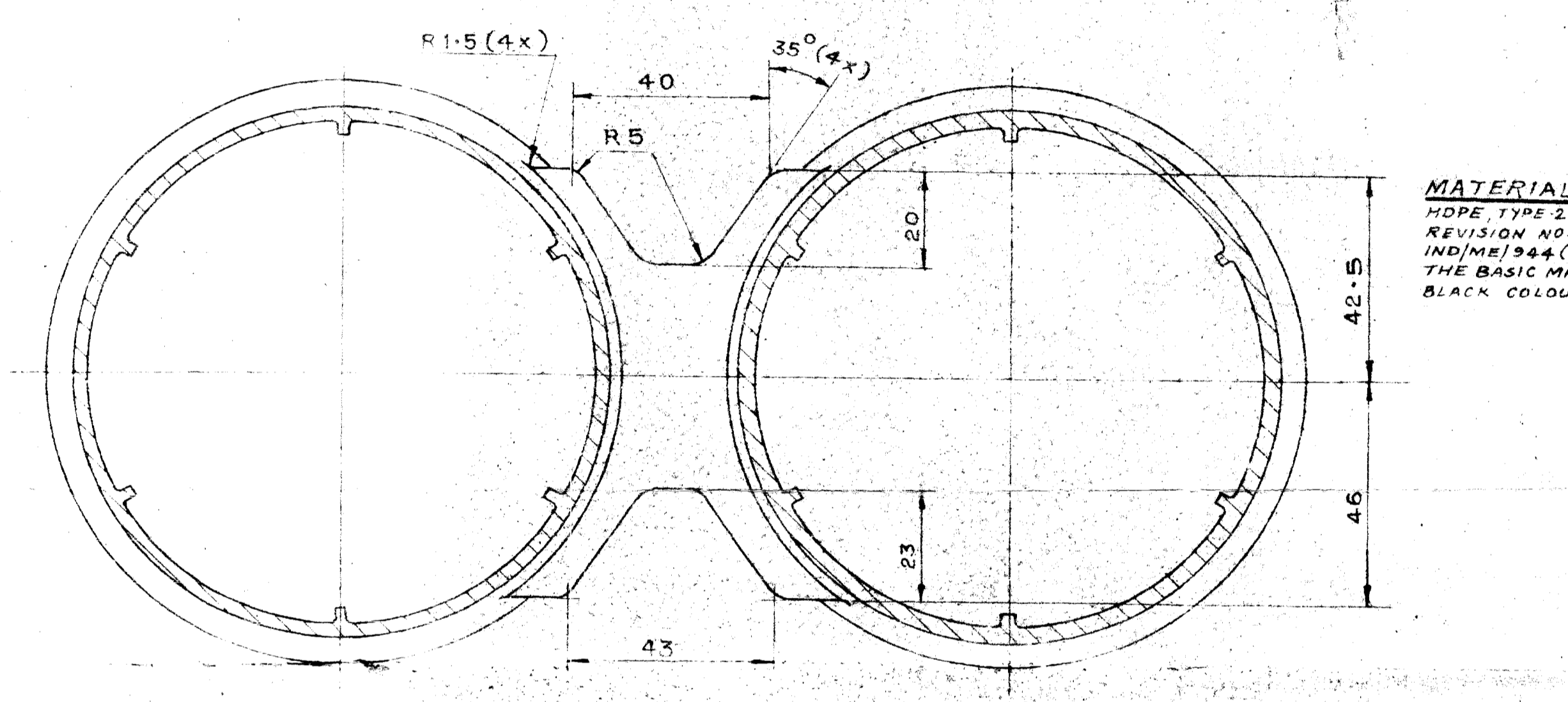
TWO BRIDGES IN  
ACCORDANCE WITH  
SECTION C-C



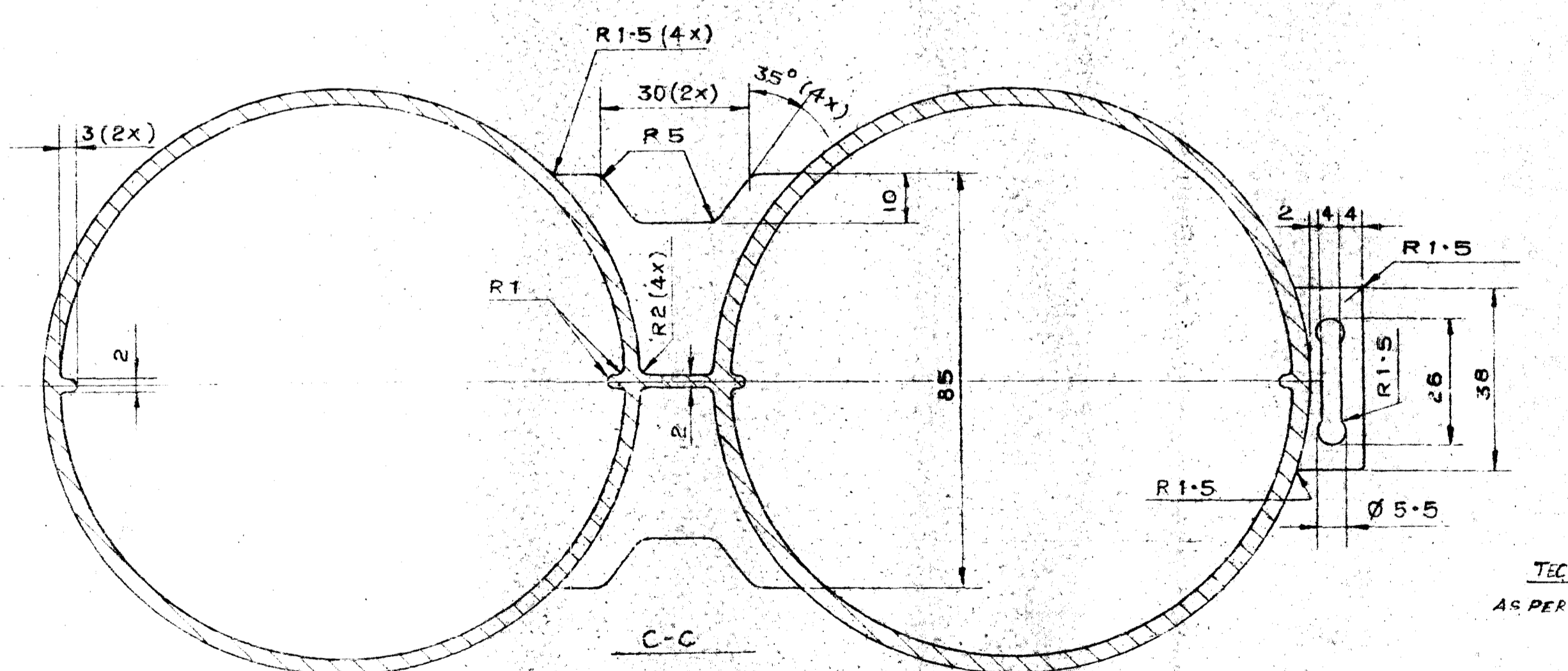
SCALE: 5:1



A-A



B-B



C-C

MATERIAL:-  
HDPE, TYPE 2, TO SPEC J55 9320-03, 035  
REVISION NO. 1, 2 TO 37, CARBON  
INDINEX 944 (PROV) IS TO BE ADDED TO  
THE BASIC MATERIAL TO ACHIEVE  
BLACK COLOUR.

TECHNICAL REQUIREMENT  
AS PER SPEC(QM) 2.R04 (k)

23-11-24	DC 35855-A	SPEC. UPDATED				
23-1-24	DC 36176-A	DRG CONTA. SPEC. ADDED PREVIOUS BOX				
23-10-22	DC 35451-A	ADD SERIAL TAGS TO BOARD				
11-4-22	DC 35228-A	MATERIAL NOTE AMENDED				
10-6-27	DCI 34154-A	MATERIAL NOTE AMENDED				
9-7-25	DCI 33777-A	DRG SCALED				
5-13-22	DCI 33228-A	MATERIAL AMENDED				
31-3-79		TRACED WITHOUT CHANGE				
9-9-78	DCI 32718-A	DRG SEALED PROV.				
R/NO	DATE	AUTHORITY	REVISION	ZONE	AHSP D.O. SIGN.	SDI
DRG SEALED: 9-7-85						

DRN KNN	CHD. VRS	TCD. HDW	COM. P.	ASSY DRG
SDI	SDI	SDI	SDI	
CD/MAN	D/C/D	EST. MASS	12.25g	
APPD.	SDI	GAUGE SCD	ABELLORU	
FOR C.Q.A.				DATE: 5-5-78
MATERIAL AS ABOVE				
PROTECTIVE FINISH: NOT APPLICABLE				

ISV 468A  
DESIGNER'S REF  
CIA/AMN/2009 DET. 8  
PART NO.  
ISV 1571  
D.S. CAT. NO.  
NOT APPLICABLE  
AHSP CQA(A) KIRKEE

BODY

5-8-04  
28-9-26 DCI 34177-A  
SCANNED WITHOUT CHANGE  
NOTE RE MATERIAL AMENDED

8991 ISI

ON PART NO.

DRG. CONVENTIONS CONFORM TO IS: SPECIFICATIONS.

DIMENSIONS ARE IN mm.

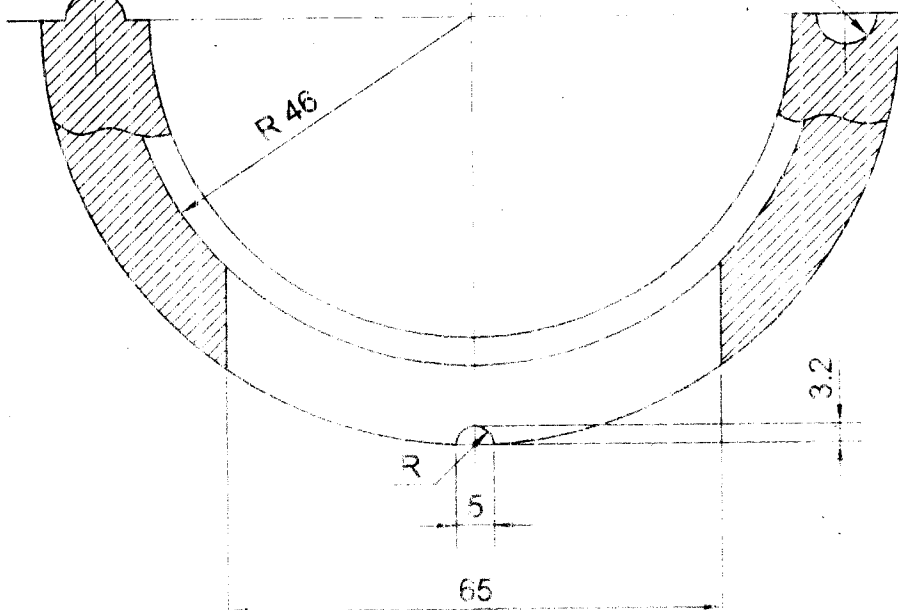
UNLESS OTHERWISE STATED:- TOLERANCE AS PER IS 15

RADIUS  
CHAMFER

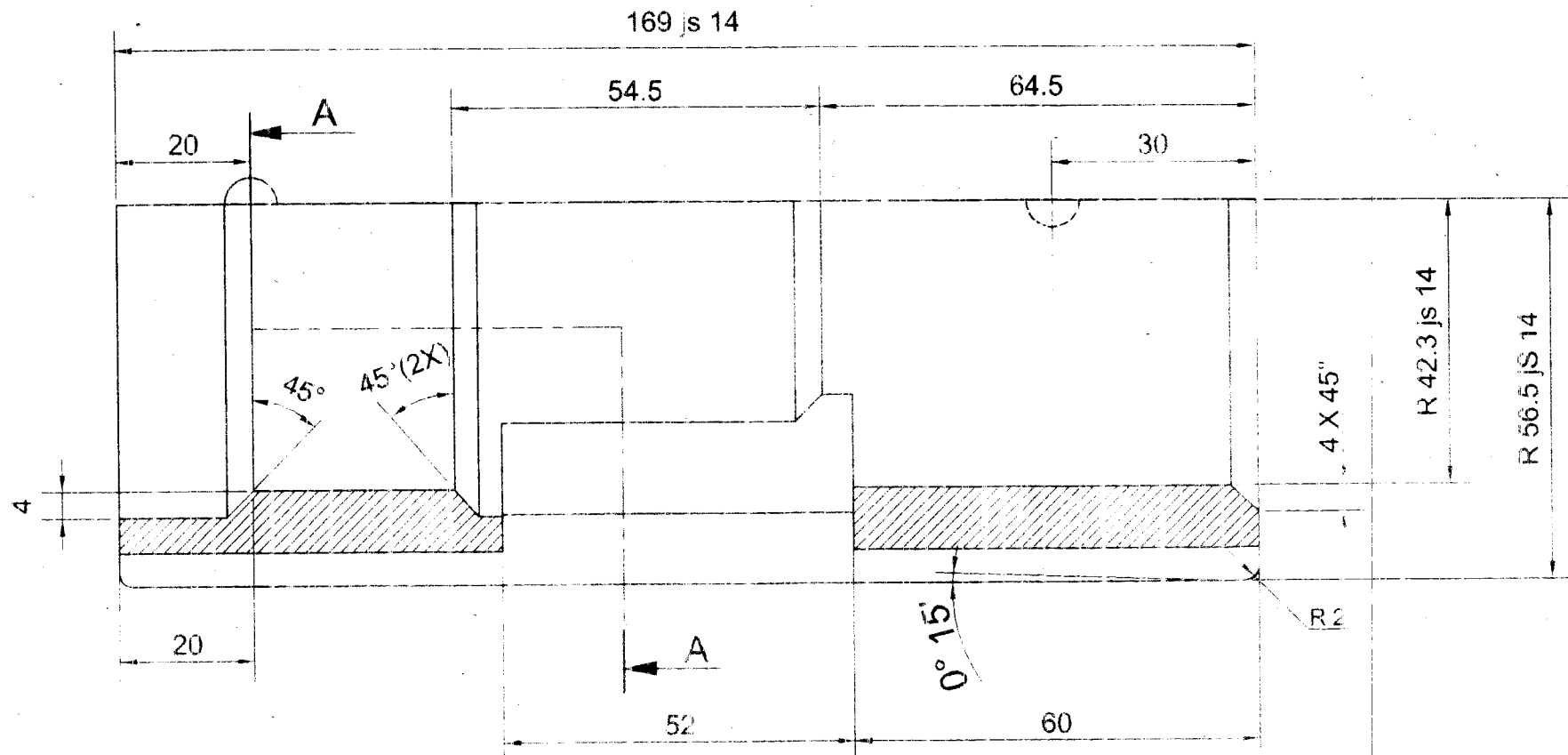
DC 32718-A  
DC 33777-A

SPHERE Ø 8 (2 X)

SPHERE Ø 8 (2 X)



A - A



**MATERIAL:-**

EXPANDED POLYSTYRENE (THERMOCOLE) NATURAL COLOUR  
DENSITY 70 kg/m<sup>3</sup> TO SPEC IS 4671 : 1984 (REAFFIRMED IN  
1990) DRIED TO A MOISTURE CONTENT OF MAX. 6 GRAMS  
OF WATER PER kg OF MATERIAL.

**TECHNICAL REQUIREMENT :-**

AS PER SPEC. CQA(A) 2804 (K)

				DRN - R Kambie	CHD:- SD/-	TRD:- SD/-	COMP:-	ASSY.DRG.	ISV 466 A
				SD/- D.D'MAN	SD/- D/C D.G	SCALE - 1 : 1	EST.MASS:- 9 g.		
				APPD.	SD/- FOR CQA(A)	GAUGE SCHD:- NOT APPLICABLE	DATE:- 05 - 05 - 1978		
R. NO.	DATE	AUTHORITY	REVISION	ZONE	AHSP SIG.	D.O.	MATL:- AS ABOVE. PROTECTIVE FINISH:- NOT APPLICABLE.		
DRG.SEALED:- 09 - 07 - 1985							DESIGNER'S REF. CIA/AMN/2009 DET. 4		
							PART NO. ISV 1568		
							D.S. CAT NO. NOT APPLICABLE		
							AHSP: CQA(A) KIRKEE		

PAD

3/9

ISV 1572

PART No.

DRG. CONVENTIONS CONFORM TO IS: SPECIFICATIONS.

DIMENSIONS ARE IN mm.

F D.C.I. 32718-A  
D.C.I. 33777-A

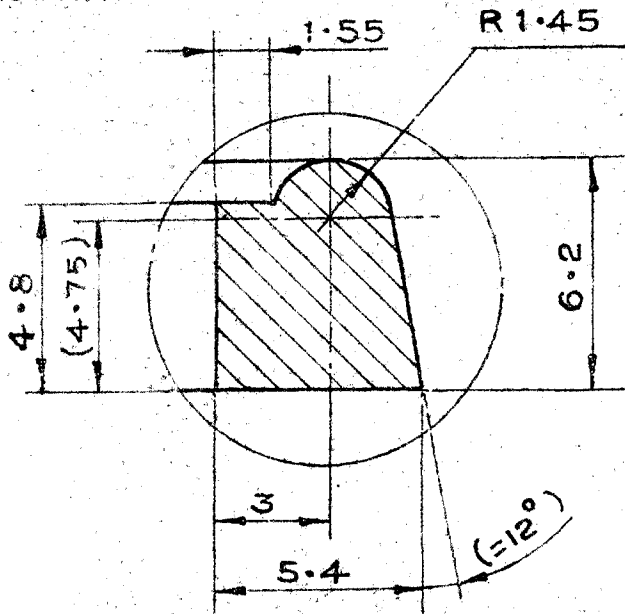
UNLESS OTHERWISE STATED  
TOL. AS PER CLASS M2 TO SIS 162950

RADIUS:-

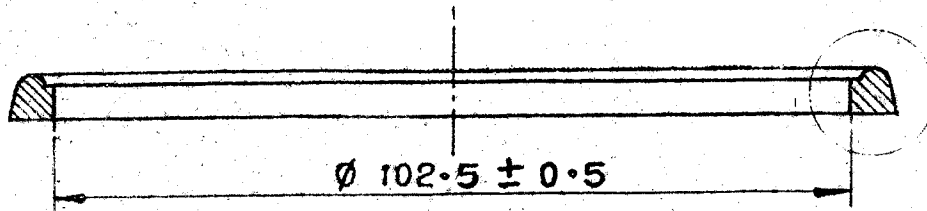
CHAMFER:-

TECHNICAL REQUIREMENT  
AS PER SPEC CQA(A) 2804 (k)

MATERIAL  
NATURAL VULCANISED RUBBER CLASS 'B'  
TO SPECN. IND/VE/584 (f)



SCALE :- 5:1

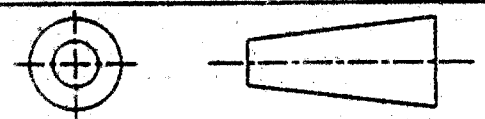


DGQA S. O. VOL-II CHAP 10 PARA 47 (a) DRG. SCAN & EDIT WITHOUT CHANGE  
NEGATIVE REPLACED IN SUPERSESSION OF EXISTING DILAPIDATED DRG.  
PREV. DC. Nos. 32718-A, 33298-A, 33777-A, 35858-A & 35855-A

R.No.	DATE	AUTHORITY	REVISION	ZONE	AHSP	D.O.
						SIG.

DRG. SEALED:-

DRM. KNN	CHD. SD/-	TRD. HDW	COMP.	ASSY. DRG.
				ISV 468 A
SD/- C.D/MAN	SD/- O/V C.D.O.	SCALE:- 1:1		
		EST.MASS:- 9 g		
APPD.	SD/- FOR CQA(A)	GUAGE SCHD:- NOT APPLICABLE		
		DATE:- 5-5-78		



MATL:- AS ABOVE  
PROTECTIVE FINISH:- NOT APPLICABLE

DESIGNER'S REF.  
CIA/AMN/2009 DET. 7

PART No.  
ISV 1572

D.S.CAT No.  
NOT APPLICABLE

AHSP:- CQA(A) KIRKEE

**SEALING RING**





**Special Instruction for Test for Carrier Ammn. 11A**

**Item code 6573810100**

As per specn No. CQA(A) 2804 (m) the following test will be carried out in ordnance factory Khamaria.

Name of the test - Specn. CQA(A)2804 (m)

**2. Rough usage Test - Para 9.4 page 8**

**Sample 05 Nos carrier ammn. 11A.**

Complete weighed assemblies (carriers packed with dummies as per method of packing) packed in their appropriate outer box/crate, as applicable, will be submitted for the following jolt and drop tests.

**(ii) Jolt Test - Para 9.4.1 page 8.**

The complete package resting on its side or base will be jolted for 8 hours in a jolting machine having a lift of 50mm and frequency 60 jolts/min. Alternatively 5000 bumps each in three different orientations allowing 25 mm free drop per bump be given in bump test machine.

**(ii) Drop Test - Para 9.4.3 Para 8**

Carriers jolted as per para 9.4.1 will be dropped individually on concrete/hard surface as follows:

(c) Drop from a height of 1.5 m at 45 deg base down orientation.

(d) Two successive drops each on side, lid and base from a height of .3m (Six drops).

**(iii) Drop test at - 20°C - Para 9.4.4 para 8.**

Two carriers per lot duly packed with dummies as per method of packing will be individually subjected to -20°C conditioning test for 24 hours followed by drop test as per para 9.4.3 (a) and (b).

**2. Water Immersion Test - Para 9.5. page 8**

At the conclusion of drop test the carriers shall be examined for cracks by immersing the carrier in 305 cm of water head for 5 minutes. The interior of carrier shall be free from liquid water and there shall be no sign of inert stores in the carrier having got wet.

**3. Handle Test - Para 9.6 Page 8**

The handle/Shoulder Strap shall withstand a rapidly applied load of five times the filled mass of complete carrier, which shall be applied for five minutes. There should be no failure of the Handle or Shoulder Strap or permanent deformation of the fastenings.

**4. Separation Test - Para 9.7 Page 8**

This test will be carried out with rivetted twin carriers only. The carriers should not separate when a rapidly applied load of five times the filled mass of complete carrier is applied for 5 minutes.

**5. Fitment Trial of Carrier Ammn. 11 A**

**Sample - 10 Nos. Carriers Ammn. 11A.**

The following details are to be confirmed in the consignment of Carriers Ammn. 11A.

- (a) The inner and outer surface should be smooth.
- (b) Proper visibility of the marking / stencilling to be maintained.
- (c) The density of Rear Support, Front Support and Shock Absorber Body should be within limit to avoid the breakage of packing material due to ammn. weight inside carrier and rattling of ammn. during transportation.