

No. 01898/DGQA/Tech Coord (16TC)/ 816 /D(QA)/17
Government of India
Ministry of Defence
Deptt of Def Production

97A
/

DHQ PO, New Delhi – 110 011

Dated 12 Oct 2017

To
The Director General Quality Assurance
Ministry of Defence
New Delhi – 110 011

**TESTING CHARGES OF HELMETS COMBAT
FIBRE GLASS FOR POLICE**

Sir,

I am directed to convey the sanction of the competent authority for levying Proof Testing Charges on firing test of Helmet Combat Fibre Glass for police by the Senior Quality Assurance Establishment (SA), Kanpur in accordance with Appendix 'C' to the specification to IS:9562:1980 and Appendix 'H' to specification CIGS/98(d) respectively.

2. The Charges will be levied by SQAE (SA), Kanpur for testing the Helmets as under: -

<u>Type of Firing</u>	<u>Testing Charges Per Helmet</u>
Helmet Fibre Glass : 04 rds of cartgs SA Ball .38 inch MK 2	Rs. 933 /-*

* Applicable Goods & Service Tax (GST) wef 01 Jul 2017 shall be charged alongwith proof testing charges on firing test of helmet combat fibre glass.

3. All the Helmet manufacturers shall be required to deliver the helmets for firing tests at SQAE (SA), Kanpur through CQA(GS), Kanpur. No firm will deal with SQAE (SA), Kanpur directly.

4. CQA (GS), Kanpur will arrange collection of testing charges alongwith applicable Goods & Service Tax (GST) wef 01 Jul 2017 in advance from the firms. While adjusting the payment, the Goods & Service Tax (GST) wef 01 Jul 2017 shall be transferred to the respective local taxation office through specified challan immediately, whereas the amount realised on account of proof testing charges will be credited to the Govt under Major Head-0076 of Defence Services Army; Minor Head-109 of Inspection Organisation . A

certificate to this effect will be given by CQA (GS), Kanpur to SQAE (SA), Kanpur at the time of submission of helmets for firing test.

5. The orders shall be effective for a period of three years from the date of issue of the letter No. 01898/DGQA/Adm-16TC/ 1001 /D(QA)/16 dated 03 Nov 2016 and upto 02 Nov 2019. Thereafter the contents of this letter will be reviewed. However, these rates will continue to be applicable till the letter dated 03 Nov 2016 is superseded by a fresh Govt letter.

6. This letter is issued with the concurrence of Integrated Defence Finance vide their RF No. 1(5)/2016 /IF(DS) dated 05 Oct 2017.

Yours faithfully

Kiran

(Kiran Mala Kujur)

Under Secretary to the Govt of India

Copy to: -

The Controller General of Defence Accounts, RK Puram
Director of Audit, Defence Services
The Deputy Director of Audit, Defence Services, Meerut
The Deputy Director of Audit, Defence Services, Calcutta
DGQA/Adm-16TC
DGQA/Arm-10
IF(DS), 21-B, South Block
Ministry of Home Affairs
DGOF
SFF
SPG
RPF
D(QA)

(Copies signed in ink to be sent to all PCDA's.)

APPENDIX C

(Clause 9.3)

TEST FOR STRENGTH OF RETENTION SYSTEM

C-1. PROCEDURE

C-1.1 The helmet is placed on the appropriate headform with the chin strap fastened over a device approximating to the shape of the bony structure of the lower jaw. This shall consist of two metal rollers each 12.5 ± 0.5 mm in diameter and at 76 ± 0.5 mm centres apart. The helmet shall be supported on the headform so that the points of attachment of the chin strap to the shell will be subjected to the same test as the strap itself.

C-1.2 After applying a preload of 0.25 kN (25 kgf) for not less than 30 seconds an additional load of 0.25 kN (25 kgf) shall be applied to the device retained by the chin strap at a uniform rate of 1 kN (100 kgf) per minute. After 2 minutes at the maximum load the elongation of the retention system is determined by measuring the vertical distance between the reference point on the device and on top of the helmet shell, and comparing this distance with that obtained under preload at 30 seconds.

APPENDIX D

(Clause 9.4)

REGIDITY TEST

D-1. APPARATUS

D-1.1 Press with Two Parallel Metal Plates — They are arranged so that the distance between them could be determined within ± 1 mm.

D-2. PROCEDURE

D-2.1 One helmet shall be tested along its longitudinal axis and the other along its transverse axis. In both cases the helmets shall be positioned between the two parallel plates by means of which the initial load of 30 N (3 kgf) shall be applied to the helmet shell. After 2 minutes, the distance between the plates shall be measured. The load shall then be increased to 630 N (63 kgf) by increment of 100 N (10 kgf) every 2 minutes and maintained at that level for 2 minutes, after which the distance between the plates shall be measured again. The load applied to the plates shall then be reduced to 30 N (3 kgf) and maintained at this level for 5 minutes. The distance between the plates shall be

METHOD

The helmet shall be mounted on the wooden dummy head and the chinstrap shall be tightened so that the helmet will remain secured held. The dummy head with the helmet in turn shall be securely fastened to the rigid platform.

The body of the helmet shall then be struck by the 0.380" or low power 9 mm cartridge from a distance of 4.6 metres at four places, one each on the front, rear and the two sides.

Care shall be taken during the test to ensure that the cartridge strikes the helmet shell body at right angle and at least 1 cm above the rim.

*Note:- Cartridge, SA Ball 9 mm Low Power having striking power similar to that of 0.380" Mk 2 has been recently developed exclusively for the purpose of testing the helmet. The production of the cartridge is, however, yet to be established.

HELMET COMBAT FIBRE GLASS

SPECIFICATION NO - CIGS/US/93(d) APPENDIX 'I'

METHOD OF TEST FOR RESIN CONTENT OF LAMINATE

Five test specimens one each from front, rear and two sides and the crown shall be cut from the shell body. The test specimens shall have a size of 32 ± 2 mm x 32 ± 2 mm and the sides of the specimen shall be square to the faces and the edges shall not be frayed.

The specimen shall be weighed on an analytical balance in a previously weighed, ignited crucible. The crucible containing the specimen shall be placed in a furnace at a temperature of not more than 345°C. The temperature of the furnace shall be raised to 565 ± 20°C at a rate that will not cause blowing or loss of resin. The specimen and the crucible shall be ignited at this maximum temperature to a constant weight (approximately for 4 to 6 hours) cooling in a desiccator between weighings.

The resin content shall be calculated as follows :

$$\text{Resin Content \%} = \frac{\text{Loss in weight}}{\text{Original weight}} \times 100$$

All the five readings calculated shall be reported.

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