

**GOVERNMENT OF INDIA
MINISTRY OF DEFENCE
RESEARCH AND DEVELOPMENT ORGANISATION
DIRECTORATE OF AERONAUTICS**

TYPE APPROVAL No : 312

ISSUED TO : M/s BENGAL WATER PROOF WORKS
(1940) LTD. No. 41, SHAKESPEARE SARANI
CALCUTTA-700017.

NAME OF ITEMS : **OXYGEN HOSE FOR ISKRA AIRCRAFT.**

CO-ORDINATED BY : RCMA (A/C)

This is to certify that the oxygen hose for Iskra Aircraft (OH-00-00) designed and developed by AERO BIO ENGINEERING UNIT, Ministry of Defence (R&D), Bangalore-38 through M/s Bengal Waterproof Works (1940) Ltd, Calcutta-700017 have been tested according to the Specification BS-2F-63 with the following deviations and have been found suitable for use on ISKRA aircraft.

Deviations from BS-2F-63

- | | | |
|--|---|--|
| (a) Clause 3 (b) | : | The tensile strength of the steel wire shall be 140 to 160 kg/mm ² . |
| (b) Clause 4 (a)
Length | : | The hose shall be supplied in lengths as specified by the users. |
| (c) Clause 4 (b)
Diameters &
Thickness | : | These shall be as specified in the ABEU drawing OH-00-00 Issue 1 of 27-10-80 which replaces Fig 1 of BS-2F-63. |
| (d) Clause 5
Weight | : | The weight of the hose shall not be more than 270 gms for a length of 632 mm. |
| (e) Clause 8 (b) | : | Freedom from internal constriction. The bob dimensions shall be 18.89 mm dia 1.5 inch long & 1/16"x45" chamfer. |
| (f) Clause 8 (a) | : | Fig.2 is deleted. An appropriate gauge shall be used for acceptance of the end fittings. |
| (g) Appendix 'B' Method of
Test for Flexibility | : | The rigid tube in which the oxygen hose is inserted shall be 150 mm long & 31 mm internal diameter. The wt reqd to be attached |

- to the free end of the hose shall be 210 gms.
- (h) Table-1 Sl.No. VIII : The resistance to low temperature, the rigidity modulus at -50°C test is deleted and the following test substituted in its place.

Resistance to Low
temperature
(rigidity modulus)
test

The oxygen hose shall be placed in the climatic chamber and subjected to -40°C 55 mm Hg for 3 hours. After removal functional tests for flexibility, resistance to splitting and kinking as per clause 8 (d) & (e) shall be carried out and the oxygen hose shall comply with these requirements.

2. The specific gravity of the oxygen hose as agreed to by ABEU are as under :
- (a) Specific gravity of lining : 1.14
- (b) Specific gravity of second layer : 1.145
3. The approval serial No. quoted above must be reflected on all relevant drawings, contracts and release notes.
4. This approval is contingent upon the quality control aspects of bulk production being cleared by DTD&P (Air), Ministry of Defence, New Delhi.
5. This approval is valid initially for three years from the date of issue and will have to be renewed subsequently.
6. Prior agreement of Directorate of Aeronautics will have to be obtained if this approval is to be transferred to any other agency or if changes within the Type Record enclosed are effected.


Gp Capt

No. : AERO/RD-124/147
Date : 13 Jun 1980

(R.K. SINGHAL)
Offg. Director of Aeronautics