

Indian Standard
SPECIFICATION FOR
FOAM MAKING BRANCH PIPE

(*First Revision*)

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard
SPECIFICATION FOR
FOAM MAKING BRANCH PIPE
(First Revision)

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Indian Standard

SPECIFICATION FOR FOAM MAKING BRANCH PIPE

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 27 April 1983, after the draft finalized by the Fire Fighting Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 Foam making branches provide one of the means for the production of mechanical foam. This work on self-aspirating principle in which air is induced into the stream of water-foam solution by the suction effect created at the water head in the branch during discharge of solution under pressure. This standard was first published in 1969. The revision has been prepared to include type of branches now used by fire brigades being applicable to other type of foam.

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the results of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard lays down the requirements regarding material and the performance of the three types of foam making branches.

2. GENERAL

2.1 Foam making branches shall be designed for the generation of mechanical foam from the foam compound conforming to IS : 4989-1974†, or aqueous film forming foam (AFFF). These shall consist of 3 principal

*Rules for rounding off numerical values (revised).

†Specification for foam compound for producing mechanical foam for fire fighting (first revision).

parts indicated in Fig. 1. However, a stopcock capable of stopping the water under working pressure and a control valve capable of controlling the water discharge, shall be provided in foam making branch FB-5X type.

3. TYPES

3.1 The foam making branches shall be of three types given in Table 1.

TABLE 1 DETAILS OF TYPES AND THEIR REQUIREMENTS

TYPE	PRESSURE kgf/cm ²	DISCHARGE CAPACITY (1/Min) (WATER)		FOAM THROW %	THROW m	EXPANSION Min
		Min	Max			
FB 5X	5 to 5.5	225	250	5 to 6	15 jet	8 times
FB 10X	8 to 8.5	450	500	5 to 6	18 jet 12 spray	10 times
FB 20X	8 to 8.5	900	1 000	5 to 6	20 jet 14 spray	10 times

4. MATERIALS

4.1 Casting shall be made of leaded tin bronze conforming to Grade LTB 2 of IS : 318-1981* or aluminium alloy conforming to IS Designation 4450 of IS : 617-1975†.

4.2 The sheet work and strainer shall be of brass sheet conforming to Grade BS 60 of IS : 410-1977‡, or aluminium sheet conforming to IS : 7882-1975§.

4.3 The washer shall conform to IS : 937-1981||.

5. PERFORMANCE REQUIREMENTS

5.1 The foam making branches shall conform with the performance requirements given in Table 1. The branch is operated at an angle of 30° in still air.

5.2 The foam so produced shall be tested for 25 percent drainage time according to procedure laid down in IS : 4989-1974¶ taking quantity pans of 100 litre capacity. The mechanical foam qualities shall be within the limits shown in Fig 2.

*Specification for leaded tin bronze ingots and castings (*second revision*).

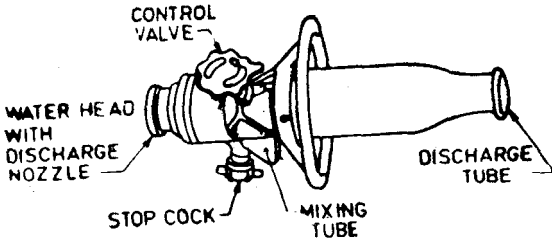
†Specification for aluminium and aluminium alloy ingots and castings for general engineering purposes (*second revision*).

‡Specification for cold rolled brass sheet, strip and foil (*third revision*).

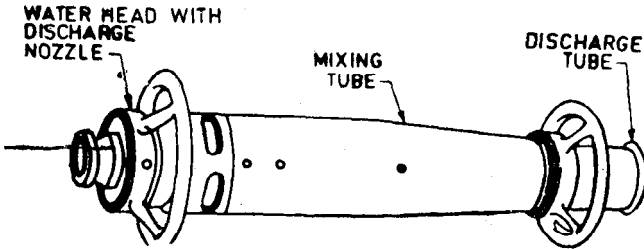
§Specification for aluminium sheet and strip for aircraft purposes. (19000)

||Specification for washers for water fittings for fire fighting purposes (*second revision*).

¶Specification for foam compound for producing mechanical foam for fire fighting (*first revision*).



1A FB-5X Type



1B FB-10X and FB-20X Type

FIG. 1 TYPICAL SHAPE OF FOAM MAKING BRANCH

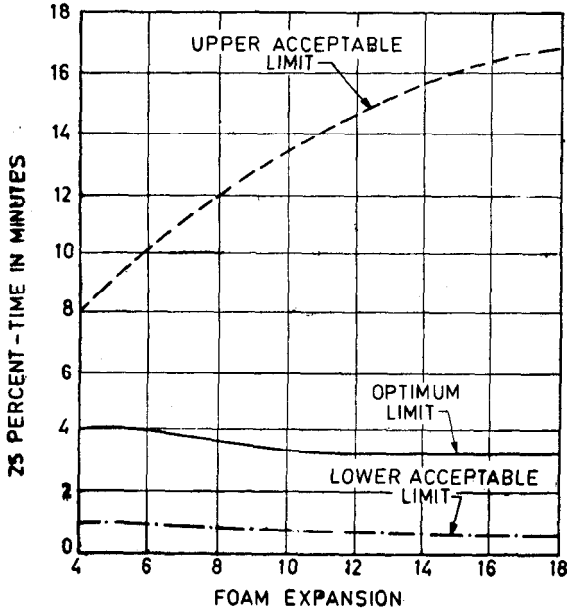


FIG. 2 PERFORMANCE REQUIREMENT OF FOAM MAKING BRANCH

6. MARKING

6.1 The foam making branches shall be clearly and permanently marked with the following information:

- a) Name of the manufacturer or trade-mark, if any;
- b) Type of the branch;
- c) Material of manufacture; and
- d) Year of the manufacture.

6.1.1 The product may also be marked with Standard mark..

6.2 The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

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