ENGINEERING STANDARDA

FOR

FIRE FIGHTING HOSE BOX AND / OR SHELTER

ORIGINAL EDITION

NOV. 1993

This standard specification is reviewed and updated by the relevant technical committee on May 2000. The approved modifications are included in the present issue of IPS.

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0. INTRODUCTION

"Fire Fighting and Fire Protection Systems" are broad and contain variable subjects of paramount importance therefore, a group of engineering standards are prepared to cover the subject.

This group includes the following standards:

STANDARD CODE	STANDARD TITLE
IPS-E-SF-120	"Off-Shore Installation Fire Fighting & Fire Protection"
IPS-E-SF-140	"Foam Generating and Proportioning Systems"
IPS-E-SF-160	"CO_2 Gas Fire Extinguishing Systems"
IPS-E-SF-180	"Dry Chemical Fire Extinguishing Systems"
IPS-E-SF-200	"Fire Fighting Sprinkler Systems
IPS-E-SF-220	"Fire Water Distribution and Storage Facilities"
IPS-G-SF-240	"Fire Water Pump Systems"
IPS-E-SF-260	"Automatic Detectors and Fire Alarm Systems"
IPS-E-SF-300	"Application of Breathing Apparatus in Safety and Fire Fighting"
IPS-E-SF-340	"Fire Figting Hose Box and/or Shelter"
IPS-E-GN-100	“Engineering Standard for Units“

This Standard covers:

"Fire Fighting Hose Box and/or Shelter"

1. SCOPE

This Standard is prepared to cover an enclosure to accommodate fire hoses, water and foam branchpipes, containers of foam compound, coupling spanners, collecting/dividing breechings with adaptors and other ancillary piece of equipment.

Note:

This standard specification is reviewed and updated by the relevant technical committee on May. 2000. The approved modifications by T.C. were sent to IPS users as amendment No. 1 by circular No 107 on May. 2000. These modifications are included in the present issue of IPS.

2. REFERENCES

Throughout this Standard the following dated and undated standards/codes are referred to. These referenced documents shall, to the extent specified herein, form a part of this standard. For dated references, the edition cited applies. The applicability of changes in dated references that occur after the cited date shall be mutually agreed upon by the Company and the Vendor. For undated references, the latest edition of the referenced documents (including any supplements and amendments) applies.

NFC (NFPA) (NATIONAL FIRE CODES)

Section 24

3. DEFINITION AND TERMINOLOGY

3.1 Hose Box and/or Shelter

An enclosure for keeping fire hoses and other emergency tools in hand.

3.2 IPI as used in this Standard means Iranian Petroleum Industries.

4. UNITS

International Systems of Units (SI) in accordance with IPS-E-GN-100 shall be used.

5. GENERAL REQUIREMENTS

5.1 To protect fire hoses and miscellaneous tools and devices from direct sun, dust, rain, hot and cold weather, etc. an enclosure should be designed to accommodate the equipment.

Fire hoses should be coupled together and installed in such a manner as they could be pulled out immediately by fire fighters to the scene of fire without lapse of time.

5.2 An adequate supply of hose and equipment shall be provided when hydrants are intended for use by plant personnel or a fire brigade. The quantity and type of hose and equipment will depend upon the number and location of hydrants relative to the protected property, the extent of the hazard, and the fire fighting capabilities of the potential users.

5.3 Hose shall be stored so that it is readily accessible and is protected from the weather. This should be done by storing hose in hose box or shelter or by locating hose reels or hose carriers in weatherprotecting enclosures.

6. LOCATION

6.1 When hose boxes or shelters are used, they shall either be located over the hydrant or immediately, nearby. Hydrants within hose box or shelter shall be as close to the front of the box or shelter as possible and still allow sufficient room in back of the doors for the hose gates and the attached hose.

6.2 When hose reels or hose carriers are used, they shall be located so that the hose shall be brought quickly into use at a hydrant.

6.3 When hose boxes or shelters are located over hydrants, it is good practice to have two or three lengths of hoses connected together and attached to the hydrant ready for use.

7. CONSTRUCTION

Hose boxes or shelters shall be of substantial construction on adequate foundations. The construction shall be such as to protect the hose from weather and vermin and designed so that hose lines can be quickly brought into use. Clearance shall be provided for proper operation of the hydrant wrench. Proper ventilation shall be provided. The exterior shall be painted or otherwise suitably protected against deterioration.

7.1 Size and Arrangement

Hose box or shelter shall be of adequate size and arrangement to provide shelves or racks for the hose and equipment. For equipment details of hose boxes or shelters, see Clause 7.3.

7.2 Marking

Hose boxes and shelters shall be plainly identified.

7.3 Equipment-General

When enclosures are used, each shall be equipped as a minimum with the following equipment:

a) 4 pieces IPI fire hoses;

b) 2 pieces water branch pipes, jet/spray;

c) 1 pieces foam branch pipe, with foam pick-up tube assembly;

d) 4 pieces containers each with 100 liters of foam compound. Type of foam compound will depend on the equipment and area to be protected;

e) 2 pieces collecting and/or dividing breechings with adaptors as required;

f) optional equipment to be included in an enclosure are as follow:

1) Fire axe with brackets;

2) Crow bar with brackets;

3) Hose and ladder straps.

8. NUMBER OF HOSE ENCLOSURES

The number of hose enclosures and their contents, shall be indicated on the list prepared for each project and they shall be shown on an appropriate layout drawing.

9. TYPICAL HOSE AND SHELTER

According to requirements.

10. DOMESTIC SERVICE USE PROHIBITED

The use of hydrants and hoses for purposes other than fire-related services shall be prohibited.

11. FIRE POINTS

11.1 Fire points, containing portable and wheeled type extinguishers, shall be provided in and around processing areas, either separately or in combination with hose boxes or shelters.

They shall be open for ease of accessibility but shall have a roof for weather protection. The steel structure shall be protected against atmospheric corrosion by an epoxy paint system of 120 µm minimum thickness, in standard color red.

11.2 Unless otherwise specified in the project specification, each fire point shall contain the minimum requirements as follow:

- 4 pieces 75 kg capacity, wheeled dry powder units;
- 8 pieces 12 kg capacity, dry powder hand extinguishers;
- 1 pieces 100 dm^3 capacity wheeled type foam extinguisher complete with inductor.

The number of fire points and their content shall be indicated in the list prepared for each project.