

**REPUBLIC OF ALBANIA
UNDP-ALBANIA
Number: 65526**

**TECHNICAL SPECIFICATIONS
FIRE PROTECTION**

**FOR THE CONTRACT
PREPARATION OF DESIGN AND SUPERVISION FOR REPAIR AND
RETROFITTING OF:**

ISMET NANUSHI JOINT HIGH SCHOOL

**LOT I
MUNICIPALITY OF DURRES**

CLIENT



This Project is Funded by the
European Union



CONSULTANT



August 2020

Fire extinguishers

Fire extinguishers can be divided into the following types:

1. Fixed types

- Hydrant inside the building
- Hydrant outside the building

2. Mobile type

- Various bombs

The designer should, according to the need and norms, establish and design an effective plan, according to which the necessary extinguishers will be installed. Below are some systems from which the designer can choose.

Fire extinguishers are active components of fire protection. The passive component should not be forgotten, such as the choice of fire-retardant materials.

Hydrant tubes

Hydrants located inside a building should be of the type described and presented below or similar.

A hydrant consists of the valves (hydrant), the tube, the linen and the box in which they are located.

Hydrant pipes are varied according to need and manufacturer. They have as usual a maximum length of 30 m. For special cases the hydrant manufacturer should be contacted and a special solution found.

The hydrant box can be fixed to the walls, but it is recommended that it be inserted into the walls inside in such a way that the lid of the box is level with the wall. This placement system is safer, especially when it comes to public construction, schools, etc. A fire extinguisher can also be integrated into the hydrant box, as shown in the pictures below, German products.

Internal hydrant water supply pipelines (Naspove)

The column coming from the MNZ service pump is zingato pipe which supplied 2 wing lines with 1.1 / 4 "zingato pipe. Zingato pipes of two dimensions will meet State standards in force

Internal hydrants



External surface hydrants



3. Water release pumps

In case of fire, firefighters must have a complete supply of special water to fight the fire. This is achieved by placing hydrants inside and outside the building. Hydrants must have a sufficient amount of water with a pressure. In case of lack of water from the municipal network or lack of its pressure, pumps must be designed which guarantee the necessary pressure to fight the fire by firefighters.

It should also be borne in mind, in cases of lack of water, to find other water sources with a sufficient amount. These requirements must be met according to modern norms / standards. Also, during the design of the building should contact the fire authorities to meet their requirements for a successful intervention in case of fire. The parameters of the MNZ service pump will be:

Electric pumps service with

- Capacity.flow $Q = 2 \times 10.5 \text{ m}^3 / \text{h}$
- Max height of water rise $H_{\text{max}} = 50\text{m}$
- Flow $q = 2970 \text{ lit} / \text{min}$
- Pipeline outlet: 2"
- Electric power $N = 2 \times 3.0 \text{ kw}$
- Voltage and frequency: 3F ~ 400V, 50Hz
- Current intensity $a = 6.1\text{A}$

Enlargement with membranes

- Max pressure: 10 bar
- Working pressure: 1.5 bar
- Volume: 200 lit Dimensions, height 1065 mm, diameter 600 mm
- Exits: 1.1 / 2"(DN 32)

Extinguishing cylinders

According to modern norms / standards, fixed cylinders are divided into classes. For example, the European DIN EN 2 divides the bombs into these classes:

Class A:

Used for fires resulting from solid materials such as wood, paper, textiles, plastics, etc.

Class B:

Used for fires resulting from liquid materials such as: benzene, benzene, alcohol, oil, etc.

Class A and B bombs will be very useful in the school environment.



Tipi	Peshë bombulës [kg]	Materi i Bombulës	Peshë e materialit fikës [kg]	Gas reaktiv	Funksioni në [se]	Hedhja e materialit [m]	Funksion në këto Temperatura [°C]	Dimensionet	Lartësia [mm]	Gjatësia [mm]	Trashësia [mm]
Pi	10,5	Pluhur	6	CO	20	5	-20/+60	435	200	170	
Pi	15,5	Pluhur	9	CO	20	6	-20/+60	455	220	210	
Pi	19,2	Pluhur	12	CO	22	7	-20/+60	580	230	210	

The number of extinguishing cylinders must be decided by the construction designer according to the requirements of contemporary and modern norms / standards. They must be maintained and inspected at least every two years by licensed authorities.

Ing.Petrit HOXHAI

Nr.Lic.3937 dt 13.06.2016