

**RUSSIAN DEVELOPER AND MANUFACTURER  
OF FIRE EXTINGUISHING EQUIPMENT AND  
FOAM CONCENTRATES PACKAGE FOR MODERN  
SYSTEMS OF FOAM AND WATER FIREFIGHTING,  
WATER COOLING, SPRAYING AND WATER CURTAINS**



## **BLOCK CONTAINER FOR FIRE SUPPRESSION BK-PT VITYAZ**

**DESIGN, PRODUCTION, SUPPLY, INSTALLATION SUPERVISION, TRAINING**

**POZHNEFTEHIM GROUP  
Saint-Petersburg +7 (812) 309-91-09  
Moscow +7 (499) 703-01-32**

**mail@pnx-spb.ru  
www.pnx-spb.ru**

## INFORMATION ABOUT POZHNEFTEHIM

Pozhneftehim is focused on fire protection of industrial objects. We develop and manufacture fire extinguishing equipment and foam concentrates for complex supplies of foam firefighting, water spraying systems and water curtains.



Established **2004**  
Over **140 employees**  
**Manufacturing venue** 4000 sq m  
Own accredited testing site 1000 sq m



License of Ministry of education  
Annual Advanced training courses for specialists of design and engineering organizations and customers



Quality Management System  
ISO 9001-2011  
Certificate of SRO APSPZ (NP PSPZ)  
Access to particularly hazardous objects  
License of EMERCOM of Russia

### Pozhneftehim Geography

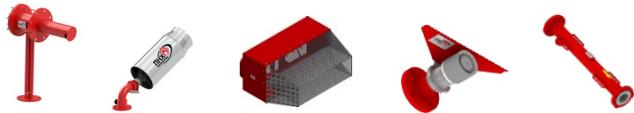
Headquarters in Saint-Petersburg  
Trade and manufacturing company in Moscow  
Manufacturing of fire extinguishing equipment in Tula region  
Manufacturing of foam concentrates in Moscow region

### Our customers



# FIRE EXTINGUISHING EQUIPMENT AND FOAM CONCENTRATES OF POZHNEFTEHIM

Generators of low, medium and high expansion foam



Fire monitor complex, fire towers, water screens



- Foam concentrates AQUAFOM of S, S/AR, AFFF, AFFF/AR, AFFF/AR LV type



Integrated functional blocks



- Foam compositions for fire extinguishers and for ammonia spills coverage

Supplementary equipment



Dosing (proportioning) systems



Proportioners M-TU, M-BP, M-FOI (Matre)

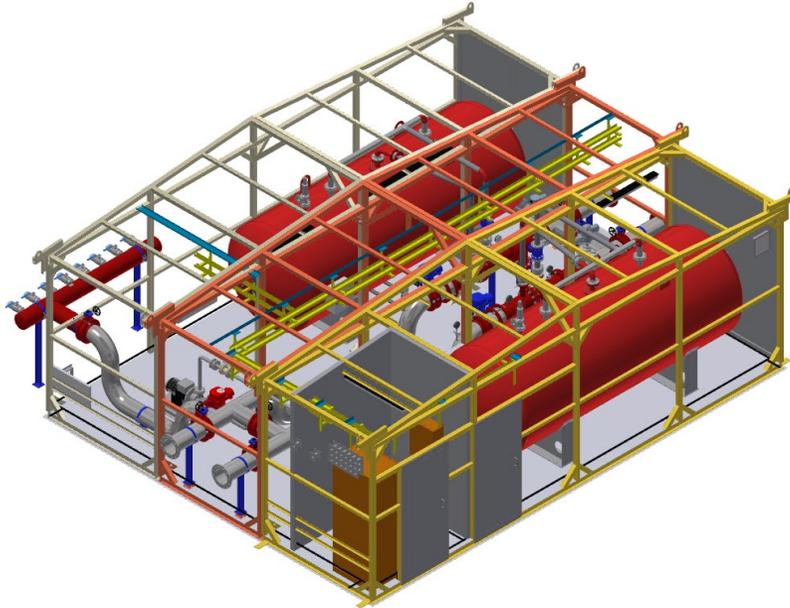


Nozzles for water curtains



**POZHNEFTEHIM FIRE FIGHTING SYSTEMS**  
**OVER 14 TYPES OF SYSTEMS / INSTALLATIONS BY FUNCTION / BY PROTECTED OBJECT**

## BRIEF DESCRIPTION OF BK-PT VITYAZ



**Area of implementation:** firefighting base, firefighting pump station, complex building for firefighting purposes, a mechanized storage for foam concentrate, firefighting point for ground heliports, a pressure boosting point, etc.

**Purpose:** storage and dosing of the foam concentrate in the foam station. BK-PT Vityaz are equipped with a storage system or a bladder tank, as well as auxiliary equipment for fire extinguishing.

**Fire resistance degree:** I, II, III, IV on order.

**Requirements for equipment and systems** in the questionnaires. To choose the dosing system, type of foam concentrate, control and measuring devices, controllers, shut-off valves, please contact the Pozhneftehim team.

**Design features** (roof type, door and window openings, seismicity, climatic design) on order.

**Engineering systems** (power supply, ventilation, heating, alarm system and control of evacuation of people in case of fire, security alarm system) on order

# BLOCK CONTAINERS FOR FIRE SUPPRESSION VITYAZ

Fire fighting in automatic, automated or manual modes

TU 4854-028-72410778-2013



- 🔥 Development of the technological scheme and equipment layout according to questionnaires (at the order)
- 🔥 Standard documentation: certificates of conformity, conclusions of the fire testing laboratory of the EMERCOM of Russia
- 🔥 Installation, commissioning, on-site testing with the participation of a specialist of the manufacturer (if ordered, optional)



## TECHNICAL CHARACTERISTICS OF BK-PT VITYAZ

Name of parameter	Value
Design	Stationary, transportable
Fire resistance according to Federal Law No. 123-FZ, SP 2.13130.2012, not lower than	I, II, III, IV (on order)
Structural fire hazard class according to Federal Law No. 123-FZ, SP 2.13130.2012	C0
Functional fire hazard class according to Federal Law No. 123-FZ, SP 2.13130.2012	F5.1
Explosive and fire hazard category according to SP 12.13130.2009	D
Operating pressure, MPa	0,5-1,4 (on order up to 1,9 MPa)
Nominal pressure (PN) of piping and fittings, MPa	1,6 MPa (on order up to 2,5 MPa)
Range of operating flow rates of water and foam concentrate solution, l/min (l/s)	on order
Foam concentrate volume, l	on order
<b>Foam concentrate proportioning</b>	
• when using turbine inline proportioners	1 %, 3 %
• when using foam inductors and balanced pressure proportioners	1 %, 3 %, 6 %
• when using bladder tanks	0,5 %, 1 %, 3 %, 6 %
Overall dimensions (length x width x height), mm	on order
Climatic modification according to GOST 15150-69	U, HL, UHL, OM
Service life, years, min	10

## DEGREE AND LIMIT OF FIRE RESISTANCE OF STRUCTURES AND OPENINGS

Fire protection of block containers from thermal effects of the external fire, taking into account their placement on fire and explosion-hazardous objects, is implemented in accordance with the specified limit of fire resistance for loss of integrity and thermal insulation ability **up to 150 minutes**.

Fire resistance limit of building structures				
Degree of fire resistance of buildings	Load-bearing elements	External curtain walls	Construction structures of non-perched coverings	
			floorings(including with insulation)	trusses, beams, girders
I	R 120	E 30	RE 30	R 30
II	R 90	E 15	RE 15	R 15
III	R 45	E 15	RE 15	R 15
IV	R 15	E 15	RE 15	R 15
Devices for filling openings				
Limit of fire resistance of the fencing structure (fire barrier)	doors, gates, hatches, valves, screens, curtains		windows	
	Type of openings' filling	Fire resistance limit for filling openings	Type of openings' filling	Fire resistance limit for filling openings
EI 15	3	EI 15	3	E 15
EI 45	2	EI 30	2	E 30
EI 60	1	EI 60	1	E 60
EI 90	1	EI 60	1	E 60
EI 150	1	EI 60	1	E 60

## FIRE RESISTANCE, CERTIFICATION TEST REPORTS

Complies with GOST 12.2.003-91, GOST 22853-86.

Certificate of conformity of ROSS RU. AG42. H00772 dated 21.07.2016. Certificates of conformity for fire resistance No. NSOPB.RU.PR195/2. N. 00169 dated 01.08.2016 (I degree) and No. NSOPB.RU.PR195/2. N. 00170 dated 01.08.2016 (II degree)

### Fire resistance degree I

Report No. 16-07-19/1DS

Construction of a three-layer metal wall panel with mineral wool insulation with a total thickness of 76 mm

Report No. 16-07-19/2DS

Construction of a three-layer metal roof panel with mineral wool insulation with a total thickness of 76 mm

Report No. 16-07-19/3DS

Construction of a three-layer metal load bearing panel with mineral wool insulation with a total thickness of 156 mm, with a rigid frame

### Fire resistance degree II

Report No. 16-07-20/1DS

Construction of a three-layer metal wall panel with mineral wool insulation with a total thickness of 51 mm

Report No. 16-07-20/2DS

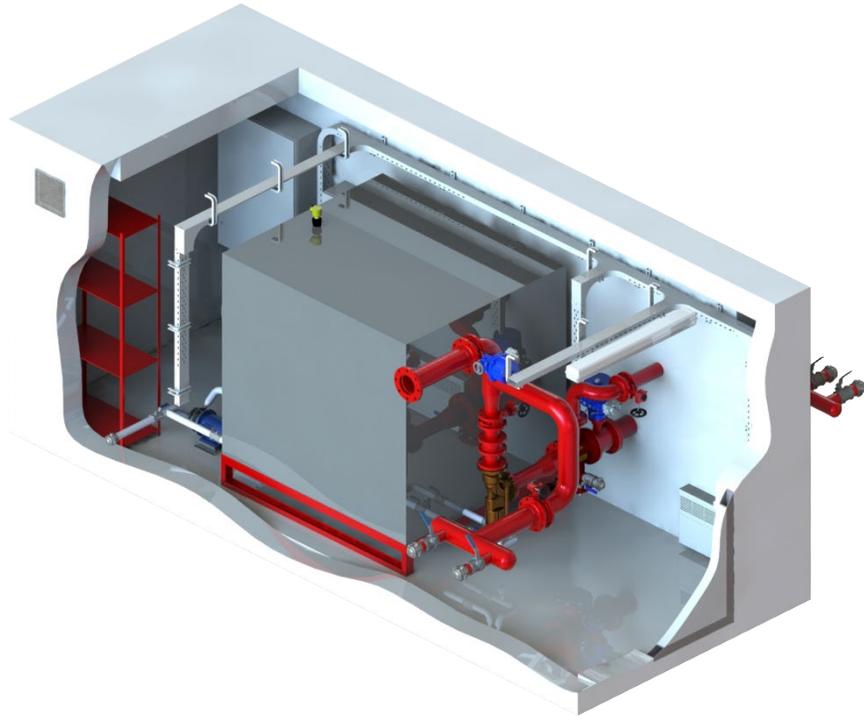
Construction of a three-layer metal wall panel with mineral wool insulation with a total thickness of 51 mm

Report No. 16-07-20/3DS

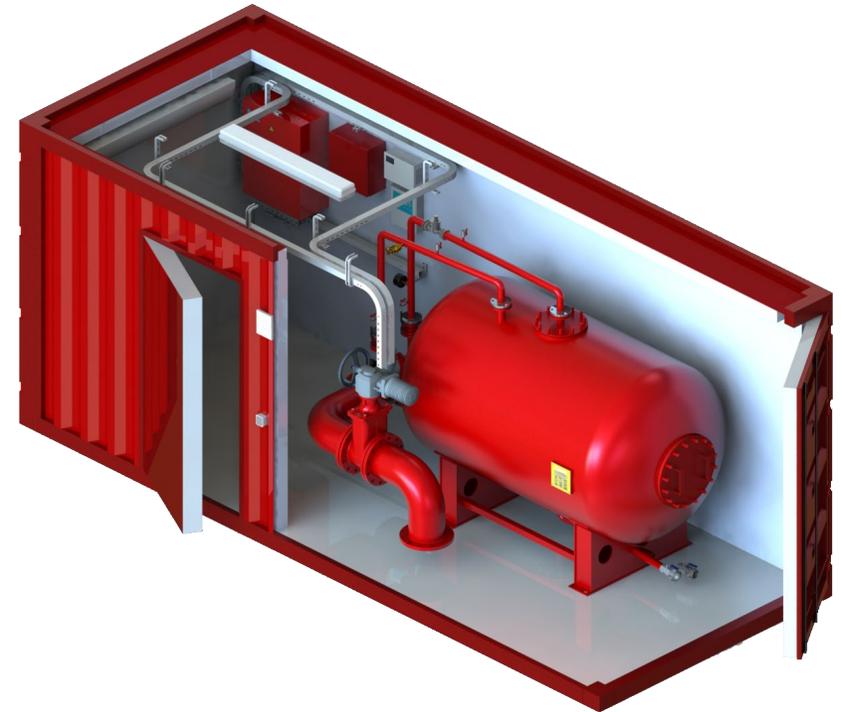
Construction of a three-layer metal load bearing panel with mineral wool insulation with a total thickness of 131 mm

# BLOCK CONTAINERS FOR FIRE SUPPRESSION VITYAZ

Choice of foam concentrate dosing system, sample configuration

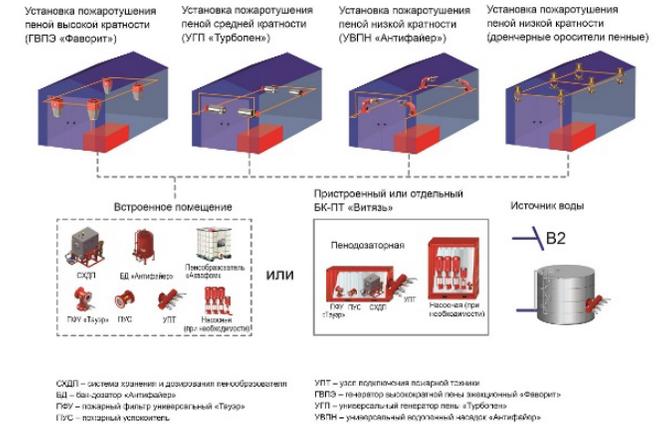
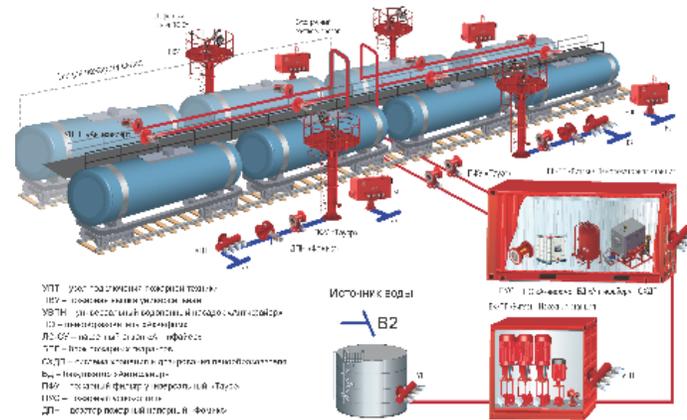
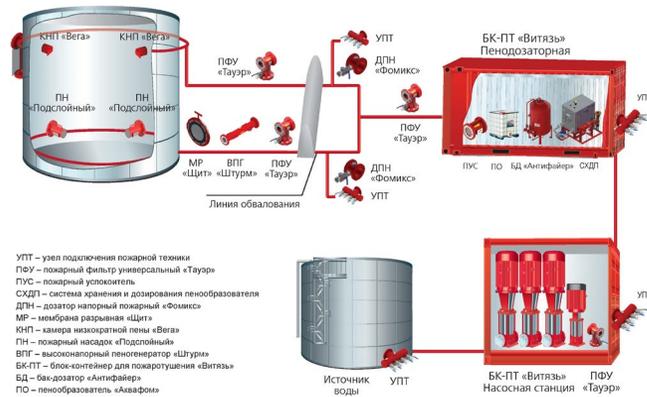


**SKhDP with turbine inline proportioner M-TU and tank for foam concentrate storage (material: stainless steel)**



**Bladder tank Antifire, tank for water and pump station**

# EXAMPLES OF POZHNEFTEHIM FIREFIGHTING SYSTEMS AND INSTALLATIONS



## Firefighting system of reservoir park, tank storage of flammable and combustible liquids

- Proportioning system: bladder tank Antifire or System for storage and proportioning of foam concentrate
- Foam concentrate Aquafom
- Fire filter Tauer
- Fire hydrant manifolds
- Fire stabilizer
- Fixed fire pressure proportioner Foamix
- Burstable membrane

## Firefighting system of railway loading rack

- Proportioning system: bladder tank Antifire or System for storage and proportioning of foam concentrate
- Foam concentrate Aquafom
- Fire filter Tauer
- Fire monitor complex (fire tower, fire monitor, water heat-protective screen)
- Fire hose cabinet Rubezh
- Fire hydrant manifolds
- Deluge sprinkler, water/foam nozzle Antifire

## Firefighting systems of buildings and rooms according to SP 5.13130.2009

- Proportioning system: bladder tank Antifire or System for storage and proportioning of foam concentrate
- Foam concentrate Aquafom
- Fire filter Tauer
- Fire stabilizer
- Deluge sprinkler, water/foam nozzle
- Antifire
- Universal foam generator Turbopen
- High-expansion foam generator Favorit





## WHEN CHOOSING THE SUPPLIER OF FIREFIGHTING PRODUCTS

### PROBLEMS OF THE RUSSIAN MARKET OF CONTEMPORARY FIREFIGHTING TECHNOLOGIES

🎯 90% of products have no standard (GOST), each manufacturer is producing according internal documents' requirements

🎯 Certificates from “underpasses at metro stations” (general trend is to have certificate, no matter what it says)

🎯 Difficult for customer to conduct technical expertize (new non-standard types of equipment and foam concentrates, lack of maintenance experience). As a result, choice by name and by price

🎯 No conditions at the object to check quality of delivered products



## PACKAGE SUPPLIES WITH POZHNEFTEHIM

Pozhneftehim advises to choose suppliers with due consideration of the following

- 1 Carefully evaluate technical proposals and their credibility
- 2 When assessing technical issues, request protocol of certification tests (there will be no protocol in case of formal certification), evaluate its content
- 3 Conduct preliminary inspection control of the manufacturing site and competence of the manufacturer / supplier
- 4 Include in the contract for supplies the participation of the object representative in the commissioning tests of products
- 5 Include in the contract for supplies installation supervision, participation in commissioning of the firefighting system / installation, in preliminary and acceptance tests, training of personnel



## COMPLETE CYCLE OF PROJECT REALIZATION

Pozhneftehim has realized  
over 40 large-scale projects  
by complete cycle



Pre-desing  
stage



Concept



Consulting, participation  
in design works



Packaged  
supplies



Installation  
supervision



Adjustment works and  
commissioning

We perform the technical maintenance of the  
firefighting system during its lifecycle

## COMPLETE CYCLE OF PROJECT REALIZATION

Sample complete-cycle projects  
realized by Pozhneftehim



Petersburg oil terminal



Moscow oil refinery  
Tecnimont (Italy)



Oil platform  
LUKOIL Nizhnevolzhskneft



Commodities base  
Slavneft YANOS

Marine trading  
port NOVATEK  
Ust-Luga



Commodities base,  
LUKOIL-  
Nizhegorodnefteorg  
synthes

## CONTACTS

**Firefighting systems.  
Technical support**

Yury Poteryaev, deputy Technical director for business development  
+7 (499) 703 01 32, ext.151

**Firefighting systems. Concepts,  
special technical conditions,  
MOPB design documentation**

Sergey Titenkov, Head of technical norms department  
+7 (499) 703 01 32, ext.159

**Firefighting equipment**

Sergey Vypritsky, Head of project design department  
+7 (499) 703 01 32, ext.153

**Foam concentrates Aquafom**

Tatyana Potapenko, Head of foam concentrates department  
+7 (499) 703 01 32, ext.172

[mail@pnx-spb.ru](mailto:mail@pnx-spb.ru)

[www.pnx-spb.ru](http://www.pnx-spb.ru)



World  
of fire safety  
technologies

Established in 2004