ABOUT COMPANY

"FR" Engineering Centre of Fire Robots Technology Jsc. is on the leading place in Russia and CIS for elaboration and manufacturing of fire robots GOST R 53326-2009 and fire monitor technology GOST R 51115-97. The enterprise is the originator of fire robots technology in Russia as a new line in fire automatics, and more than 25 years solves the problems of fire defense of unique and dangerous units, and also protects the human life and health.

The Engineering Centre has been founded in 1984, when the first fire robot, created by Karelian specialists, was mounted for protection of the monuments of wooden architecture of the Kizi museum. It became a start for development of this new line of fire fighting technology. Those days in Petrozavodsk there has been founded the Laboratory of fire robots.

The fire robots also worked for liquidation of Chernobyl APP breakdown in 1986.

Further in the State Committee of atomic energy there was taken a decision to create the robotized fire complexes for APP to replace firemen in dangerous areas. Such complex was made on the Leningrad APP. After that the elaboration works were continued, and the Laboratory of fire robots grew into the Engineering Centre of Fire Robots Technology.

Nowadays the enterprise manufactures more than 200 articles of the fire technology under GOST R 51115-97.

Elaboration of articles on the enterprise is made in the construction bureau in complex: in mechanics, hydraulics, electronics and programming.

The production is certified in a system of fire safety standard and GOST R, meets the requirements of marine register and explosion proof in accordance to application units, and the quality management system is certified for the international quality standard ISO-9001:2008. The articles are made on the international standard level; the novelty of technical decisions is proved by patents.

The Engineering Centre elaborates the projects of automatic fire fighting, fire extinguishing, fire alarm and TV-observation, and operates mounting and start-up works and service for fire protection of units.

During the period of development the enterprise has sold the wide assortment production from pieces up to series, manufactured on its own plant with modern equipment.

Nowadays the FR Engineering Centre of Fire Robots Technology includes:

- Construction bureau, electrotechnical and software department;
- Project department;
- Testing department, which includes testing polygon and research manufacturing field;
- The plant of Fire Robots and Fire Monitors;
- The Branch in Moscow, and also Representative offices in Ukraine, Belorussia and Norway.

The enterprise has a modern park of polishing centers with serial producing technology.

Fire monitors

FR-Jsc. produces hand-held and remote-controlled fire monitors with constant and adjustable discharge from 15 up to 350 l/sec in stationary and portable modification - they form streams as dispersed water and foam mass with changing spray angle from straight stream up to shielding screen 90 deg. They mean to extinguish fire, cool constructions, precipitate the clouds of poisoned or radioactive gases, fumes and dust. The peculiar quality and functional features are:

- light-weight construction of stainless steel, resistant to aggressive foam formers and sea water
- by customer's demand fire monitors can be optionally supplied with: shielding screen, disk gate, ejector for foam former, oscillator, discharge regulators, deflectors;
- optional swivel section (the 3rd degree of freedom) for raise and turn down (maxi, mini);
- the construction can be fixed in upper and lower monitor position - maxi, mini;
- quick-detachable connection of fire monitor for reinstallation to portable or stationary monitor;
- remote-controlled fire monitors have higher and lower speeds;
- explosion-proof fire monitors are supplied with control cabinets with start up equipment and system of micro climate, which regulates temperature and moisture, with a mark of explosion proof IExdIIBT4.

Handheld fire guns

There was created the handheld universal combined fire guns first time in Russia HHCU with adjustable flow rate from 2 up to 15 l/sec., with changeable stream geometry, which forms straight and dispersed water stream, shielding screen without additional foam nozzle.

Fire robots and robotized fire complexes

Basing on remote-controlled fire monitors there were created fire robots with program control for automatic extinguishing. Among all known types of fire robots, including android and mobile, these fire monitors are the most popular. Their application is especially actual for protection of high-floored and outside units of fire extinguishing.

Fire robot under GOST R 53326-2009 "Robotized installations of fire extinguishing" is automatic installation, which manipulates fire monitor in spherical coordinate system on base of remote-controlled fire monitor with fixed or mobile installation, with ignition disclosure device and program control, it replaces a fireman in dangerous for life areas,. Robot means to extinguish and localize technological equipment and buildings in protected unit. Produced fire robots differ with huge protected area, they have a baseline network, and water or foam is supplied by air. Fire robots can be supplied with IR-scanners for automatic ignition disclosure and TV-cameras for video control.

Basing on fire robots connected by RS-485-channel, there are formed installations of automatic fire extinguishing - robotized fire complexes, working with PC. All information about fire extinguishing is registered by video cameras and electronic protocol with registration of RFC's actions. In duty time the system is in mode of self-testing and informs itself about necessity of control at the system address, keeping it in permanents readiness. Engineering centre of fire robots technology serially produces the whole complex of equipment for automatic fire extinguishing on base of RFC.

The FR Jsc. production has been widely applied in complex systems of fire preventive defense of large industrial buildings and constructions, on the oil industry units and on the mobile fire technique: fire engines, fire tanks, fire motor boats. Automatic installations of fire extinguishing with application of robotized fire complexes have been used for high-floored buildings and huge constructions, such as sports, exhibition and trade complexes attended by many people, also concert halls, machinery halls of HPP and APP, hangars for airplanes.

The last years the FR fire extinguishing installations have been involved into such units as Vitino Marine specialized port (the City of Kandalaksha), Baltic pipeline system (the City of Primorsk), oil terminals for the Sakhalin-1 project (Sakhalin is.), Lukoil-2 oil terminals (the City of Vysozk), hangars for airplanes in Sheremetyevo-1, in Vnukovo (VIP-hangar), Krokus concert hall in Moscow, sport complex of EMERCOM Academy (Novogorsk set.) and others.