ZBKiT
PLANT OF BLOCK CONSTRUCTION AND TECHNOLOGIES

ZBKiT PRESENTS

MULTI-PURPOSE FIRE-FIGHTING VEHICLE

Power capacity 200 kW
Thermal power 3.0 MW
Pressure 2-10 MPa
Tank volume up to 3000 liters
Feed rate up to 10 m3/s
Water consumption 2.0 l/s
Fire extinguishing height up to 350 m

OPTIONS

Operation in extreme temperatures
Airborne curtain
High feed hose 25 mm
Barrels sprayers

ZBKiT LLC | Bolotnikovskaya str. 36-6, office 205 | +7 (977) 810-28-80 | info@zbkit.ru | www.zbkit.ru

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ZBKiT PHILOSOPHY

FIRE-FIGHTERS IS NOT JUST A PROFESSION, IT IS A CALLING

Our goal is to simplify fire-fighting process with exclusive equipment.

Every day, firefighters and rescuers around the world doing their job saving people's lives. Showing their heroism and resilience in the big fight against fire. These people do not just do their job, but they respond to the challenge of danger, they are fighters. And we do the same.

Our passion is the construction of high-tech fire-fighting equipment that can extinguish fire in the shortest time. We offer innovative technology that has no analogues in the world.

Emergency situation doesn't give a second chance, there is no room for delay.

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ZBKiT PHILOSOPHY

MULTI-PURPOSE FIRE FIGHTING VEHICLE FOR EVERY CHALLENGE

It doesn't matter where in the world, in the Arctic or in the desert, in a residential backyard, or in an industrial facility, on an offshore oil platform, or in an airport, in a rainforest or in an icy hydroelectric power station, at an altitude of 350 meters, or at a depth of 350 meters.

Regardless of the task, whether it is necessary to break ice, extinguish gas condensate, to extinguish forests, precipitate harmful substances, extinguish buildings in a volumetric way, we have a special solution for your very specific requirements.

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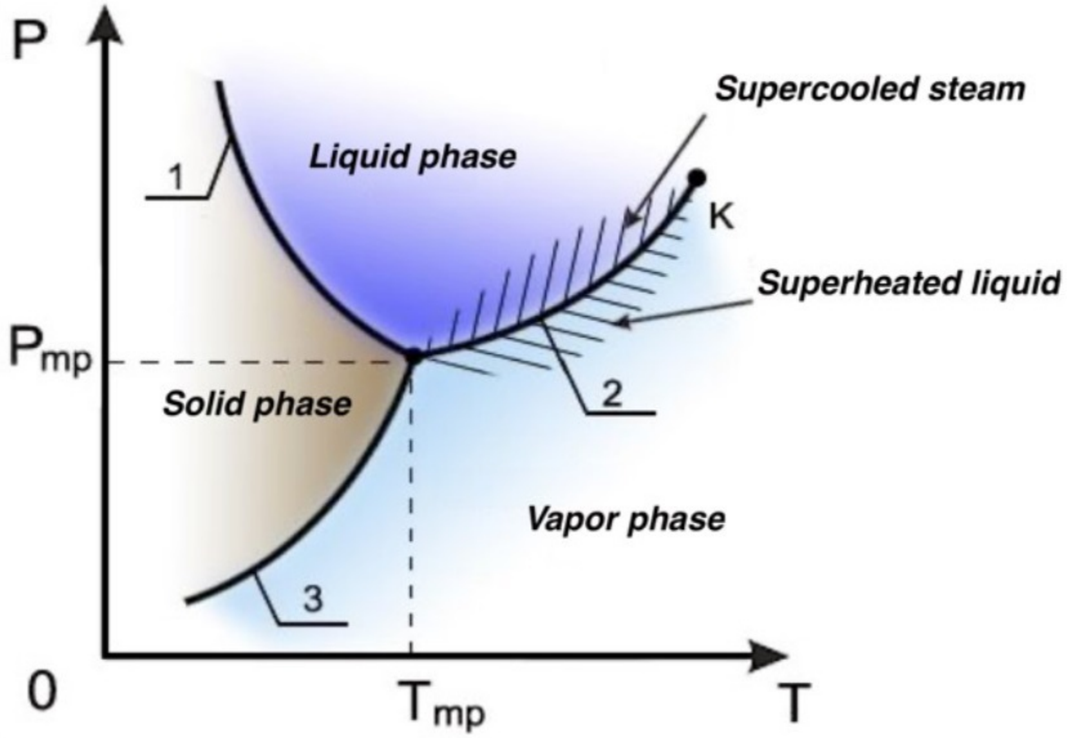
TECHNOLOGY

TEMPERATURE ACTIVATED WATER IS A NEW WORD IN FIRE EXTINGUISHING TECHNOLOGY

The main problem of fire science today is efficiency increasing of water use.

Most modern fire-fighting equipment uses only 5–10% of the supplied water to extinguish the fire source. In fact, 90–95% of the water is wasted. Often the damage from wasted water spills is more damaging than the fire itself.
Long-term research by the scientists of the State Fire Service Academy of Russia has made it possible to find a fundamentally new technical solution to improve the fire extinguishing properties of water by means of its temperature activation.



This method allows to improve the fluidity of water without the use of chemical additives, and also allows you to reduce the size of water droplets without increasing the pressure of the pumps and without the use of fire nozzles with complex, expensive nozzles.

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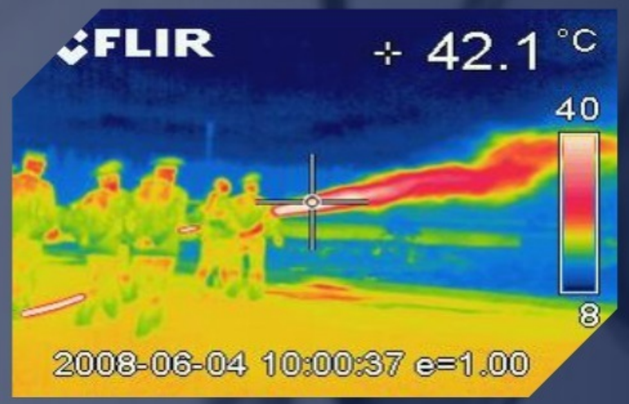
Scientists of the SFS Academy conducted research and developed a method for producing jets of temperature-activated water, which not only effectively extinguishes fires, but also sharply reduces the temperature of the flame and precipitates smoke.

The essence of the method: fresh water changes its properties when heated to high temperatures under high pressure. When water returns to normal conditions, then for some time it is in a special, so-called “metastable state”. Water acquires an increased dissolving ability to dissolve carbonates, sulfates, silicates and other compounds.



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And also water acquires the ability to retain abnormal amounts of solute in its composition for a long time and significantly increase acidity.

Such water is called activated, and the process itself is called temperature activation.
The jets of temperature-activated water are obtained from superheated * water after it is fed through the barrels, which have a simple design and are cheap to manufacture.

* Superheated water is called, which, being in a closed volume, at a temperature of more than 100 ° C and at a pressure greater than atmospheric pressure, does not boil and does not turn into steam.

If the pressure of the superheated water quickly decreases to atmospheric (for example, the superheated water is discharged from a closed volume into the atmosphere), then almost instantaneous boiling of water occurs. As a result of boiling, one part of the superheated water turns into steam, and the other part is crushed into droplets with a diameter of less than 100 microns, these droplets form a "water mist".

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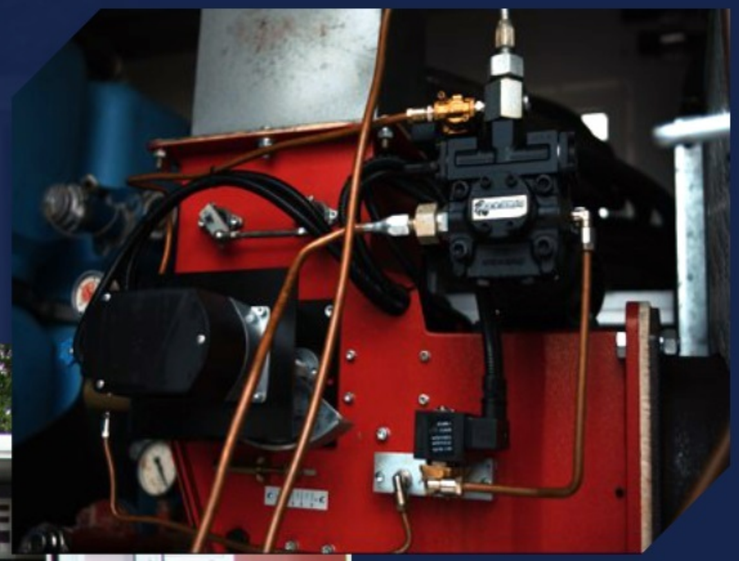
The diameter of most of the "water fog" droplets is 10–50 microns, so the droplets float in the air and are mistakenly perceived by many observers as vapor. Getting such a fine spray of water in the traditional way can only be achieved at a pressure of more than 150 atm.

The jets of temperature-activated water ("water mist"), obtained from superheated water, can be used to extinguish almost all types of combustible substances that do not enter into a chemical reaction with water with the release of large amounts of heat, or combustible gases.



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TEMPERATURE ACTIVATED WATER IS A NEW WORD IN FIRE EXTINGUISHING TECHNOLOGY

Technology allows to extinguish successfully:

- gasoline of various brands
- petroleum products
- alcohols
- acetone
- other hydrocarbons and water-soluble liquids

As well as solid materials:

- wood
- rubber
- polyvinyl chloride
- polystyrene

The most effective jets of temperature-activated water extinguish fires in confined spaces, as they form a large volume of "water mist", which effectively precipitates smoke and vapors of toxic substances, and also displaces air and thereby reduces the percentage of oxygen in the combustion zone.

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APPLICATIONS:

- Highly efficient extinguishing of buildings, structures, enclosed spaces
- Bulk extinguishing of warehouses
- Extinguishing ships
- Extinguishing fires in the absence of access to the hearth (using special trunks)
- Deposition of smoke, vapors and aerosols of emergency chemically hazardous substances
- Gas concentration reduction in confined spaces
- Emergency heat generation
- Autonomous source of electricity
- Extinguishing gas condensate
- Fire extinguishing of high-rise buildings (up to 350 meters)
- Steam-water protective curtains
- Cleaning of tanks, pipelines, process equipment and elements of building from oil product spills
- Heating up oil spills for its subsequent collection by vacuum pumps
- Elimination of icing of technological equipment and machinery
- Extinguishing energized electrical installations at energy facilities

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HOW WE WORK

For demonstration work and testing of the MPFV. We invite you to visit Volgodonsk, Russia, the training center of the Ministry of Emergency Situations.

- Certification in accordance to the Customer's requirements
- Logistics support
- Warranty and service support

To quickly go to our site,
scan the QR code of the smartphone camera

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