Areas of application

BRONYA®
SUPERFINE HEAT INSULATION

Thermal insulation of steam pipes, water pipes and heating mains

Reduces heat transfer, removes condensation, rust

The finished Bronya coating meets the requirements of SNiP41-03- 2003 "Thermal insulation Main and internal pipelines are the most common objects of application of the thermal insulation coating " Bronya ". It is capable of reducing heat loss by 6-8 times, while it does not require the use of a protective coating, which means it successfully replaces the usual thermal insulation materials (glass wool, mineral wool, PU shells, etc.). It should be noted that liquid thermal insulation " Bronya" has a high degree of maintainability.Thermal insulation " Bronya " is ideal for use both outdoors (thermal insulation of heating pipelines) and indoors (thermal insulation of pipelines in boiler rooms, heating stations, pumping stations, etc.). The coating serves for at least 10 years, retaining all its operational characteristics. Ultrathin thermal insulation " Bronya", serves not only to preserve heat, but also prevents excessive heating of the surfaces of cold water pipelines, technological pipelines and gas pipelines. The Bronya coating is able to maintain the temperature inside the pipelines, for which it is extremely important to maintain the lowered temperatures of the transported liquids (liquefied gases), for example, when transporting freon.

Advantages and effectiveness:
- reduction of heat loss
- reduction of surface temperature for
- ensuring safe working conditions
- reduces the weight load on pipelines and supporting structures
- aesthetic appearance
- the ability to isolate complex structural elements of pipelines, valves, compensators, etc.
- reduce the cost of repairing the pipeline in case of emergency situations by reducing the time of leak detection and dismantling of old insulation
- corrosion protection
- it is not of interest to plunder that additionally increases the service life compared to traditional thermal insulation
- protection from direct sunlight, reducing the amount of energy entering the pipeline
- prevention of condensation
- long-term corrosion protection
- increasing the temperature of the inner walls of the trunks above the "dew point" temperature to reduce the rate of corrosion wear
- extension of the service life of chimneys.

Areas of application

BRONYA®
SUPERFINE HEAT INSULATION

Thermal insulation of building facades

Increased vapor permeability for walls
In recent years, the share of energy costs in industry and utilities has sharply increased in Russia. Therefore, the problem of energy saving has become one of the most urgent. The main way to save fuel and energy resources is to reduce heat losses through the enclosing structures of buildings and structures.It has long been known that in Russia, 2.5-3 times more heat is spent for heating residential buildings in winter than in Finland, Germany and the Scandinavian countries. Consumption of conventional fuel for household needs in currently, it is approximately 370 million tons, of which 120 million tons are consumed by housing and communal services. The consumption of thermal energy for heating multi-apartment residential buildings in the middle zone of Russia is up to 600 kWh/m^2 per year, and only 135 - 150 kWh/m^2 of thermal energy is consumed for the same houses in the Scandinavian countries and in Finland, i.e. 4 times less. The main reason for such a large consumption of energy resources is that the walls of our houses do not meet modern requirements of thermal protection and let the cold through, especially in large-panel houses with expanded clay concrete panels. Liquid ceramic thermal insulation Bronya is ideal for thermal insulation of facades of buildings, inter-panel seams, window and door slopes, loggias, balconies, protruding parts of metal and concrete structures, ends of monolithic floors.

Advantages and effectiveness:
- Reduction of heat loss
- Elimination of "cold bridges"
- No additional load on the foundation
- Reduction of excessive humidity of masonry and improvement of thermal characteristics of masonry during restoration work
- The ability to isolate complex architectural facades
- Protection from adverse weather conditions, weather events and preservation of the building structure from destruction
- Equalization of the temperature of the exterior walls, getting rid of the enclosing structures from temperature fluctuations
- Reduction of capital and operating costs during facade repairs, increase in the time interval between repairs
- The possibility of coating in hard-to-reach places Effective for protecting facades of buildings exposed to wind loads with high salt content (coastal areas)
- Reduction of heat loss
- Elimination of freezing of walls
- Getting rid of condensation and mold during local repairs of "problematic" apartments
- Preservation of the useful area of the premises
- Increased illumination
- The possibility of coating in hard-to-reach places
- Reduction of labor costs and work time compared to other technologies
- Reduction of heat loss
- Protection from direct sunlight, prevention of heating of the interior
- Creating more comfortable working conditions
- Reduction of air conditioning costs
- No additional loads on the foundation
- Corrosion protection
- Reduction of labor costs and terms of work
- The possibility of coating in hard-to-reach places
- Reduction of heat loss
- Elimination of "cold bridges"
- Prevention of condensation
- Reduction of labor costs and deadlines compared to other technologies
- It is possible to apply the coating in hard-to-reach places
- Reduction of expenses for current and major repairs of buildings and structures
- Reduction of heat loss
- Preservation of the building structure from destruction
- Reduction of heat loss
- Equalization of the heat load on the exterior walls of the building
- Reduction of expenses for the current overhaul of buildings and structures

Areas of application

BRONYA®
SUPERFINE HEAT INSULATION

Thermal insulation of tanks, cisterns and containers

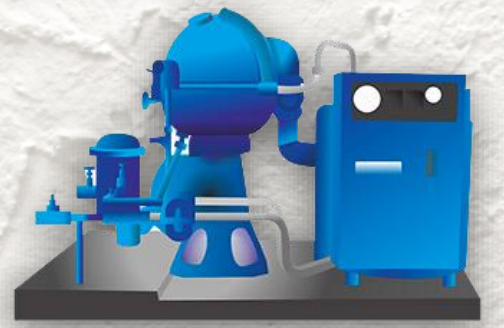
Protection against evaporation, minimization of heat loss!
The main task of thermal insulation of tanks is Protection from overheating by sunlight. This problem arises when operating tanks with petroleum products (crude oil, fuel oil - reserve fuel, gasoline, kerosene, automobile oils). The boiling point of petroleum products is + 40 ° C, after which the process of gradual evaporation begins. In the summer season, forced losses can reach 30-40% of the total volume of the tank, especially in hot regions where metal surfaces they are heated to a temperature above 80 ° C. The use of ultrafine thermal insulation "Armor" for thermal insulation of tanks and containers allows to reduce temperatures on external surfaces and, as a result, significantly reduce evaporation losses. The liquid consistency allows you to isolate the most difficult, hard-to-reach and "problematic" places for installation. High speed of application using airless spraying devices allows in a matter of days, without technological downtime to carry out work on the thermal insulation of tanks of various configurations. Its service life is at least 15 years.

Tasks to be solved:

- Elimination of heat losses;
- Increase in the cooling time of the substance;
- Reduction of energy consumption for heating;
- Reduced heating of the tank in the summer
- Anti-corrosion protection;
- Ease of installation (any structural elements)
- Cost-effectiveness.

Areas of application

BRONYA®
SUPERFINE HEAT INSULATION



Thermal insulation of tanks, cisterns and containers

Reduction of heat loss, elimination of condensation!
Thermal insulation of equipment is widely used in energy, chemical, oil refining, metallurgical, food and other industries. Objects where thermal insulation Bronya is used are steam boilers, flues, steam and gas turbines, heat exchangers, hot water storage tanks, chimneys. In the industry, vertical and horizontal technological devices, pumps, heat exchangers, storage tanks for water, oil and petroleum products are subject to thermal insulation. Also, liquid ceramic thermal insulator Bronya at low-temperature and cryogenic equipment facilities, where particularly high requirements are placed on the efficiency of hermal insulation.

Advantages and effectiveness:

- qualitative positive changes in the technological process
- reduction of the technological cycle time
- reduction of the amount of condensate released
- stabilization of the drying process of the product
- preventing heating of the contents
- the possibility of producing works without loss of quality on existing lines without stopping the technological process reducing the amount of heat entering the chambers
- prevention of condensation
- Corrosion protection
- protection from direct sunlight, prevention of heating of the contents
- ensuring the necessary temperature regime
- prevention of condensation
- ensuring the smooth operation of electronics
- additional anti-corrosion protection

Areas of application

BRONYA®
SUPERFINE HEAT INSULATION

Thermal insulation of trailers, wagons and other vehicles

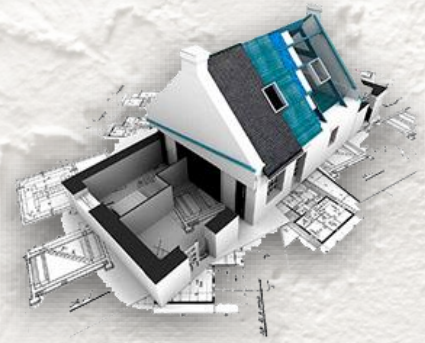
Isolation of vehicles is necessary when transporting goods at low temperatures and over long distances, with an increased risk of damage to them, to create a vacuum regime inside the van, truck and trailer. That is, to reduce the risk of loss of valuable or perishable goods, regardless of the season of their transportation, as well as to reduce the return and loss of heat from the sealed space

Tasks to be solved

- Elimination of heat losses
- Qualitatively insulates, eliminates the Appearance of condensation
- Protects the painted surface from environmental influences
- Maintains the required temperature level
- Protects against atmospheric precipitation
- Creates a seamless coating;
- Protects against mold, mildew and other microorganisms
- Prevents corrosion
- Increases the service life
- Insulates from direct sunlight

Areas of application

BRONYA®
SUPERFINE HEAT INSULATION



Application in everyday life

Protection against freezing, mold, condensation
Thermal insulation "Bronya" is ideal for use both outdoors and indoors. The coating lasts for at least 10 years, retaining all its performance characteristics. Ultra-thin thermal insulation Bronya, serves not only to preserve heat, but also prevents excessive heating of surfaces. In addition to industrial enterprises, building facades, industrial equipment, pipelines and vehicles, the material is actively used in everyday life to insulate walls, prevent freezing, eliminate and prevention of condensation on water supply pipes, window and door slopes, shielding of heating systems.

Advantages and effectiveness:

- Ease of application
- Reduction of heat loss
- Elimination of freezing
- Elimination of "cold bridges"
- The ability to isolate complex shapes
- Protection from adverse weather conditions, weather events and preservation of the building structure from destruction
- Equalization of the temperature of the exterior walls, getting rid of the enclosing structures from temperature fluctuations
- Getting rid of condensation and mold during local repairs
- Reduction of labor costs and work time compared to other technologies
- Elimination of condensation
- Reduction of heat losses
- Ease of application
- Reducing indoor humidity
- Constant access to the surface
- Maintainability
- Corrosion protection
- Long service life
- Isolation of sections of any shape
- Ease of application
- Elimination of condensation
- Reduction of heat losses
- Elimination of freezing
- Constant access to the surface
- Maintainability
- Corrosion protection
- Long service life
- Isolation of sections of any shape
- Ease of application
- Reduction of heat losses
- Indoor heat preservation
- Constant access to the surface
- Maintainability
- Savings due to heating costs in a private household
- Long service life
- Isolation of sections of any shape
- Ease of application
- Reduction of heat losses
- Indoor heat preservation
- Constant access to the surface
- Maintainability
- Long service life
- Prevention of fungal formations