

BRONYA

ULTRA-THIN THERMAL INSULATION

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BRONYA
APPELIED LIKE PAINT,
ACTS AS A THERMAL BARRIER.
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KATROM

SINCE 2022



- **FAMILY BUSINESS** KATROM s.r.o. is built on family foundations. This helps us overcome turbulent times in both life and business, propels us forward, and brings joy in times of prosperity. We stand behind our work from A to Z.
ROMAN ABGARYAN - CEO
- **OUR VISION** Our vision and values. KATROM acknowledges three fundamental values: respect, collaboration, and ambition. They are the core of our corporate culture. Every company is primarily about people and the products they create. KATROM brings together the energy of people doing their best work. We think about what to do differently and better. We are here to respond to the wishes and inquiries of customers and offer them the best solutions. Patiently, in a friendly atmosphere, we listen to our clients and together, we reach our goals. We are a stable and strong partner for customers in various sectors of the construction industry: construction companies, designers, and investors. We are a player in the market that sets standards in the industry. We fulfill our commitments on the due date. Thanks to a strong team of employees, we are creative and innovative.
- **NANOTECHNOLOGY** It generally refers to the technical field dealing with the creation and utilization of technologies on a nanoscale (approximately 1-100nm), i.e., 10⁻⁹m (billionths of a meter), which is roughly one-thousandth the thickness of a human hair. Nanotechnologies are already finding applications in many areas of everyday life. Our company specializes in the application of nanotechnology-based thermal insulation.



PRODUCT HISTORY

The history begins in the 1970s when NASA and ROSKOSMOS initiated the development of paint for rocket shields for space travel. The ultra-thin thermal insulation BRONYA is a robust thermal insulating paint suitable for any surface. It prevents thermal losses and condensation formation. BRONYA is usable in temperatures ranging from -80°C to $+200^{\circ}\text{C}$.

BRONYA

ULTRATENKÁ TEPELNÁ IZOLACE

As an authorized business representative for the Czech Republic, Slovakia, Germany, Austria, and the Canary Islands, our company specializes in the sale of the BRONYA thermal insulation coating, providing comprehensive service for the application of this paint, including project implementation. The cornerstone of our long-term success is establishing customer trust in the quality and effectiveness of our products. Additionally, we actively seek to expand our presence in the global market and extend our operations to new markets.



WHAT MAKES BRONYA UNIQUE ?

LIFE EXPECTANCY

The fundamental components of Bronya paint consist of ceramic beads, constituting 80% of the mixture, with the remaining portion being binding polymers. Once dried, this material exhibits high resistance to atmospheric changes, is waterproof, and mechanically durable.

"ADVANTAGES"

"The application process must be carried out correctly and professionally. Care should be taken during substrate preparation and, in particular, paint mixing. Specific procedures need to be followed during the paint application. If you intend to undertake the job yourself, consult with us before starting!



Quality
Material



Time
Availability



15-year
lifespan



Climate
change mitigation



Facade
insulation



Eco.
friendly

BRONYA

OR TRADITIONAL INSTULATION

Thermal conductivity

1 mm of coating equals 5 cm of traditional insulation

Fire-resistant properties: **Class A1**

Vapor permeability $\mu = 0,001$

Lambda: $\lambda = 0,0015 \text{ W/m.K}$



Mineral wool



Thermal conductivity; má $\lambda = 0,030-0,040 \text{ W/m.K}$

Thermal conductivity of mineral insulation for ETICS systems is $\lambda = 0,034-0,041 \text{ W/m.K}$



Acoustics: Mineral wool is heavier and denser than EPS, its better at noise reduction. In technical terms, it has better airborne sound insulation.



Vapor permeability: It is evaluated using the so-called factor of diffusion resistance (μ). This indicates how many times better a stagnant air layer allows water vapor to pass through compared to an insulant of the same thickness. The air diffusion resistance factor is $\mu = 1$, and the same value applies to mineral insulation.



Fire-resistant properties: Mineral insulation falls into Class A1.



Polystyrene



Thermal conductivity: EPS has $\lambda = 0.030-0.040 \text{ W/m.K}$, while the thermal conductivity of polystyrene for ETICS systems is $\lambda = 0.034-0.041 \text{ W/m.K}$



Acoustics: Polystyrene stands out among all construction materials due to its very light weight, which means it cannot effectively block sound. Additionally, thanks to its closed core structure, it is unable to absorb sound waves, and, surprisingly, it can even propagate sound waves better than other materials, reaching distances of tens of meters. The surface structure of the adhesive and stucco can even create a primitive speaker.



Vapo permeability: The diffusion resistance factor in EPS is $\mu = 20-40$.



Fire-resistant properties: EPS falls into Class E, which categorizes it as unequivocally flammable materials.



Bronya



Thermal conductivity: The thermal insulation has $\lambda = 0.0015 \text{ W/m.K}$, thermal conductivity of the Bronya thermal insulation coating is also $\lambda = 0.0015 \text{ W/m.K}$.



Acoustics: Sound consists of air molecules in motion. The molecular structures of the Bronya thermal insulation create pores, allowing particles to transfer kinetic energy of air molecules into thermal energy. This means that a portion of sound intensity is reduced. This phenomenon is known as 'negative resonance' in the thin layer of Bronya sound insulation.



"Vapor permeability: The diffusion resistance factor in Bronya thermal insulation is $\mu = 0.001$.



Fire-resistant properties: Bronya thermal insulation falls within Class C to A1 - non-combustible material.

TABLE

REDUCTION OF TEMPERATURE ON THE SURFACE OF METAL PIPES

Recommendations for determining the thickness of the liquid ceramic thermal insulation coating Bronya and adjustments for use on pipes and equipment. The use of liquid ceramic thermal insulation coatings Bronya is aimed at ensuring energy efficiency, achieving standardized heat losses, and ensuring safe working conditions. Properly determining the required amount of coating to address insulation issues for hot water supply and heating pipes, technological equipment, etc. We recommend consulting with us before starting!

THICKNES OF BRONYA COATING, MM	SURFACE TEMPERATURE					
	60°C	80°C	100°C	120°C	150°C	200°C
1mm	42	54	64	68	77	100
1,5mm	33	42	56	57	64	75
2mm	31	35	45	51	58	70
2,5mm	30	31	42	46	50	66
3mm	28	29	35	42	45	52
4mm	25	26	32	35	39	45

BRONYA

INFLUENCE ON HEALTH AND THE ENVIRONMENT!



NANO INSULATION

- Safe
- Certified
- Environmentally non-conflicting

TRADITIONAL INSULATION

- Dangerous for allergies
- A source of dust
- Carcinogenic components

ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development) has created a new indicator (ISEA) – the Economic Sustainability and Environmental Index, allowing the comparison of the economic and environmental impact and energy efficiency of insulation materials used in building insulation. This index is based on climatic range and building type.

For the first time, ENEA highlighted the issue of excessive use of synthetic materials for building insulation. Unfortunately, such materials, especially their derivatives like polystyrene, pose serious problems, including flammability, toxicity, moisture formation, negatively impacting all building wall structures and affecting people's health.

BRONYA declares thermal values of the product, tested in laboratories accredited in Europe according to EN12667 standards. Thus, it has become a unique technology that is safe for the environment.

BRONYA

AREAS OF APPLICATION



**INSULATION OF BUILDING FACADES
AND HISTORICAL FACADES**



**THERMAL INSULATION FOR TANKS,
CISTERNS, AND CONTAINERS.**



**THERMAL INSULATION FOR STEAM
PIPES, WATER PIPES, AND HEATING
SYSTEMS**



**THERMAL INSULATION FOR
INDUSTRIAL FACILITIES**



- Highly effective for mold prevention, etc. It protects building envelopes and structures from thermal losses by maintaining moisture and air exchange between the building and the surroundings. They are the only products of this type with CE marking, with DoP (Declaration of Performance) in accordance with Regulation (EU) CPR No. 305/11, which also guarantees the thermal insulation value lambda, supported by European certifications. $\lambda=0.0015\text{W/mK}$

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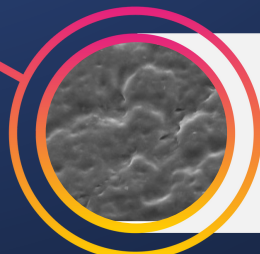
UNDER THE MICROSCOPE



Bronya: Porous ceramic beads combined with polymers that prevent the transfer of heat through the material.



COMPETITIVE COATING: Under the microscope, the 'broken' microstructure is visible



There is no developed microstructure that would prevent the transfer of heat in the material

HOW TO DETERMINE WHICH ONE IS BETTER?

Several competitive products exist on the market. The fundamental parameter determining the quality of thermal insulation coating is the coefficient of thermal conductivity, and its value should be as low as possible, as lower thermal conductivity indicates better thermal insulation capability. The coefficient of thermal conductivity for mineral wool is 0.045 W/mK. Bronya's coefficient of thermal conductivity is only 0.0015 W/mK. Some manufacturers do not present their product as thermal insulation but rather as paint, offering a bonus compared to regular paint – the effect of certain thermal savings. They state efficiency in percentages (without guaranteeing properties) and do not provide thermophysical parameters for their colors.

BENEFITS OF NANO-INSULATION BRONYA



HEAT PRESERVATION

When discussing where heat escapes from homes and buildings in general, experts refer to the so-called 'envelope.' This includes the floor, walls, windows, and doors, as well as the ceiling and roof.



NOISE INSULATION

Its subdivision into subcategories is much more complicated. Here, you can find sound insulation for soundproofing walls, floors, ceilings, sound insulation to dampen walking noise, as well as absorbing sound insulation that significantly reduces echoes.



FIRE SAFETY

Fire protection is a set of methods, activities, material-technical, and personnel security aimed at ensuring conditions to protect the lives and health of individuals, animals, property, and the environment against fire.

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COLD PROTECTION

Cold indoors is no joke. In uninsulated houses, the situation is different: Despite significantly higher energy costs, external walls and the overall indoor climate are often cold and uncomfortable.



COLOR ADAPTABILITY

The advantage is a pleasant appearance, extremely low weight, color adaptability, quick, simple, and long lifespan with a consistently unchanged appearance.



ANTI-CORROSIVE MATERIAL

Top-notch anti-corrosive coating for removing corrosion and providing exceptionally long-term corrosion protection for all metal surfaces.

COMMERCIAL IMPLEMENTATION REFERENCES



PRODUCTS

BRONYA I.



CLASSIC, CLASSIC NF

Applied as a coating, it acts as thermal insulation! Highly effective insulation for water pipes, steam pipes, air ducts for HVAC systems, cooling systems, various containers, tanks, refrigerators, etc.

(-60°C až do +200°C)



FACADE, FACADE NF

Ultrathin insulation that can be applied in layers as thin as 1 mm, increasing vapor permeability. Highly effective in eliminating frost penetration, condensation, mold formation, etc.

(-60°C až do +120°C)



ANTIRUST, ANTIKOR

The coating can be applied directly to a rusty surface! Highly effective thermal insulation with added anti-corrosive components. Simply remove loose rust with a wire brush.

(-30°C až do +150°C)

PRODUCTS

BRONYA II.



LIGHT, LIGHT NF

Applied as plaster, it is applied in thin layers for surface leveling. Bronya Light is designed for finishing work, intended for thermal and sound insulation of interiors and exteriors. Excellent adhesion to bricks, concrete, drywall.

(-30°C až do +150°C)



FIREPROTECTION

It is designed to increase the fire resistance of steel structures and constructions for industrial and civil purposes from 45 to 120 minutes.

(-30°C až do +80°C)



AQUABLOCK

It is applied to roofing, balconies, terraces, floors, and is suitable for use in bathrooms, basements, and similar areas.

(-30°C až do +80°C)



BEFORE IMPLEMENTATION

Before starting the implementation, we had to prepare the house for the insulation application, such as covering windows, doors, and the roof. Insulation application on a family house in Karlovy Vary. The material used for the facade is 2.5mm Bronya Classic. Additional insulation of the house was necessary due to condensation on the masonry from traditional insulation on the north side of the house.



INSULATION APPLICATION

After applying the thermal insulation layers of Bronya Classic and Bronya Facade, we successfully prevented heat penetration, thereby resolving the condensation issue. Simultaneously, it prevented heat ingress during hot days. The entire application process took 7 days, during which we adhered to the correct technological procedure with a 24-hour break between each applied layer.



THE APPLICATION OF ACRYLIC MATERIAL.

After applying the thermal insulation, we, in agreement with the owner and after selecting the color, applied a standard acrylic paint. To maintain the vapor permeability of the materials, we used an acrylic-based paint. In case of using a silicate or other paint combination, it would compromise the vapor permeability and disrupt the proper functioning of the insulation.



AFTER COMPLETION

The final completion of the project and the satisfaction of the owner serve as evidence that our green thermal insulation works in all weather conditions. We are pleased to have helped resolve a longstanding issue with the masonry, where even conventional insulation materials were inadequate. Our solution not only preserved the space but also contributed to environmental conservation.

It applies like paint and acts as a thermal barrier.





BEFORE IMPLEMENTATION

In the past, the customer faced heat losses on steam boilers caused by the uninsulated front and rear parts. Simply insulating them was not feasible. They had to ensure access to removable parts of the boiler for regular inspections of combustion chambers, and this wouldn't be possible if insulated with common materials like mineral wool with sheet metal. Calculating from the non-insulated surface area of the boilers and insufficient insulation of economizers, they estimated a loss of about 20 to 34 kW per hour depending on the operation.



THE ORIGINAL INSULATION

We started by removing the original insulation on the economizers, revealing additional issues such as corrosion beneath the common glass wool insulation. To address this, we safely and ecologically removed the original insulation, ground down the corroded areas, and rectified any defects. As a crucial first step, we applied the Bronya Antikor anti-corrosion coating on the economizers, effectively halting the further spread of corrosion.

Our application acts as a thermal barrier, serving as a protective layer against heat.



APPLICATION OF THERMAL INSULATION

The application of thermal insulation on boilers inside the building measured a temperature of +45°C. The temperature of the boilers was 75°C. To prevent overheating of the boilers and economizers and minimize operating costs, it was necessary to apply 0.5mm Bronya Antikor and 4mm Bronya Classic. Additionally, we applied thermal insulation coating Bronya Classic along with 120g geotextile on the economizers.



AFTER IMPLEMENTATION

After applying thermal insulation, we measured a temperature of 37 °C on the boiler. Before applying thermal insulation, we measured 84.2°C on the surface in full operation. Thanks to the special nano-insulation coating Bronya, we achieved the effect of insulation while maintaining access to the removable parts of the boiler from both the front and rear for internal inspections. We can confidently state that we reduced heat leaks into the space on the newly insulated parts of the boilers by more than 50%. The measurements conducted serve as evidence of this.





BEFORE IMPLEMENTATION

Before the implementation at CEMMAC Cement Plant in Horne Srnie, Slovakia, we measured the temperature of the flue gas chimney surface at 160°C. The chimney posed a danger to employees due to burns, and nearby technologies were affected over time due to an extraordinary heat leak produced by the flue gas chimney. To prevent these issues, we decided to address the situation with the Bronya Classic thermal insulation coating.



THE ORIGINAL INSULATION

We had to thoroughly clean the flue gas chimney from dust. Subsequently, we needed everything to take place during a partial shutdown to reduce the temperature to a minimum, ensuring the safety of our employees, as the chimney temperature is usually 239°C and higher. We covered all openings and technologies and began the insulation work.

Served as a paint, acting as a thermal barrier.



APPLICATION OF THERMAL INSULATION

As the first layer on the metal structure of the flue, we applied the anti-corrosion coating Bronya Antikor 0.50 mm, suitable for such surfaces, preventing and sealing any corrosion that may occur. The second layer consisted of the thermal insulation coating Bronya Classic 1 mm. Finally, we applied the thermal insulation coating along with 120g and 200g geotextile, reducing heat leakage into the space and, during full operation, lowering the temperature to 46°C.



AFTER IMPLEMENTATION

After applying the thermal insulation, we measured a temperature of 46°C on the flue chimney. Thanks to the special nano-insulating coating Bronya Classic, we achieved the effect of insulation while maintaining access to the removable parts of the flue chimney from the front. We can confidently state that we have reduced heat leaks into the space on the newly insulated parts of the chimney by more than 70%. This is evidenced by the conducted measurements.





BEFORE IMPLEMENTATION

Before the implementation at Ironworks Podbrezová a.s. on scintillation detector crystalizers, the application of thermal insulation coating Bronya Classic was 50 mm in diameter and 300 mm in length, with a width of only 2 mm. They insert a detector into the casing with an internal diameter of 51 mm. The challenge was to address an issue that standard insulation couldn't handle.



THE ORIGINAL INSULATION

The original insulation was not present; the casing itself was made of lightweight aluminum, which, under such extreme conditions and radiation, caused frequent malfunctions in the sensitive sensors. This limited the work and incurred costs associated with repairing the sensitive detectors.

Our application acts as a thermal barrier.



APPLICATION OF THERMAL INSULATION

Our primary goal was to maintain the diameter to prevent friction during the insertion of the casing. The application of the 2 mm thermal insulation layer Bronya Classic ensured sufficient protection for the casing against overheating, radiation, and reduced the temperature on the scintillation detector crystals.



AFTER IMPLEMENTATION

Following the application, we provided the customer with sufficient insulation to prevent damage to the sensitive crystal detector. With confidence, we can state that we reduced the heat transfer to the detector on the newly insulated crystals by more than 50%. The measurements conducted serve as evidence of this improvement.





BEFORE IMPLEMENTATION

Before the commencement of the implementation, we had to prepare the beer tank for the application of thermal insulation, i.e., cover the parts that did not need insulation. Thermal insulation application for beer tanks at Pilsner Urquell. The materials used were Bronya Antikor and Bronya Classic with a thickness of 2.5mm. The issue with condensation cannot be resolved by conventional insulation because standard insulation methods are unable to prevent condensation.



APPLICATION OF THERMAL INSULATION

We started the application of thermal insulation by applying the first layer, which was an antirust coating Bronya Antikor 0.50 mm, suitable for such surfaces, effectively stopping and sealing any corrosion. The second layer consisted of thermal insulation coating Bronya Classic 2.5 mm.

Our application acts as a thermal barrier.



APPLICATION OF THERMAL INSULATION

The application of thermal insulation on beer tanks ensured an adequate insulation layer. Inside the building, we measured a temperature of +30°C, while the tank temperature was 11°C. To prevent condensation formation, it was necessary to reduce the surface temperature. The temperature was reduced to 0°C after the prior application of 2.5mm BRONYA CLASSIC.



AFTER IMPLEMENTATION

After completing the application and moving the tanks to the brewery, we concluded the insulation application with a protective flex foil. Thanks to the special nano-insulating coating Bronya, we achieved the effect of insulation. We can confidently state that we reduced heat losses into space and, conversely, prevented condensation and the formation of the dew point on the newly insulated parts of the tank. The measurements conducted serve as evidence of these improvements.





BEFORE IMPLEMENTATION

Považský sugar a.s. in Slovakia, before the implementation, measured a temperature of 50°C on the roof surface. In the interior, temperatures reached up to plus 45°C during the summer months. The danger posed to employees included dehydration, making the operation of the sugar conveyor and other technologies challenging. To address these issues, we decided to resolve it with the Bronya Classic thermal insulation coating.

THE ORIGINAL INSULATION

For roof insulation, gray cardboard was initially used on the polycarbonate roof, creating a greenhouse effect inside the building. The interior felt like one large greenhouse, making work within the facility extremely challenging and, at times, unbearable. Therefore, the decision was made to remove the cardboard and commence insulation at a height of 4.5 meters.

Our application acts as a thermal barrier.



APPLICATION OF THERMAL INSULATION

After removing the original insulation, we applied a primer to the polycarbonate roof. Following the primer, we applied the thermal insulation layer of Bronya Classic, 2.5 mm thick. Such demanding insulation would not have been possible with conventional methods. Even ordinary paint tends to peel off over time, so we decided to conclude the final phase of insulation with the hydro-insulating coating Bronya Aquablock, 1 mm thick, which can repel water and snow, preventing them from penetrating the roof.

AFTER IMPLEMENTATION

After the application of thermal insulation, we measured a temperature of 31°C on the roof and even 25°C in the interior. Thanks to the special nano-insulating coating Bronya, we achieved the effect of isolating the roof and reduced the temperature inside. We can confidently state that we reduced the heat transfer into the space on the newly insulated parts of the roof by more than 50%. This is evidenced by the measurements, going from the original 50°C to 25°C.





BEFORE IMPLEMENTATION

Before the implementation, we had to conduct measurements and agree on how to carry out the thermal insulation application in such a complex environment as a glass furnace. In extreme conditions, our main concern is the safety of our employees to avoid endangering their health.



THE ORIGINAL INSULATION

The original insulation consisted of a special cement-concrete insulation layer applied to refractory bricks, designed to withstand the extreme heat from the glass-melting furnace. At the beginning, we measured 103°C, and the measurement itself was very challenging as the intense heat allowed for no more than 3 minutes near the furnace.

Our application acts as a thermal barrier.



APPLICATION OF THERMAL INSULATION

The application of the thermal insulation layer by painting or spraying was not feasible. Therefore, it was decided to carry out the application outside the furnace area. The entire preparation of the Bronya Classic thermal insulation coating with a 200g geotextile was done outside the furnace, and the finished insulation was then transferred to the application site and adhered to the concrete surface of the furnace. The application was performed wearing special clothing and gloves, strictly adhering to safety regulations.



AFTER IMPLEMENTATION

After the thermal insulation layer of Bronya Classic 7 mm had dried and endured such extreme conditions, we returned after a month of exposure to the glass melting furnace to conduct further measurements. Following the application of the thermal insulation, we measured a temperature of 69.9°C on the glass melting furnace. Thanks to the special nano-insulation coating of Bronya Classic and the geotextile, we achieved the effect of insulation, preventing heat loss and, consequently, reducing gas consumption. With confidence, we can state that we decreased heat leakage into the space from the newly insulated parts of the furnace by more than 40%. The measurements serve as evidence of this achievement.





BEFORE IMPLEMENTATION

ŠKO-ENERGO Mladá Boleslav faced challenges with coal wagon thawing, and when initially invited to address the issue, we were unaware of the situation that awaited us. The premises still held water from firefighters who extinguished a fire caused by the high temperature of the steam pipes at 250°C and coal particles escaping from the original insulation, which couldn't effectively insulate the hot pipes.



THE ORIGINAL INSULATION

The original insulation proved inadequate, leading to self-ignition, and the pipes were already in an emergency state with corrosion. Without hesitation, we proposed a solution to address the issues, including fires and significant steam leaks, by removing the original insulation and replacing it with glass wool pipe insulation and protective covers.

Our application acts as a thermal barrier.



APPLICATION OF THERMAL INSULATION

On the steam pipes, we applied the following layers: an initial 1 mm coat of Bronya Antikor, suitable for such surfaces and capable of halting ongoing corrosion; a second layer of 1 mm Bronya Classic for thermal insulation; a third layer of thermal insulation with 120g geotextile to reduce heat leakage. During full operation, we lowered the temperature of the steam pipes. Finally, we applied fire-resistant coating Bronya Fireprotection to prevent fires.



AFTER IMPLEMENTATION

After applying thermal insulation, we measured the temperature on the pipes at 38.7°C, where insulation was not applied to the surface. During full operation, we previously measured 250°C. Thanks to the special nano-insulating coating Bronya, we achieved the effect of insulation while preserving access to the detachable parts of the pipes from both the front and back. We can confidently state that we reduced heat leaks into the space on the newly insulated sections of the pipes by over 80%. This is evidenced by the measurements taken. Since completing the application for the customer, firefighters no longer had a reason to go there for fire extinguishing.





BEFORE IMPLEMENTATION

Before commencement, we had to prepare the dry ice conveyor for thermal insulation application, i.e., wrap the parts that didn't require insulation. We used Bronya Antikor and Bronya Classic materials for our client, Rataj a.s. The challenge involved condensation, which couldn't be addressed with conventional insulation due to its inability to prevent condensation. Additionally, standard insulation posed a risk of burns to employees at operational temperatures of -80°C .



THE ORIGINAL INSULATION

We did not have to address the original insulation as the ice conveyor was manufactured and transported to our company for insulation.

Our application acts as a thermal barrier.



APPLICATION OF THERMAL INSULATION

On the metal part of the conveyor, we applied an ant-corrosion coating Bronya Antikor 0.50 mm as the first layer, suitable for such surfaces, capable of stopping and sealing any corrosion that may occur. The second layer consisted of the thermal insulation coating Bronya Classic 1 mm. Finally, we applied the thermal insulation coating along with 120g geotextile, reducing the escape of cooling and raising the temperature to 0°C during full operation.



AFTER IMPLEMENTATION

Despite the challenging insulation, it is crucial to consider hygiene and adhere to strict procedures, especially since the dry ice conveyor was placed in food production, where higher hygiene standards apply. Thanks to the special nano-insulation coating Bronya, we achieved effective insulation. We can confidently state that we have ensured sufficient insulation, thus protecting the operators from dry ice burns. The measurements conducted serve as evidence of our success.





BEFORE IMPLEMENTATION

Application on Canary Islands apartments. Prior to the application, the traditional asphalt membrane reached a temperature of 60°C, causing the entire interior of the apartment to heat up, with a measured temperature of around 38°C.

THE ORIGINAL INSULATION

The original insulation was outdated and no longer effective. With the weather causing wrinkles even on the islands, which typically experience high temperatures reaching a maximum of 40°C this year, people on the islands have begun to consider insulation as well.

Our application acts as a thermal barrier.



APPLICATION OF THERMAL INSULATION

After thorough cleaning of the roof with water and drying, we applied 2mm Bronya Classic and 0.5mm Bronya Aquablock. Subsequently, we also applied Bronya Facade across the entire façade of the apartment, achieving optimal temperatures of 30°C on the surface and 20°C inside the apartment. This resulted in reduced air conditioning costs, especially significant for 280 apartments where such expenses can be considerable.

AFTER IMPLEMENTATION

After completing the application on the roof and façades of the apartment, we concluded the thermal insulation process with the hydroisolating coating Bronya Aquablock, which also served as protection against aggressive sand during sandstorms coming from the Sahara. Thanks to the special nano-insulating coating Bronya, we achieved the effect of insulation. We can confidently state that we reduced heat leaks into the interior and, conversely, improved the living conditions in the apartments where air conditioning is no longer necessary. This is supported by the measurements conducted.





BEFORE IMPLEMENTATION

Before the start of the application, we had to prepare the concrete mixer truck by covering the parts that did not need insulation. The thermal insulation application for Mip transport s.r.o. involved using Bronya Antikor and Bronya Classic, both 2.5mm thick. The challenge of high temperatures in summer and, conversely, cold in winter is common for all concrete transporters. This issue cannot be effectively addressed with conventional insulation, as standard insulation struggles to prevent heat transfer with such a thin layer.



THE ORIGINAL INSULATION

The original insulation was insufficient, so they approached us to apply the Bronya thermal insulation coating over the existing insulation. The original insulation was finished with an acrylic glossy paint, which the customer wanted to preserve.

Our application acts as a thermal barrier.



APPLICATION OF THERMAL INSULATION

After thoroughly cleaning the drum, we applied the anti-corrosion coating Bronya Antikor 0.50 mm, suitable for these surfaces, capable of preventing and sealing any corrosion. As the second layer, we applied the thermal insulation coating Bronya Classic 2.5 mm. Finally, an acrylic white paint was applied.



AFTER IMPLEMENTATION

After the application, we provided the customer with sufficient insulation to prevent high fuel consumption for heating and curing concrete caused by inadequate insulation. With certainty, we can state that we reduced the heat transfer into the drums by more than 50%. The measurements conducted serve as evidence.

WORK TOGETHER



PARTNERS

We are seeking global business partners: Connect with us and expand your business on an international level. In today's interconnected world, constantly seeking new markets and opportunities for growth and expansion is essential. Therefore, we reach out to potential business partners from around the globe who are interested in collaborating with us for mutual prosperity.

Let's work together! As part of our partnership, we also offer training for your technical staff and sales team to familiarize them with our products and technologies. This will enable them to better advise customers and efficiently propose solutions for individual projects.

In addition, we will regularly update you on new additions to our product range, product updates, and important changes in legislation or standards related to insulation. As our partner, you will also have the opportunity to take advantage of marketing support, including collaboration on promotional materials, presentations, or participation in trade fairs and conferences.

Together, we will explore opportunities for joint projects and combined offerings to expand our market presence and provide comprehensive services to our customers.



Kontakt :

+420 607 766 776

info@katrom.eu

www.katrom.eu

Braunerova 563/7, 180 00 Praha