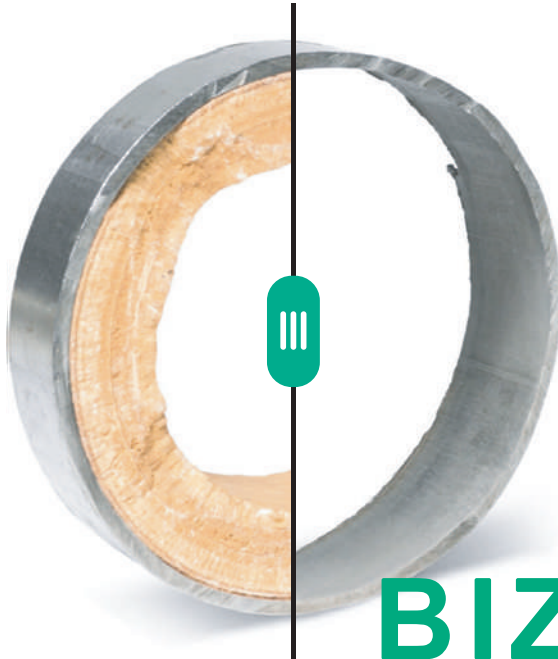




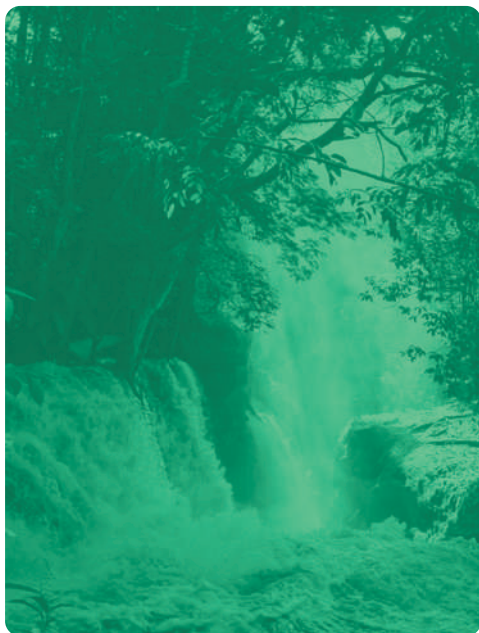
BONAKA

Cleaning Biotechnologies



BIZ-1

Sustainable technology at the service of nature and industry.



Our mission is to increase the efficiency of equipment dedicated to the production and consumption of heat with innovative and ecological methods, to make the world cleaner and safer for the environment and for work activities.



BIZ-1

Innovation in plant cleaning.

BIZ-1 by Bonaka is an innovative, efficient, safe and environmentally friendly biotechnological product for the cleaning and recovery of a wide range of thermal equipment and technological systems from sludge, encrustations and deposits:



EQUIPMENT OF BOILERS AND
THERMOELECTRIC STATIONS
OF VARIOUS CAPACITY
AND POWER



HEAT EXCHANGERS
OF VARIOUS TYPES



HEATING, TELE-HEATING
AND WATER SUPPLY SYSTEMS
FOR BUILDINGS



WASTEWATER
TREATMENT PLANTS



OIL REFINERY
EQUIPMENT



FACTORY EQUIPMENT
FOR FOOD AND BEVERAGE
PRODUCTION

BIZ-1 How it works.

The functioning of BIZ-1 is based on the fermentation processes of symbiotic lactic acid triggered by specific and selected microorganisms that generate over 30 organic acids in the form of metabolites with unique properties. In fact, once BIZ-1 has been inserted into the closed circuit of the system to be treated:

- The metabolites, by selectively entering into reaction with the compounds that make up the sediments, destroy them. The decomposition products are subsequently washed off with simple water;
- At the same time, a hydrophobic film of complex natural composition forms on the surface of the material to be cleaned, which protects the material from corrosion by oxidizing agents and reduces the future rate of deposit formation.



The properties of BIZ-1

The BIZ-1 product, being a bio-organic detergent, has several valuable properties:



Disrupts sludge, corrosion products and encrustations in thermal equipment and energy systems;



Decomposes a wide range of deposits and organic substances in industrial equipment and thermal systems;



Has a passive attitude towards the materials of the surfaces to be cleaned, gaskets, plastic, rubber;



Ecologically safe;



Individually it can be disposed of in dilution in the general wastewater system without prior treatment. Depending on the disintegrated substances, the resulting liquid must be disposed according to the regulations in force;



It is not toxic to humans and animals.

Comparison with other cleaning methods.

PARAMETER	BIZ-1	CHEMICAL REAGENT		ELECTRIC, ULTRASONIC, HYDROPNEUMATIC PULSE CLEANING	MECHANICAL CLEANING	REPLACEMENT	CLEANING WITH WATER
		BASED ON ORGANIC AND INORGANIC ACIDS	BASED ON ACIDS WITH INHIBITORS AND ADDITIVES				
EFFECTIVENESS	98%	80%	80%	75%	90%	100%	1%
SAFETY FOR EQUIPMENT, GASKETS, PLASTIC, ETC..	✓	✗	✗	✗	✗	✓	✓
ENVIRONMENTAL COMPATIBILITY	✓	✗	✗	✓	✓	✗	✓
DURATION OF THE PROCESS	1-7 DAYS	UP TO 1 DAY	1-3 DAYS	2-3 MONTHS	1-3 MONTHS	3 MONTHS	1 DAY
FORMATION OF A PROTECTIVE FILM AFTER CLEANING	✓	✗	✓	✗	✗	✗	✗
SPECIAL DISPOSAL	NOT REQUIRED	REQUIRES TREATMENT BEFORE DISPOSAL		NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED


To date, BIZ-1 is the main alternative to conventional cleaning methods.

BIZ-1 The advantages of constant use.

- 2-3 times extension of the life cycle of the system components treated;
- Repeatability and programmability of maintenance interventions;
- Reduction of maintenance costs;
- Up to 30% savings on energy costs;
- 10-25% reduction in CO2 emissions;
- Up to 30% increase in thermal irradiation;
- Greater efficiency of the production cycle;
- Restoration of the original operating parameters;
- Decrease in hydraulic resistance.





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