



**UNDERWATER  
PAINT**



**ALL TYPES OF UNDERWATER WORKS  
UP TO A DEPTH OF 100 METERS**

# ABOUT US



Scientific and production company UNDERWATER PAINT develops and implements on world market innovative, highly efficient technologies used in the repair and restoration of hydraulic structures.

## **We offer:**

- Thermal gas cleaning of metal surfaces;
- Thermal spray of a protective metal layer (Zn, Cu, Al);
- Cleaning of underwater metal and concrete surfaces by cavitation;
- Underwater painting of surfaces with "underwater paint marine" enamel;
- Diving work of any complexity



# GAS-THERMAL CLEANING



## GAS-THERMAL CLEANING OF METAL SURFACES

Gas thermal treatment units designed by our partners create a jet of gas-abrasive mixtures with a temperature of more than 500 degrees Celsius, with speed approaching speed sound. This allows the installations to clean metal surfaces much faster standard sandblasting machines, obtaining more high degree of purification.

The installations used by the specialists of the company UNDERWATER PAINT allow clean metal surfaces to Sa3 at a depth of 15 cm below the water's edge.





# GAS-THERMAL SPRAYING



## GAS-THERMAL SPRAYING OF METALS

Unique technology for protecting surfaces from corrosion based on coating of ferrous metals and concrete with a layer of oxidation-resistant metals, such as zinc, copper and aluminum. High speed thermal spraying consists in acceleration and heating of particles of the sprayed material in high speed and high temperature flow combustion products of kerosene in compressed air. This technology allows spraying metal and polymer materials, admitting heating to a plastic state in air environment.



# GAS-THERMAL SPRAYING



The advantages of the method are its economy, productivity and high quality of the resulting coatings. In practice, zinc plating of machine parts, building structures, trusses, cranes and port facilities with galvanic method is impossible. Only high speed thermal spraying is optimal for the application of resistant anti-corrosion coatings on metal objects in the field during their installation and repair.

UNDERWATER PAINT has mastered the possibility of applying a zinc coating thickness up to 300 microns on metal surfaces of submerged in the water structures 15 cm lower the waterfront.

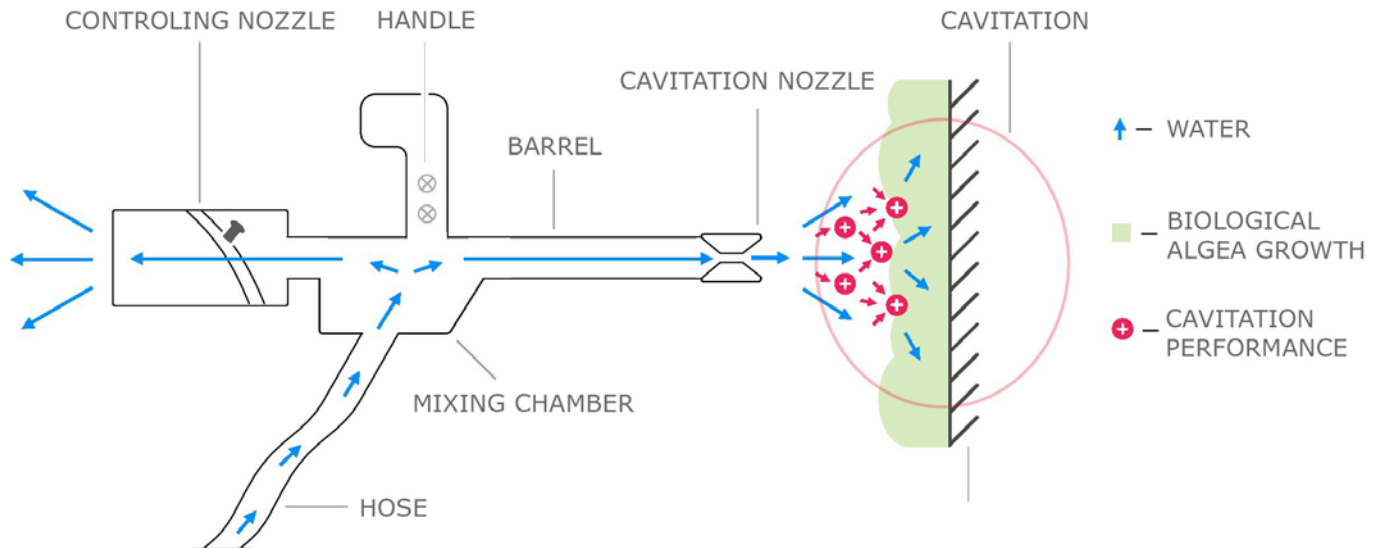


# CAVITATION CLEANING



## CAVITATION UNDERWATER CLEANING

Cavitation equipment allowing to clean metal and concrete surface under water at depth up to 30 meters. Purification degree Sa 2.5 Convenient to use, reliable and extremely effective in all waters. Removes biological growth, formation corrosion and old automatic transmissions. No abrasives or brushes are used.



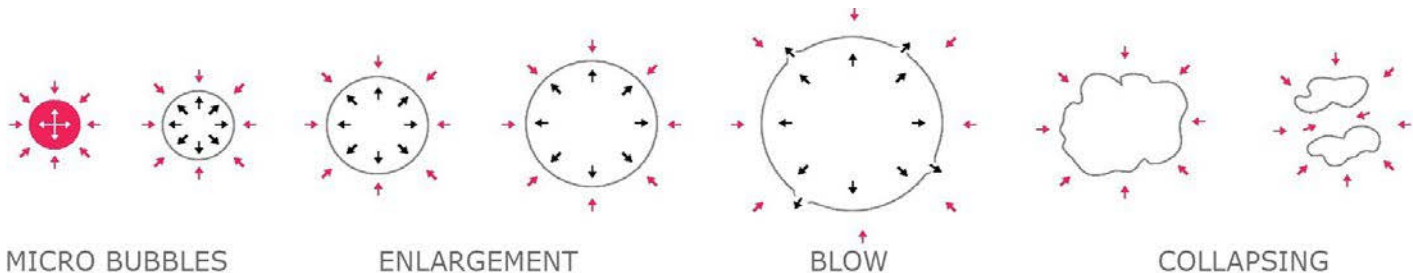
# CAVITATION CLEANING



## On the principle of cavitation:

Cavitation, or microexplosions of air bubbles, is a very well-known phenomenon.

Since the appearance of trunk pipelines, engineers have faced the unexplained phenomenon, destruction of pipelines at bending points. It was the effect shown in the diagram that destroyed steel pipes until people found it useful application. Now we are using it for high quality underwater cleaning.





# CAVITATION CLEANING



Using the cavitation devices developed by us, divers UNDERWATER PAINT, solve any cleaning task ship hulls and hydraulic facilities in any waters. The quality of their work has been proven by years of experience. You can assess the quality of the equipment by watching video reports on our website.



# UNDERWATER PAINTING



**One of our best inventions is underwater enamel.**

UNDERWATER PAINT Two-component underwater paint based on epoxy oligomers, allowing to carry out anti-corrosion work on underwater parts of submerged in water structures without the use of expensive caissons. Ideal for painting piles and sole for sheet piling.

Working temperature up to 5 degrees of celsius.



# UNDERWATER PAINTING



The enamel has excellent adhesion to metal and concrete surfaces and protects them from corrosion for a long time. Guaranteed preservation of the protective properties of the coating, subject to application conditions, is 3-5 years. Lifetime of the enamel is at least 10 years.

## 10 m<sup>2</sup>/h

Underwaterpaint has developed special equipment that allows apply enamel at a speed up to 10 sq.m. per hour.



# WASHING CONTAINERS



**Washing oil/petroleum** - from inside containers with high pressure water jet and lignin. This helps the petroleum products to be absorbed into the material and can be used as fuel, like firewood.





# OUR BUSINESS MODEL



1. We produce underwater paint and deliver wherever it's needed.
2. We perform a pre-job investigation service to make the report regarding the existing condition of underwater structures.
3. We perform a detailed price offer after the pre-job investigation was done.
4. We do surface cleaning and underwater painting with our professional scuba divers.
5. We give a 10-year warranty to our performed work.
6. We also perform gas-thermal cleaning and gas-thermal cleaning of metal structures above the water.



# CORROSION PREVENTION



## SUITED FOR CORROSION PREVENTION IN ELECTROLITIC CORROSION AREAS

(e.g. The basement of offshore wind turbine)

### The benefits:

- Material saving (no need for anodes);
- Maintenance savings (no need for regular change of anodes using expensive workforce);
- Enhancement of life time and durability of metal structures.



# EQUIPMENT ROTAN for underwater cleaning and painting



Cabinet for divers



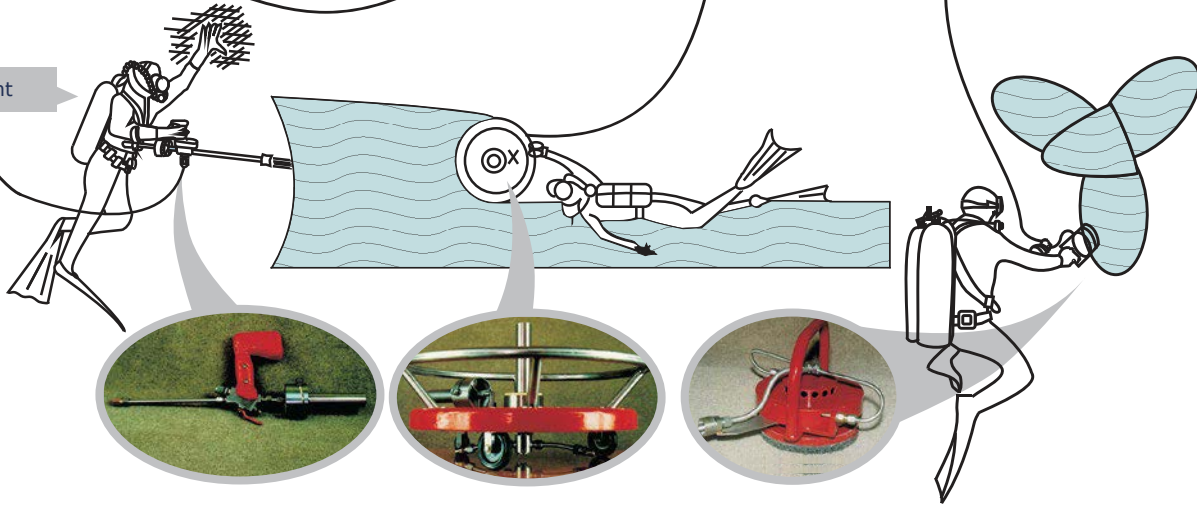
Cabinet with diesel generator



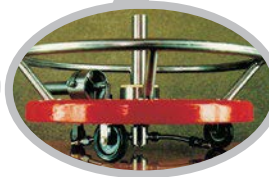
High pressure units



Divers equipment



Tool **SARGAN**



Tool **MEDUZA**



Tool **NIMFA**

# ADDITIONALLY OUR PROFESSIONAL SCUBA DIVERS CAN PERFORM THE FOLLOWING WORKS:



1. Cutting and welding metal under water at a depth of 100 m.
2. Survey of the bottom, including detection of residual mine hazard at a depth of 100 m.
3. Cleaning of ship hulls, rudder-propellers and caissons.
4. Laying of bank protection elements (hexabits, gabions, leveling of a stone bed)
5. Ship lift.
6. Installation / dismantling of prefabricated metal structures under water up to 100 m.
7. Concrete work under water.
8. Emergency rescue operations in open water areas.



**Professionals with extensive experience and the necessary certificates will help you perform all the necessary tasks.**





# UNDERWATER PAINT

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