

## UNDERWATER PROPELLER POLISHING & CLEANING

The underwater propeller polishing (multi-stage micro polishing of all surfaces) and the maintenance of the smooth surfaces, is vital in order to save energy and optimize the performance of the ship (improvement of vessel's performance). The rough propeller leads to power loss, which can be up to 6% as well as an increase of fuel consumption.

**BEVALDIA (Manager of the branches PSOMAKARA & GAMSRO)** provides high quality underwater cleaning and underwater propeller polishing (uw propeller polishing), achieving immediate and effective reduction of fuel consumption and reduces the total cost of the ship. Propellers convert mechanical energy to the propeller shaft to thrust energy in the water.



The propeller blades function as a spoiler. The development of thrust that they generate is a result of flow around the blade. As the propeller turns the blades generate a pressure difference in the water, pushing the ship forward or backwards, depending on the way that the propeller turns, as well as the pitch of the blades. There are fixed pitch propellers and variable pitch propellers.

An important problem in shipping is the increase of roughness to the ships propeller, as the fuel consumption and the emission of gaseous pollutants in the environment is increased and significant losses are caused to the propulsion system.

### GREECE

Piraeus, Chios  
Thessaloniki  
Kavala  
Alexandrou-  
poli  
Neapoli- Vatika,  
Kali Limenes  
Corfu Kalamata  
Patra, Laurio Ag.  
Theodori Elefsina  
Chalkida Rhodes  
Drepano Korinthos

### TOGO

Lome

### TURKEY

Istanbul  
Canakkale  
Iskenderun

### CYPRUS

Limassol  
Larnaca

### ALBANIA

Detar  
Sarande

### BENIN

Cotonou

### CHINA

Rizhao  
Shanghai  
Hong Kong  
Qingdao  
Lianyungang

### CONGO

Pointe  
Noire

### DJIBOUTI

Djibouti

### EGYPT

El Dekheila  
Suez

### SINGAPORE

Aepa

### FRANCE

Marseille

### GHANA

Tema

### GUINEA

Conakry  
Kamsar

### INDONESIA

Balikpapan

### IV. COAST

Abidjan

### KOREA

Yeosu

### MEXICO

Lazaro  
Cardenas  
Manzanillo  
Punta  
Manzanillo  
Tuxpan

### PANAMA

Balboa

### SPAIN

Palma de  
Mallorca

### SENEGAL

Dakar

### TUNISIA

Tunis  
Sfax

## ADVANTAGES OF UNDERWATER PROPELLER POLISHING

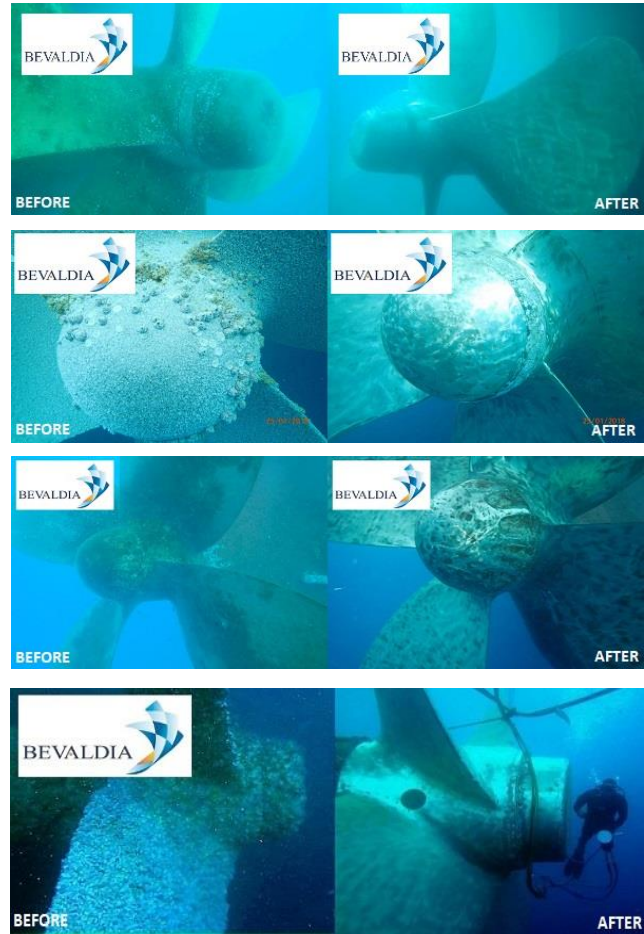


With continuous cleaning of the hull, rudder and underwater propeller polishing (uw propeller polishing), the potential savings per case can exceed 6%! The time period, which the propeller takes to cover with marine growth, and then to proceed for

underwater propeller polishing (uw propeller polishing), varies depending on the propellers' source material, the nature of the roughness, as well, and the corrosion of the metal from which the propeller is made.

## PROPELLER POLISHING RESULTS

The underwater propeller polishing (uw propeller polishing) is now part of the regular ship maintenance. The underwater services company BEVALDIA (Manager of the branches PSOMAKARA & GAMSRO) performs underwater propeller polishing (uw propeller polishing) with diamond disc pads, achieving excellent results [Rubert "A" scale (1.00 Micron Ra)].



**GREECE**  
Piraeus, Chios  
Thessaloniki  
Kavala  
Alexandrou-  
poli  
Neapoli- Vatika,  
Kali Limenes  
Corfu Kalamata  
Patra, Laurio Ag.  
Theodori Elefsina  
Chalkida Rhodes  
Drepano Korinthos

**TOGO**  
Lome

**TURKEY**  
Istanbul  
Canakkale  
Iskenderun

**CYPRUS**  
Limassol  
Larnaca

**ALBANIA**  
Detar  
Sarande

**BENIN**  
Cotonou

**CHINA**  
Rizhao  
Shanghai  
Hong Kong  
Qingdao  
Lianyungang

**CONGO**  
Pointe  
Noire

**DJIBOUTI**  
Djibouti

**EGYPT**  
El Dekheila  
Suez

**SINGAPORE**  
Aepa

**FRANCE**  
Marseille

**GHANA**  
Tema

**GUINEA**  
Conakry  
Kamsar

**INDONESIA**  
Balikpapan

**IV. COAST**  
Abidjan

**KOREA**  
Yeosu

**MEXICO**  
Lazaro  
Cardenas  
Manzanillo  
Punta  
Manzanillo  
Tuxpan

**PANAMA**  
Balboa

**SPAIN**  
Palma de  
Mallorca

**SENEGAL**  
Dakar

**TUNISIA**  
Tunis  
Sfax