

UNDERWATER PROPELLER POLISHING

The underwater propeller polishing 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.

There are several factors which are responsible for increasing the roughness of the propeller and which act together achieving a reduction in the smoothness of the propeller.

These factors are:

1. Marine pollution
2. Propellers' structure, materials' origin
3. The deposition of calcium carbonate
4. The corrosion of the metal
5. The hydrodynamic cavitation
6. Mechanical damage from collision with objects that can be found at sea



The underwater propeller polishing is now part of the regular ship maintenance.

Advantages of the underwater propeller polishing:

1. Increase and improvement of vessel's performance
2. Reduced fuel consumption up to 6%
3. CO2 emission reduction of gases in the marine environment
4. Increase of vessels' speed
5. Reduction of unwanted vibrations due to cavitation
6. Stress reduction of the propeller axis and the vessels' machinery
7. The propeller and rudder are cleaned simultaneously, to further enhance the performance of the vessel
8. Increased reliability
9. Expansion of vessels' maintenance cycles

BEVALDIA performs underwater propeller polishing with diamond disc pads, achieving excellent results [Rubert "A" scale (1.00 Micron Ra)].

BEVALDIA headquarters in **Greece** (Piraeus, Chios, Thessaloniki, Crete / Kali Limenes, Korinthos - Kalamaki, Kavala, Alexandroupoli, Neapoli-Vatika, Corfu, Patra, Kalamata, Laurio, Chalkida, Rhodes, Drepano, Elefsina, Ag. Theodori), **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), **France** (Marseille), **Ghana** (Tema), **Guinea** (Conakry, Kamsar), **Indonesia** (Balikpapan), **Ivory Coast** (Abidjan), **Korea** (Yeosu), **Mexico** (Lazaro Cardenas, Manzanillo, Punta Manzanillo, Tuxpan), **Singapore** (Aepa), **Spain** (Palma de Mallorca), **Senegal** (Dakar), **Tunisia** (Tunis, Sfax), while diving teams are located at regular intervals in ports around the world.

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