Reduce marine pollution, Return to nature

ECO PAINT

Tin-Free, Elution-Control, Antifouling bottom paint

WAKO Co., Ltd.

Development of Special Ceramic as an Additive and Adoption by M.L.I.T.

Ministry of Land, Infrastructure, Transport and Tourism (M.L.I.T.) rounded up the results that existing ship bottom paints have a significant effect on marine ecology.
Investigative research committee of the ministry decided to do the development of new ship bottom paint in 2000. They asked domestic paint manufacturers for the development and implemented installation and dip test.
In the result, our ECO PAINT, which contains special ceramic as an additive agent, was verified that it reduces elution of the paint to ocean and has advantage over other paints in antifouling property. ECO PAINT has been used for the vessels owned by M.L.I.T. since it was adopted in 2003.

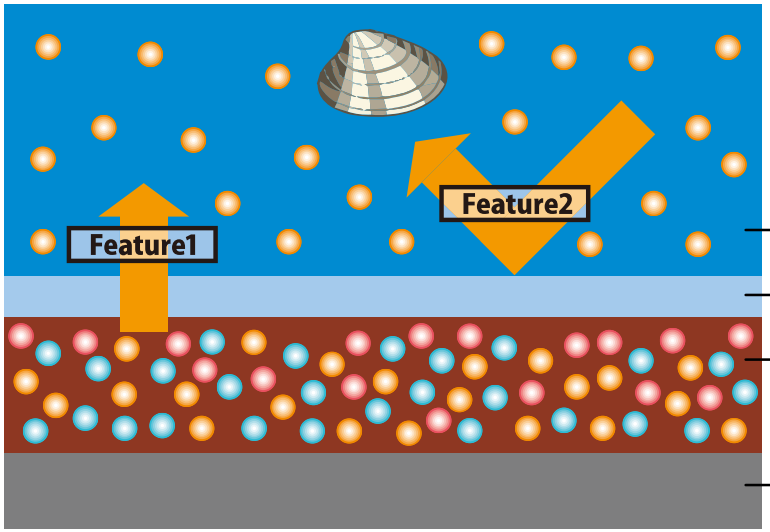

Kaisho-maru (Owned by Ministry of Land, Infrastructure, Transport and Tourism,Kyushu Regional Bureau)

Corporate Chronology

1999 ー Marine paint business started.
2001 ー *M.L.I.T. adopted ECO PAINT on owned ship.
* To date, it has been adopted to M.L.I.T owned vessels many times.
2003 ー Started trading with Yanmar Engineering Co., Ltd and Yanmar Marine System Co., Ltd.
- Acquisition of patents for marine paint incorporating special ceramics (Japan)
2004 ー Established a joint company with Korean paint company and shift a production base to Korea, also be released in Korea
2009 ー Acquisition of patents for an elution control type marine paint incorporating special ceramics (Korea)
2012 ー Start trading with Suzuki Marine Co., Ltd.
2016 ー Development of thermal insulation paint
2017 ー Sound insulation paint patent pending
*M.L.I.T. means Ministry of Land, Infrastructure, Transport and Tourism.

Antifouling Mechanism of ECO PAINT and Test Result

Mechanism



Feature1 The antifouling agents inside the paint film(positive ion) come to the surface by negative ion barrier forming on the surface of the paint films in the seawater.

Feature2 The repellent effect by negative ion barrier keeps away shellfish, seaweed and other marine creatures from ship bottom.

For above features,

ECO PAINT provides sustainable antifouling effect regardless of a usage situation and marine environment and made a success in reducing the elution of paint to the ocean.

Antifouling Performance Test Result

Painted date:
September,2006

Painted by (Port side):
Other Japanese
Ship bottom paint

Painted by(Starboard side):
ECO PAINT

After 22 months (July, 2008)

Comparing with ECO PAINT, there are a lot of attached substances (shellfish, seaweed and other marine creatures) on the port side coated with other paint.

Painted by Other Paint (Port side)

Painted by ECO PAINT (Starboard side)

ECO PAINT SUPERIOR CHARACTERISTICS

Characteristic	General antifouling paint	ECO PAINT
Antifouling ability	There are differences in effect depending on usage situation and the marine environment.	Regardless of usage situation and the marine environment, it exerts its effect uniformly.
Antifouling theory	Leaching antifouling component by the hydrolysis of painted films.	Owing to formation of negative ion barrier, sea life avoids to stick on a vessel.
Sustainability of effect	The more leaching of the painted films, the weaker the effect.	Despite low leaching painted films, negative ion barrier makes to keep the effect.
Environmental for sea life	Leaching painted films cause to marine pollution.	Elution-Control type. It is widely used in marine resort areas.

Marine Environment Friendly

General antifouling paint

ECO PAINT

Compared to general antifouling paint, ECO PAINT reduces marine environmental pollution at the time of voyage and anchorage by reducing elution of paint.

It is an antifouling paint that was certified to conform to IMO's International Convention on the Control of Harmful Antifouling Systems on Ships, 2001.

Track Record (Japan)

In addition to bellow ships, over 200 vessels use ECO PAINT.

Cuatomer *M.L.I.T.
Vessel name KAISHO-MARU
Vessel type Dredge and oil recovery ship
D.W.T 4,651

Cuatomer *M.L.I.T.
Vessel name GANRYU
Vessel type Cleaning and Oil recovery ship
D.W.T 195

Cuatomer *M.L.I.T.
Vessel name CHINZEI
Vessel type Patrol ship
D.W.T 39

Cuatomer NIPPON SHIO KAISO CO.,LTD
Vessel name WAKABA
Vessel type Cargo ship
D.W.T 4,713

Cuatomer NIPPON SHIO KAISO CO.,LTD
Vessel name NOZOMI
Vessel type Cargo ship
D.W.T 499

Cuatomer NIPPON SHIO KAISO CO.,LTD.
Vessel name SHORYU
Vessel type Cargo ship
D.W.T 299

* M.L.I.T.: Ministry of Land, Infrastructure, Transport and Tourism

We can provide bottom paints for boats and yachts which be able to use on fiberglass and wood. The main business partners in Japan are as follows.

YANMER ENGINEERING CO., LTD. YANMAR MARINE SYSTEM CO., LTD. SUZUKI MARINE CO., LTD. etc

Patent Holder and Manufacture

Patent Holder/Manufacture: WAKO Co., Ltd.

HEADQUARTER
WAKO Palace21,2-1-13,Honkawa-Cho,Nakaku,
Hiroshima-shi, Hiroshima, Japan
Tel:+81-(82)503-1150 Fax. (82)503-1151
URL: http://www.wako-g.jp/
http://www.boat.jp

Production site: Korea

Using Patented Technology for ECO PAINT

Paint Additive agent and
Ship bottom paint containing additive agent
Japan Patent No. 3468743 Registered: Sep. 5, 2003

Antifouling ship bottom paint
(Reduction of leaching type, tin free)
Korea Patent No. 0910894 Registered Jul. 29, 2009

Antifouling ship bottom paint
(Tin and cuprous oxide free)
Korea Patent No. 1014964 Registered: Feb. 8, 2011

*Package design may change.