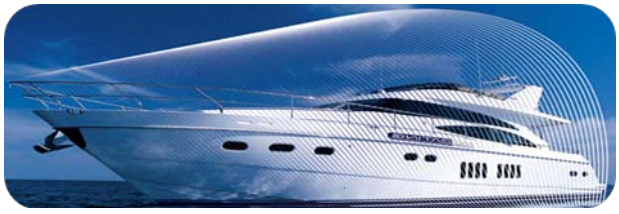
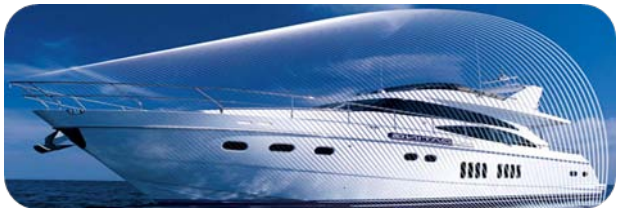


MC LioCyl Sys

Fouling Release Paint System

www.mcoating.it – info@mcoating.it



'Vessel fuel efficiency and environmental impact is an area where coatings have and will continue to have a significant role. With an estimated 350 million fleet, there is an ever increasing focus on shipping's environmental footprint. At this level of consumption the industry currently emits some 1.1 billion tons of CO2 and over 10 million tons of SO2 annually. Fouling is a major problem, leading to higher fuel consumption and so increased air pollution. The underwater hull condition has an important impact on the economics of shipping and any increase in underwater hull roughness can have major effects on the environment."


Underwater hull with barnacles


Underwater hull with weed

MC LioCyl Fouling Release Paint System (FRPS) *is the most innovative system ever made.*

From an ecological point of view the underlying strategy was to create a specific surface morphology at nano-scale, based on carbon nano-tubes specifically developed for this purpose in order to introduce them in a liquid paint environment, which had already performant fouling release capacities.
In the paint, the carbon nano-tubes manifest their full intended effect and marine organisms on the hull surface.

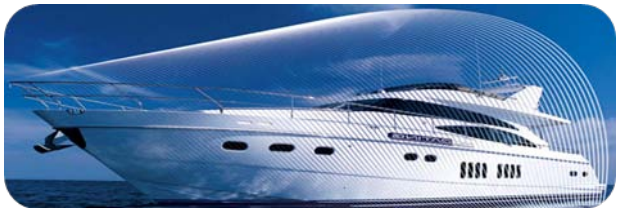
The NEW SYSTEM, Indeed, combination of the carefully selected introduction of carbon nano-tubes, is the overall solutions outperforms any other long lasting fouling release coating. **This marine fouling solution is could be reached without containing any biocides or heavy metals** (CORI REPORT ME 3081 / ES 7531)

On top of that, the **MC LioCyl Fouling Release Paint System** provides excellent abrasive resistance and protection against corrosion and cavitation.
These capacities result in a very cost effective protection system for both private and commercial boat owners.

With **MC LioCyl Fouling Release Paint System** cleaning on a regular basis will keep the vessel operational for several years with postponed maintenance and boat owners will be capable to tackle the marine fouling phenomena in a sustainable eco-friendly way.

In August 2012 we achieved to obtain the type approval certification by Bureau Veritas

LioCyl topcoat is the first application of CNTs available in four colors



Advantages of MC LioCyl Fouling Release Paint System

- Free of biocides.
- Free of heavy metals.
- Good water penetration ability (+20% speed)
- Excellent resistance to mechanical damage
- Very good mechanical properties (ABRASION, CORROSION and CAVITATION)
- Less fuel consumption for the same speed.
- Perfect use for Rudders and Propeller
- Reduction CO2 emission
- Durable paint system with longer operating cycles.
- Reduce Service Time (Reduce costs of repaint in the dry dock)
- Weeds and Bernacles don't find attachement and don't grow under the layer and they can be easily removed also just by hand.
- Marine certificate – IMO MEPC.102(48) – File number: COAT 88980-2012
- It is recommended to evaluate MC LioCyl Fouling Release Paint System performance in a full coating system with PRIMER and MIDCOAT.

Application of MC LioCyl Fouling Release Paint System

STEEL SURFACE

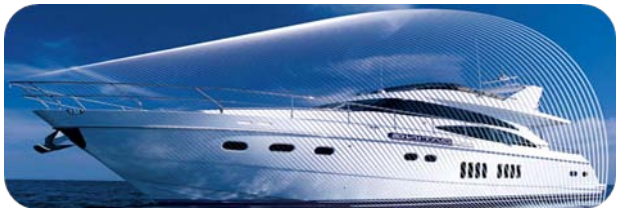
Product	Number of Coats	Recommended Total DFT	Recommended WFT	Dry Time between each or next coats	Min and Max application temperature	RAH %
Primer 9937	2	150	2 x 105	>5 h	5°C-40°C	40-85
12 hours drying						
Midcoat 9942	1	75	1 x 135	5 -48 h	5°C-40°c	40-85
Top Coat 9949	1-2	100-120	1x110-130/2x60	1-3 h	5°C-40°c	40-85

Induction time after mixing paint(A) and hardener(B) =+/- 20' at 20°C

POLYESTER SURFACE

Product	Number of Coats	Recommended Total DFT	Recommended WFT	Dry Time between each or next coats	Min and Max application temperature	RAH %
Primer 9938	2	225	2 x 150	>5 h	5°C-40°C	40-85
12 hours drying						
Midcoat 9942	1	75	1 x 135	5 -48 h	5°C-40°c	40-85
Top Coat 9949	1-2	100-120	1x110-130/2x60	1-3 h	5°C-40°c	40-85

Induction time after mixing paint(A) and hardener(B) =25' to 30' at 20°C



ALUMINIUM SURFACE

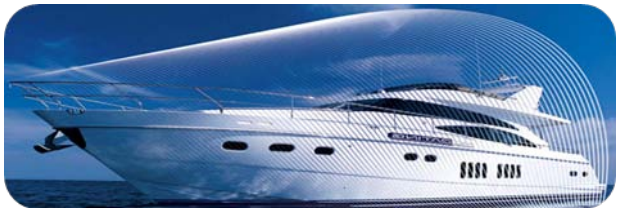
Product	Number of Coats	Recommended Total DFT	Recommended WFT	Dry Time between each or next coats	Min and Max application temperature	RAH %
Primer 9936	2	140	2 x 100	>6 h	5°C-40°C	40-85
12 hours drying						
Midcoat 9942	1	75	1 x 135	5 -48 h	5°C-40°c	40-85
Top Coat 9949	1-2	100-120	1x110-130/2x60	1-3 h	5°C-40°c	40-85

Induction time after mixing paint(A) and hardener(B) =25’ to 30’ at 20°C

SPOT REPAIR / EXISTING AF

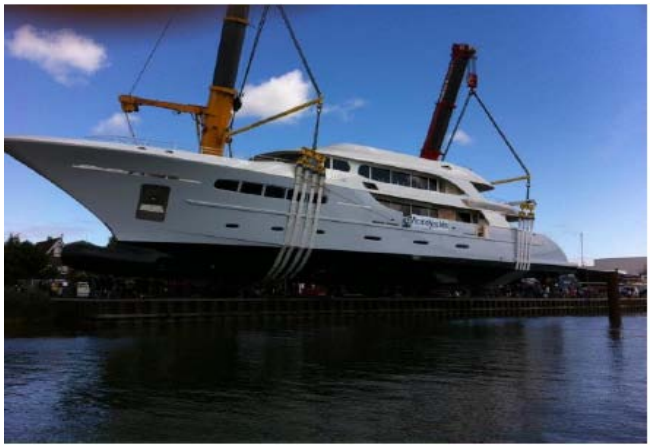
Product	Number of Coats	Recommended Total DFT	Recommended WFT	Dry Time between each or next coats	Min and Max application temperature	RAH %
Midcoat 9942	1	75	1 x 135	5 -48 h	5°C-40°c	40-85
Top Coat 9949	1-2	100-120	1x110-130/2x60	1-3 h	5°C-40°c	40-85

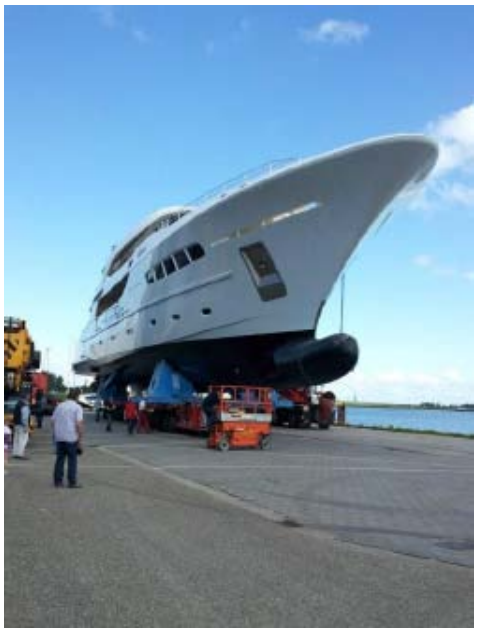
Induction time after mixing paint(A) and hardener(B) =+/- 20’ at 20°C



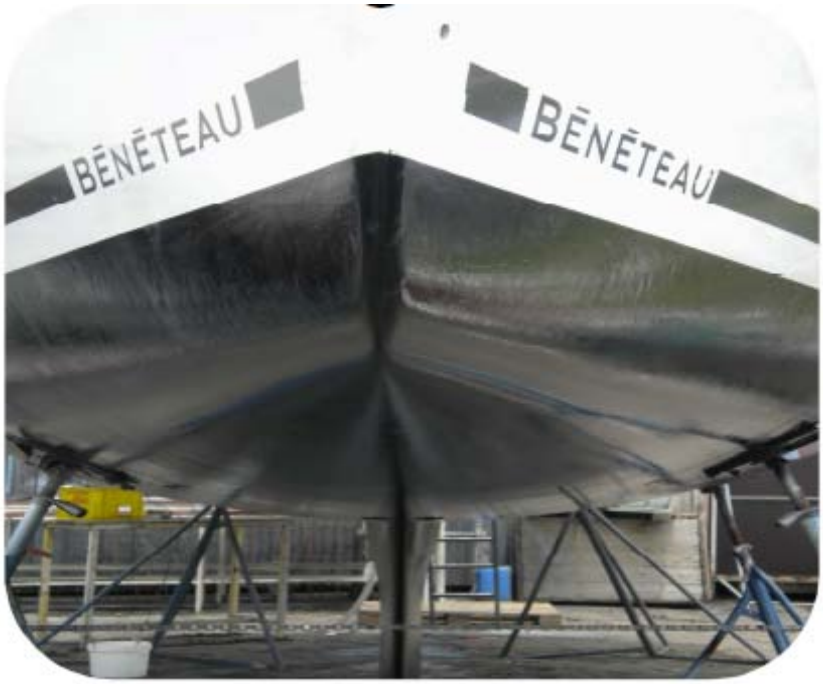
REFERENCES:

ACICO YACHTS
Nassima : 50 mt yacht





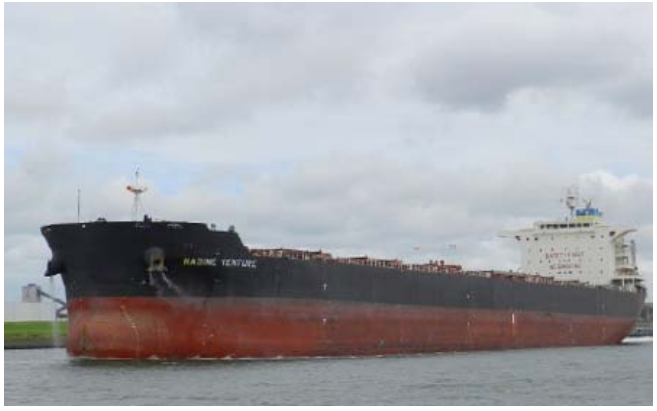
DREAM SAIL:



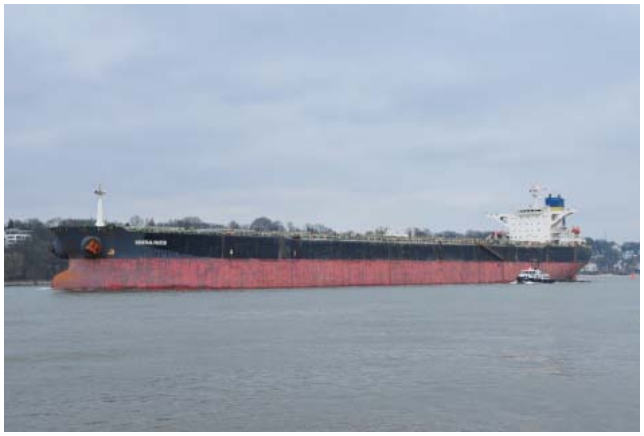
Sailing Yacht in fiber glass – from DREAM SAIL on a Beneteau Sailing Yacht.

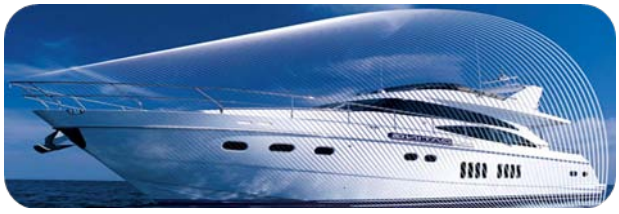
BOCIMAR LINES

- Nadine venture

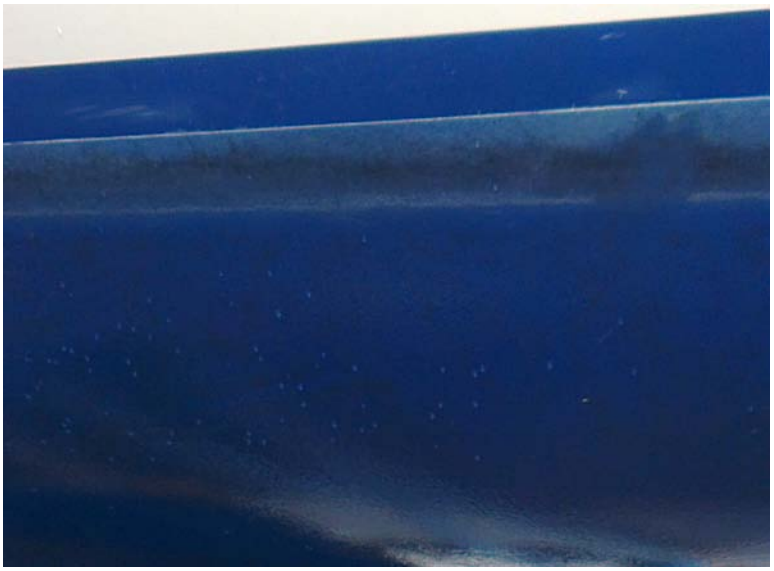


- Mineral Water





PRIVATE BOAT:



After 7 years – bernacoles are stick only on the rubber surface where the LioCYl is not done.