

## Case Study

# Long Term Reference of a Floating Floor in the Superyacht "M.Y. Excellence" (PH)



» Optimum vibration and sound insulation while maintaining a constantly low noise level

» Excellent long-time behaviour: almost three decades with virtually no degradation in the effectiveness of Sylomer®



# Renovation of a Floating Floor in the Superyacht "M.Y. Excellence"

## Description of the project

Filipino firm Rouvia Road Yacht Design & Construction Corp. restored the "M.Y. Excellence" superyacht in 2013 at the Freeport Area of Bataan, Philippines. Built in 1986 at the Feadship yard in the Netherlands, the 40 m long and 8 m wide motor yacht boasts an exceptional design and technology of the highest standard.

The challenge in this project was to prevent vibrations and noise detracting from these features - a consideration in both the construction and renovation of vessels of this type.

Vibrations and secondary airborne noise in ships are caused by the mechanical and hydrodynamic processes from engines, pumps and drive systems. These have a detrimental effect on the serenity and comfort on board. To protect the "M.Y. Excellence" from undesired vibrations and to keep the noise level to a minimum, elastic bedding of the floating floor was carried out.

The professional vibration solution was essential to satisfy the owner's high demands for comfort. As a ship is subjected to the effects of salt water, oil and dirt, the situation is even more challenging. The design

engineers therefore needed a highly effective and extremely durable material.

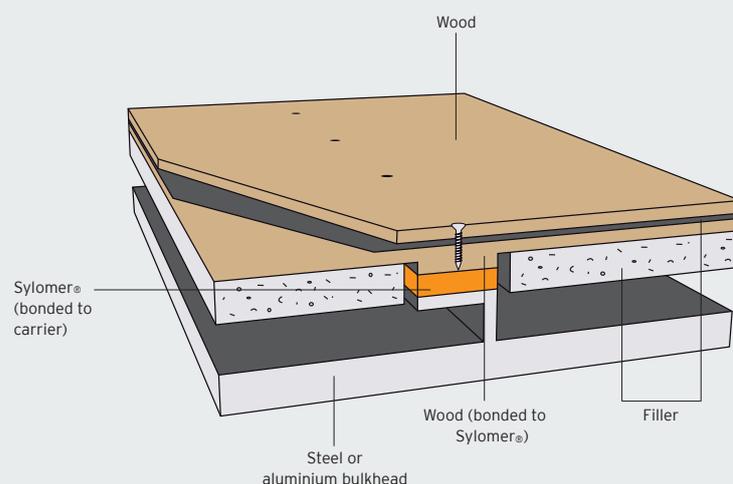
The long-time behaviour of Sylomer® coupled with previous experiences with Getzner were reasons enough for Rouvia Road to award the vibration experts with the contract for fitting the floating floor with an elastic bearing.

## The Getzner solution

An elastic floor bearing was used to provide the superyacht with optimum vibration protection.

As part of the project Getzner lined approximately 60 m<sup>2</sup> of the hull and walls with strips of Sylomer®, isolating the inner hull from the outer hull and thereby considerably reducing vibrations and secondary airborne noise. Getzner had previously been commissioned to supply the bearing for the floating floor when the yacht was originally built in 1986.

### Schematic showing the structure of a floating floor





Prepared steel bulkhead



Installing the vibration bearing using Sylomer® strips

### Virtually no degradation of the material properties after nearly thirty years

As part of the nine-month restoration project, Rouvia Road removed the 30-year old high-tech vibration isolating material.

Subsequent tests revealed that material characteristics, such as the static and dynamic durability, as well as the creep behaviour, had remained virtually the same after nearly 30 years, despite the effects of salt water, salty air, oil and dirt.

The thickness also remained unchanged, clearly highlighting the durable long-time behaviour of the material. By using Sylomer®, the first-class features of the "M.Y. Excellence" will be sustained for years to come.

"For nearly 30 years, large shipyards around the world have been using the high-quality Sylomer® material for the bearing of floating floors. The material is characterised by a stable temperature response coupled with excellent residue behaviour and very little deflection. It is very easy to handle and can be bonded to steel, aluminium and wood," explains Thomas Gamsjäger, the responsible project manager at Getzner.

### Feedback

#### What does Rouvia Road's project manager have to say about the project?

"We decided to commission Getzner due to the impressive quality of the material: it is highly effective and resistant, as well as easy to use. Collaborating with Getzner went really smoothly. Peace, quiet and comfort on board have certainly been achieved."

Realito H. Rubia  
President of Rouvia Road  
Yacht Design & Construction  
Corporation

#### What does the captain of the "M.Y. Excellence" have to say about the project?

"Ever since I've been sailing this yacht, I've been impressed with how quietly and gently she glides through the water. Thanks to the special bearing solution provided by Getzner, engine noise and vibrations have been reduced to a minimum, allowing the qualities of the luxury yacht to come into their own."

Captain John G. Brazel  
Captain of "M.Y. Excellence"

#### Durable long-time behaviour of Sylomer®

Even after nearly 30 years, Sylomer® still displays sustained long-time behaviour:

- Virtually no changes to the material characteristics in terms of static and dynamic durability as well as the creep behaviour
- Material thickness remains virtually the same
- Stable temperature response
- Excellent residue behaviour
- Very little deflection

Furthermore:

- Easy to work with
- Bonds easily with steel, aluminium and wood
- Resistant to salt water, salty air, oil and dirt
- Has been successfully used by large shipyards worldwide





## Facts and figures at a glance

### Restoration of the "M.Y. Excellence" superyacht

Year of construction:	1986
Shipbuilder:	Feadship, Netherlands
Architect/exterior designer:	De Voogt Naval Architects, Netherlands
Interior designer:	Glade Johnson Design Inc., USA
Length (LOA)/beam:	41.2 metres/7.8 metres
Type:	Motor yacht
Maximum speed:	13 knots

### Renovation:

Client:	Rouvia Road, Yacht Design & Construction Corporation, Philippines
Vibration isolation:	Getzner Werkstoffe GmbH
Scope:	60 m <sup>2</sup> floating floor on Sylomer® SR 55
Duration of renovation project:	9 months
Completion:	Spring 2014

### Getzner Werkstoffe GmbH

Foundation:	1969 (as a subsidiary of Getzner, Mutter & Cie)
Chief Executive Officer:	Ing. Jürgen Rainalter
Employees:	340
2015 turnover:	EUR 77.9 million
Business areas:	Railway, construction, industry
Headquarter:	Bürs (AT)
Locations:	Berlin (DE), Munich (DE), Stuttgart (DE), Lyon (FR), Amman (JO), Tokyo (JP), Pune (IN), Beijing (CN), Kunshan (CN), Charlotte (US)
Ratio of exports:	85 %

Further information can be found in the fact sheet "Comfort on board ships and yachts - vibration suppression and reduction of airborne noise in shipbuilding".

This can be downloaded from [www.getzner.com/downloads/broschueren/](http://www.getzner.com/downloads/broschueren/) or is available in printed form from Getzner.