

# SUCCESS STORY

## REINFORCED BEARINGS

## P&O CRUISE SHIP IONA

### PROJECT DATA

#### Brief description

Facilitation of horizontal movements for the ›SKYDOME‹ glass roof while at sea and under temperature expansion

#### Requirement

The Iona cruise ship by P&O Cruises has a glass roof, making it unique among cruise ships. This roof is welded in place pointing in the direction of travel. A sliding bearing must be installed on the opposite side to avoid damage caused by component constraint forces.

#### City, year

Papenburg, 2020

### PROJECT DESCRIPTION

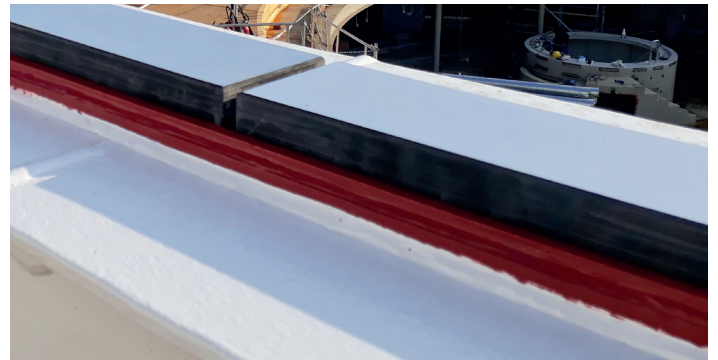
The premium luxury cruiser MS Iona, which is being built in Meyer-Werft shipyard and will be powered by LNG, will be 337 long and have 18 decks with space for 17 restaurants and 5200 passengers. One of the 4 swimming pools is covered with a 970 m<sup>2</sup> glass dome. Almost friction-free movements within the sliding bearing, even during strong waves and extreme weather, guarantee a roof structure that is free of constraint forces.

### SOLUTION

A lamellar arrangement of Ciparall® sliding bearings proved to be the optimum solution. The sliding plates were mounted to the glass roof's elliptical sub-structure and the bearing bodies were positioned to the lower rail. The challenge was to mount the sliding plates in a way that allowed them to sit perfectly over the matching bearing bodies once the sky dome was in place. Readjusting the bearings and sliding plates had been impossible right from the outset. Once the roof was moved to the correct position, the sliding plates and bearing bodies facilitated the required movements in the full extent required.

#### The benefits:

- Wear-free sliding bearings
- Homogeneous distribution of tension by lamellar bearings



Bearing bodies



Mounted sliding plates on the bottom of the roof



The MS Iona