TECNADIS METALCOAT EASY TO CLEAN
Corrosion tests in saline chamber

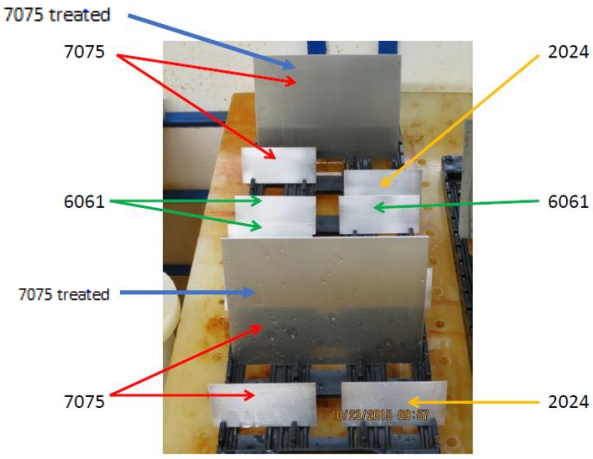
In order to demonstrate the ability of the coating TECNADIS METALCOAT EASY TO CLEAN to prevent the appearance of corrosion on different metal substrates, accelerated aging tests were carried out in a saline chamber according to the Regulation ASMT B117. The conditions of these tests were:

- Saline concentration: 5%w
- Saline fog flow: continuous
- Temperature: 35 ºC

The tests performed with different metal substrates are shown below:

1. Aluminum samples

The corrosion resistance of TECNADIS METALCOAT EASY TO CLEAN on 7075 aluminum alloy plates has been evaluated, compared to untreated plates of different aluminum alloys, namely 2024, 6061 and 7075. All samples were subjected to the corrosion resistance test according to ASMT B117, as shown in the picture.



During the test it was verified how the coating TECNADIS METALCOAT EASY TO CLEAN protects aluminum from corrosion. Untreated plates of 7075, 6061 and 2024 alloys were corroded after 100h, while treated plates of 7075 alloy exceeded 500h.

The following table summarizes the corrosion resistance for each material tested according to ASTM B117:

Alloy	Corrosion resistance according to ASTM B117 (h)
2024	<100
6061	<100
7075	<100
7075 treated	>500

In conclusion, we can say that TECNADIS METALCOAT EASY TO CLEAN coating delays the appearance of the first corrosion, exceeding 500 hours without showing any signs of this problem.

Following, they are shown the pictures, after 7, 11 and 22 days, of the state of the different plates during the saline fog chamber test:

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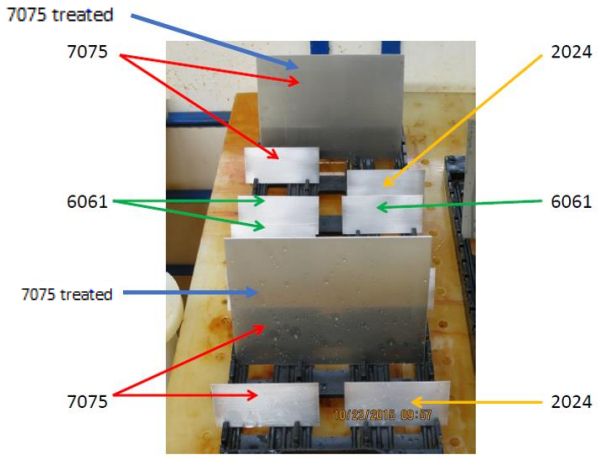
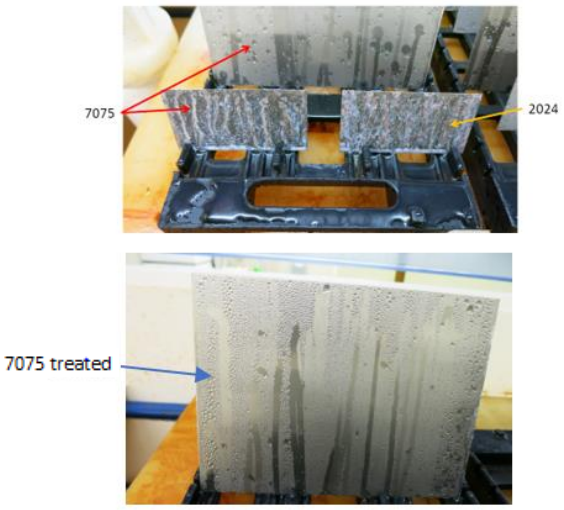
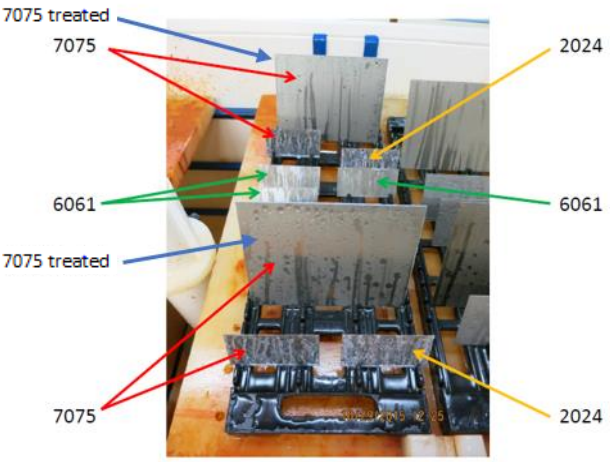
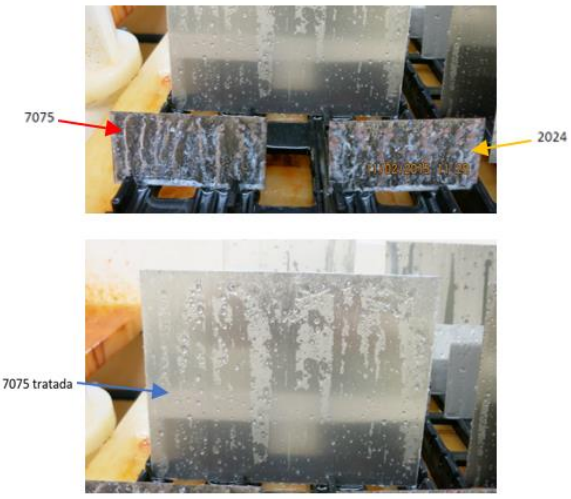
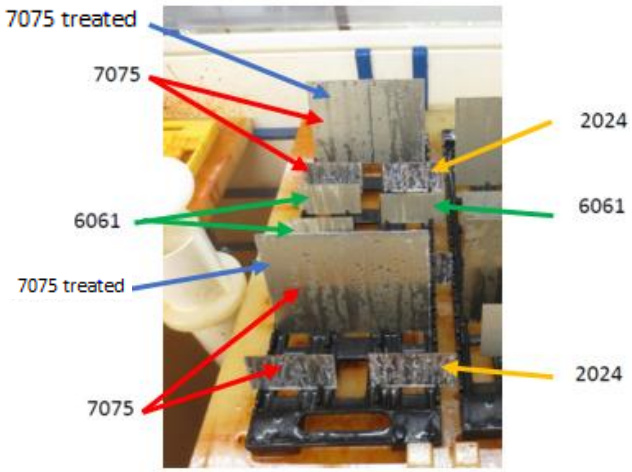
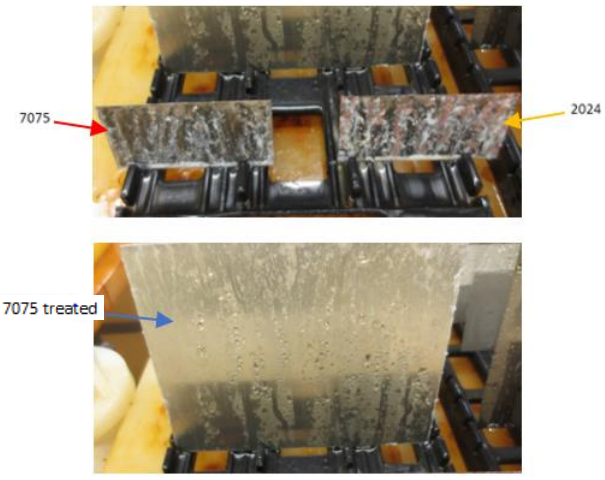
After 7 days of exposure		
After 11 days of exposure		
After 22 days of exposure		

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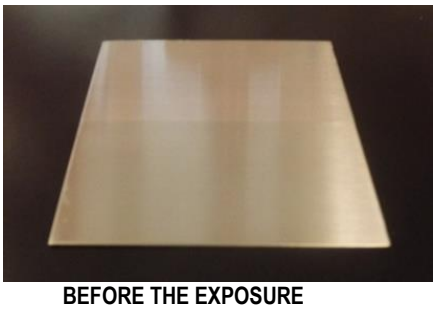
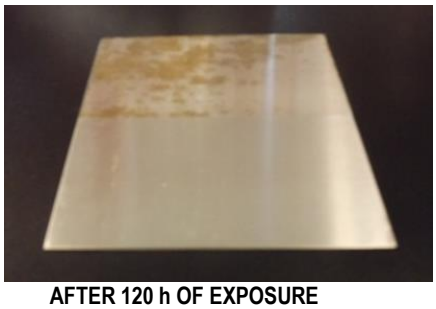
2. Stainless Steel samples

Plates of stainless steel AISI 304 were subjected to the test. Due to the fact that it is a corrosion resistant material, in order to accelerate the test, corrosion process, and to evaluate the resistance of the coating in saline atmosphere, the plates were subjected to a previous thermal shock. Half of the plates were treated with the coating TECNADIS METALCOAT EASY TO CLEAN, and their state was evaluated at different times, exhibiting a great behavior in terms of the protection of the substrates against corrosion, as can be seen in the following pictures taken during the essay.

PLATES AISI 304 (upper half non-treated/bottom half treated)

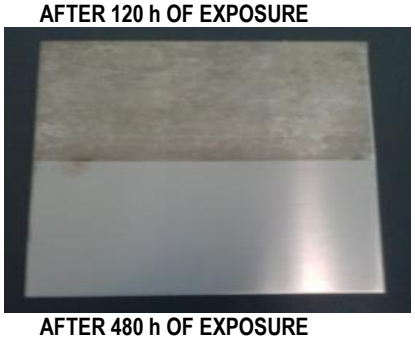


BEFORE THE EXPOSURE



AFTER 120 h OF EXPOSURE

AFTER 240 h OF EXPOSURE

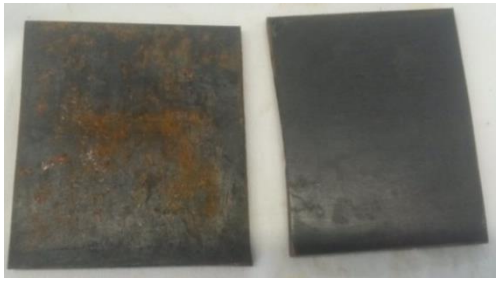


AFTER 480 h OF EXPOSURE

3. Carbon Steel samples

After 24 h of exposure to saline chamber, the untreated sample (left) is clearly affected by corrosion, while the treated sample (right) remains unchanged. In this sense, the coating TECNADIS METALCOAT EASY TO CLEAN proved to delay the emergence of corrosion on carbon steel substrates under the indicated conditions in the saline fog chamber.

CARBON STEEL PLATES



NON-TREATED **TREATED**

In conclusion, and taking into account the results of all previous tests, it has been demonstrated that **the coating TECNADIS METALCOAT EASY TO CLEAN has the capacity to protect metal surfaces from oxygen and salt environments and, therefore, from corrosion, thus delaying their appearance and lengthening the useful life of the base material in adverse conditions such as the weather or even marine environments**.

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