

SALT SPRAY CORROSION TEST

1. Introduction

Specimens of the following stainless steel grades:

- 470LI;
- 316;

have been inserted to the salt spray fog chamber to evaluate corrosion resistance, according to the ISO EN 9227 norm. All the specimens were cold rolled, annealed, pickled and skin passed (2B finish).

This test consists on the exposure of the specimens to a controlled atmosphere in a chamber (cabinet) devoted to the purpose, where a salt spray solution is nebulised. The test solution contains 5% sodium chloride in distilled water.

The cabinet is provided of a spraying device and of an appropriate system that maintains both cabinet and solution at the temperature (35°C) defined for the test.

Test specimens have been thoroughly cleaned before testing and the cut edges adequately protected by coating them with suitable material (wax and pitch mixture).

Surface of the test specimen has been exposed to the test atmosphere with a geometrical configuration such as the inclination angle of the plane specimen was as close as possible to 20° in respect the reference vertical direction. Specimens were positioned in a way that they did not come into contact with the cabinet and so that surfaces to be tested were exposed to free circulation of spray.

Supports for the specimens were made of inert and non-metallic material.

Specimens have been exposed for 1000 hours.

2. Results

The following table summarizes all the obtained results:

Stainless steel	Exposure time (h)	Observations
316	1000	No pits
470LI	1000	No pits

This test is currently in progress for the 460LI stainless steel; no pits have been observed after 300h of exposure.

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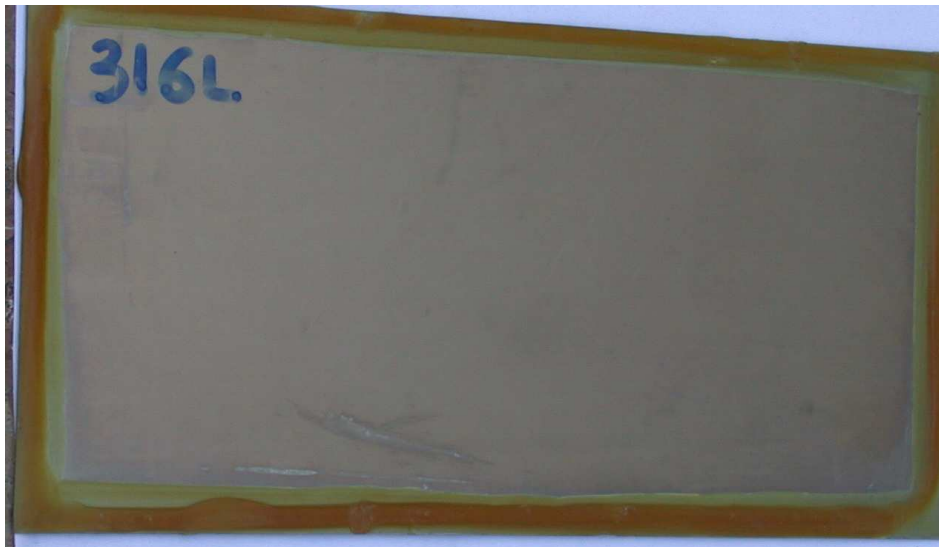


Fig. 1: 316L at the end of the test (exposure period: 1000h); no pits observed.



Fig. 2: 470LI at the end of the test (exposure period: 1000h); no pits observed.