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**Test
Report**

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A/C No: T004

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SALT SPRAY TESTING OF GALVANISED STEEL PLATE / TUBE ASSEMBLY SAMPLE

INTRODUCTION

The finished sample was submitted to the laboratory for Salt Spray Testing in accordance with the relevant specification.

RELEVANT INFORMATION

Description / Finish: 1 off. Galvanised Steel / Tube Assembly Sample

Specification: Salt Spray Test in accordance with ASTM B117-11
Test Duration: 336 – 672 Hours Exposure
Submitted By: Phil Higgs
Purchase Order No.: STD419142
Sample Receipt Date: 26/02/2015

RESULTS

Salt Spray Test (ASTM B117 -11)


The photograph in fig 1 is showing the sample prior to test, the sample was then exposed to a neutral 5% Salt Spray for a test period of 336 and 672 hours, examinations after 72 hours and then every 24 hours, revealed the following observations:-

Galvanised Steel / Tube Assembly Sample


72 Hours

The sample showed evidence of total white zinc corrosion (see photograph).

REPORT COMPILED BY


G B Withers
Corrosion Science
Technician

REPORT APPROVED BY


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RESULTS IN THIS REPORT RELATE ONLY TO THE ITEMS TESTED.

144 – 168 Hours

The sample showed evidence of moderate yellow corrosion product and total white zinc corrosion (see photograph after 144).

240 – 312 Hours

The sample showed a small area of red ferrous corrosion on the tube arm adjacent to the nut and a significant amount small spots of red ferrous corrosion 1.0mm maximum size and significant yellow corrosion product and total white zinc corrosion (see photograph after 240 hours).

336 Hours

The sample showed a small area of red ferrous corrosion on the tube arm adjacent to the nut 20mm x 10mm and small area on the left hinge.

The general condition of the sample showed a significant amount of small spots of red ferrous corrosion 1.0mm maximum size and a significant amount of yellow corrosion product and total white zinc corrosion, the spring tension mechanism function worked satisfactory (see photograph after 336 hours).

408 – 504 Hours

The sample showed an area of red ferrous corrosion on the tube arm adjacent to the nut and small area on the left hinge.

The general condition of the sample showed an significant - almost total amount of small spots of red ferrous corrosion 2.0mm maximum size and a significant - almost total amount of yellow corrosion product and total white zinc corrosion (see photograph after 504 hours).

576 – 648 Hours

The sample showed an area of red ferrous corrosion on the tube arm adjacent to the nut and small area on the left hinge.

The general condition of the sample showed a significant amount of small spots of red ferrous corrosion 2.0mm maximum size and a significant amount of yellow corrosion product and total white zinc corrosion.

672 Hours

The sample showed an area of red ferrous corrosion on the tube arm adjacent to the nut and small area on the left hinge.

The general condition of the sample showed a significant amount of small spots of red ferrous corrosion 3.0mm maximum size and a significant amount of yellow corrosion product and total white zinc corrosion, the spring tension mechanism function worked satisfactory (see photographs).

COMMENTS / CONCLUSION

Before the salt spray test, the spring tension mechanism function worked satisfactory.

After completing 336 hours salt spray test, the spring tension mechanism function worked satisfactory.

After completing 672 hours salt spray test, the spring tension mechanism function worked satisfactory.

There are no pass or failure criteria defined within the standard in relevant information, this is a matter of agreement between the parties concerned.

The finish applied to the Galvanised Steel / Tube Assembly Sample tested, **failed to withstand** 672 hours Salt Spray Test requirement without the formation of red ferrous corrosion.

END OF TEXT

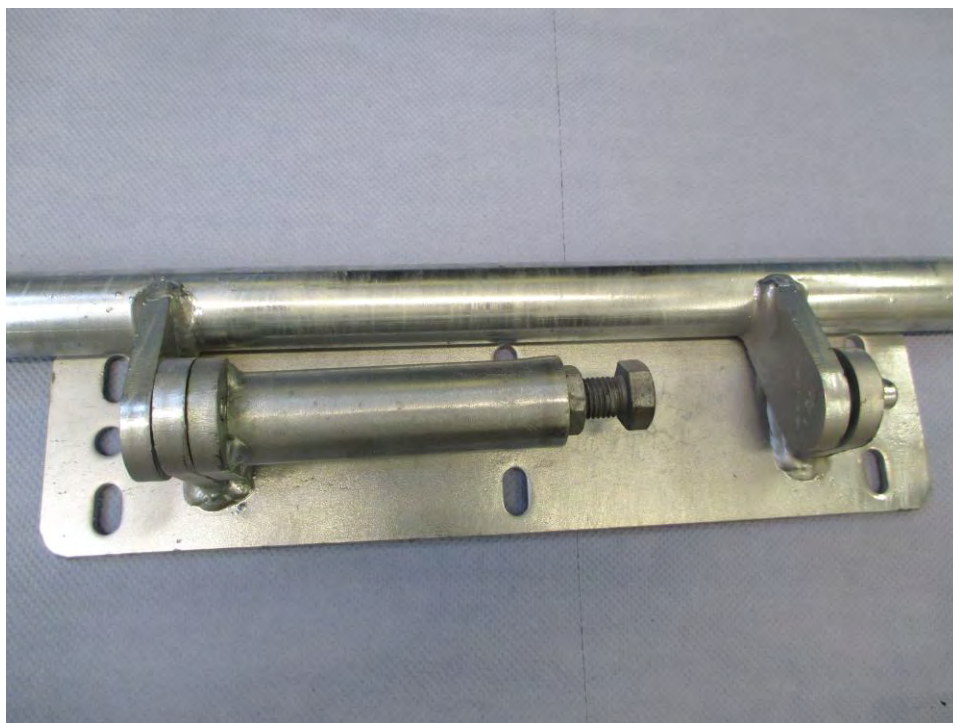


Fig 1: Photograph showing the condition of the Sample prior to Salt Spray Test



Fig 2: Photograph showing the condition of the Sample after 72 hours Salt Spray Test



Fig 3: Photograph showing the condition of the Sample after 144 hours Salt Spray Test



Fig 4: Photograph showing the condition of the Sample after 240 hours Salt Spray Test



Fig 5: Photograph showing the condition of the Sample after 336 hours Salt Spray Test



Fig 6: Photograph showing the condition of the Sample after 504 hours Salt Spray Test



Fig 7: Photograph showing the condition of the Sample after 672 hours Salt Spray Test



Fig 8: Photograph showing the condition of the Sample after 672 hours Salt Spray Test



Fig 9: Photograph showing the condition of the Sample after 672 hours Salt Spray Test