ISO 21746:2019 (E)

Composites and metal assemblies — Galvanic corrosion tests of carbon fibre reinforced plastics (CFRPs) related bonded or fastened structures in artificial atmospheres — Salt spray tests

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Test solutions

4.1 Preparation of the sodium chloride solution
4.2 pH adjustment
4.2.1 pH of the salt solution
4.2.2 Neutral salt spray test (NSS)
4.2.3 Acetic acid salt spray test (AASS)
4.2.4 Copper-accelerated acetic acid salt spray test (CASS)
4.3 Filtration

5 Apparatus

6 Method for evaluating cabinet corrosivity

6.1 General
6.2 Reference specimens
6.3 Arrangement of the reference specimens
6.4 Duration of tests
6.5 Determination of mass loss (mass per area)
6.6 Satisfactory performance of cabinet

7 Test specimens

8 Arrangement of the test specimens

9 Operating conditions

10 Duration of tests

11 Treatment of specimens after test

11.1 General
11.2 Non-organic coated specimens: metallic and/or inorganic coated
11.3 Organic coated specimens
11.3.1 Scribed organic coated specimens
11.3.2 Organic coated but not scribed specimens

12 Evaluation of results

13 Test report

Annex A (informative) Example schematic diagram of one possible design of spray cabinet for galvanic corrosion test with means for optional treating fog exhaust and drain

Annex B (informative) Complementary method for evaluating galvanic corrosion test cabinet corrosivity using zinc reference specimens

B.1 Reference specimens
B.2 Arrangement of the reference specimens
B.3 Determination of mass loss
B.4 Satisfactory performance of cabinet

Annex C (normative) Preparation of galvanic corrosion test panels with organic coatings

C.1 Preparation and coating of panels
C.2 Drying and conditioning
C.3 Thickness of coating
C.4 Preparation of scratches

Annex D (normative) Required supplementary information for testing galvanic corrosion test panels with organic coatings

Annex E (informative) Recommended specimen geometries — Salt spray tests to metal and CFRP assemblies

Page count: 19