

SCROOBY'S LABORATORY SERVICE (Pty) Ltd

Spectrographic, Chemical and Mechanical Testing of Materials

Established 1999
21 O'Reilly Merry St
Rynfield Benoni 1501
VAT Reg. No: 4390188391 / REG No: 2022/711019/07

TEL: 011 425 1074 / 0116
CELL: 082 925 0115
www.scroobyslab.co.za



Honingcraft (Pty) Ltd

P O Box 9679

ELSPARK

1401

Date Received: 28 August 2025

Date Tested: 01 – 09 September 2025

Date Tested: 18 – 26 September 2025

Date Reported: 11 September 2025

Date Reported: 27 October 2025

ATTENTION: Mr Nathaniel Hauptfleisch

CERTIFICATE OF TEST

REFERENCE No: 38554/38652

SALT SPRAY TESTING

INTRODUCTION

A sample was supplied for salt spray testing as described in SANS / ISO 9227 : 2014.

The exposure period was to be 200 hours

SAMPLE IDENTIFICATION: Shaft with protective coatings.

As Received





SALT SPRAY TEST CONDITIONS

The test was conducted as per the SANS / ISO 9227: 2014 specification. The actual conditions of test are tabulated as follows.

<i>Condition</i>	SANS / ISO 9227: 2014	Average
Temperature of exposure zone °C	35 ±2	35
Fog collection rate ml.80cm ⁻² .hr ⁻¹	1 – 2	1.59
pH of collected fog at 20°C	6.5 - 7.2	6.75
SG of collected fog @ 25°C		1.03
Salt concentration % (NaCl)	5% or 50g/l ±5g/l	4.89
Salt (NaCl) used for solution.		AP
Water used for solution.	De-ionised	De-ionised

OBSERVATIONS

After 50 Hours of exposure

All surfaces remain in good condition, the ferrous rust which can be seen is where two coatings come into contact with each other.



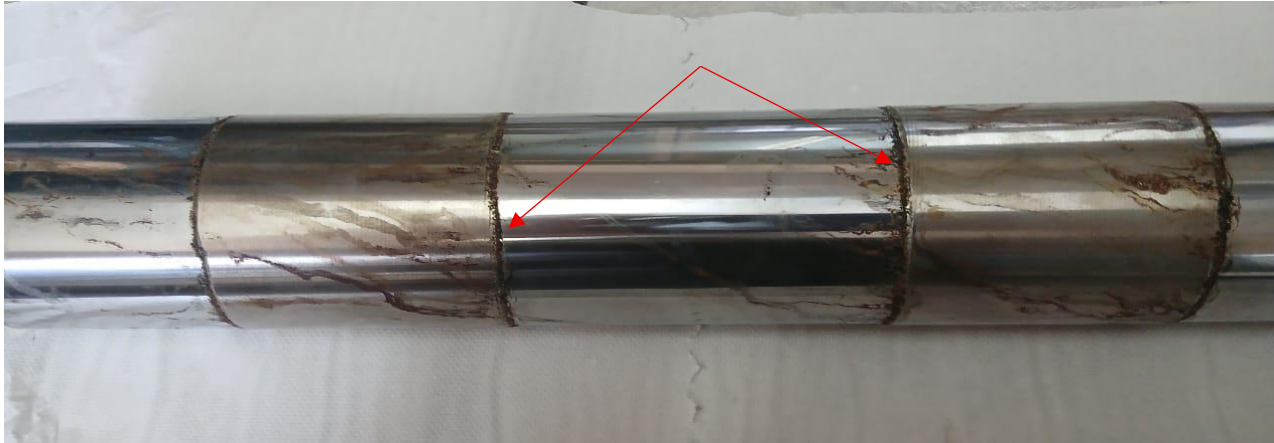


OBSERVATIONS

After 100 Hours of exposure

All surfaces remain in good condition, the ferrous rust which can be seen is where two coatings come into contact with each other.

It is noted on the joins, the ferrous rust is beginning to creep into the 'Chrome' coatings.



After 150 Hours of exposure

All surfaces remain in good condition, the ferrous rust which can be seen is where two coatings come into contact with each other.

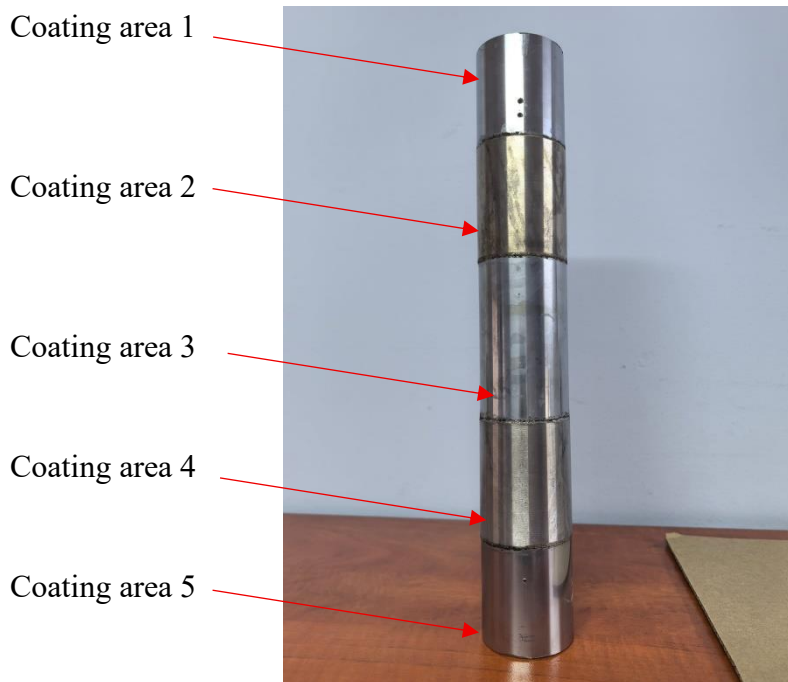
It is noted on the joins, the ferrous rust is beginning to creep into the 'Chrome' coatings.



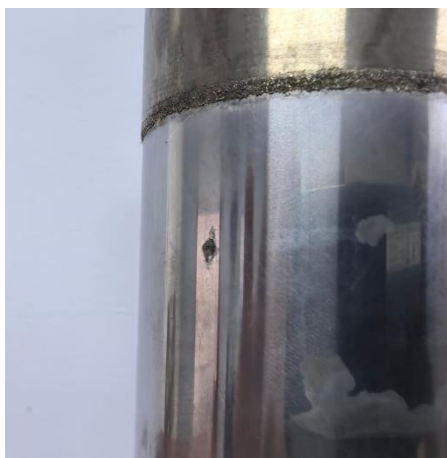


OBSERVATIONS

After 200 hours of exposure, the component was removed, rinsed in warm water and immediately dried. Coating areas 1, 3 and 5 exhibit corrosion creep and pitting. Coating areas 2 and 4 show no corrosion or degradation.



Pitting and creep in coated areas 1, 3 and 5





The sample was returned to the salt spray chamber for an additional 200 hours of exposure.

SALT SPRAY TEST CONDITIONS

The test was conducted as per the SANS / ISO 9227: 2014 specification. The actual conditions of test are tabulated as follows.

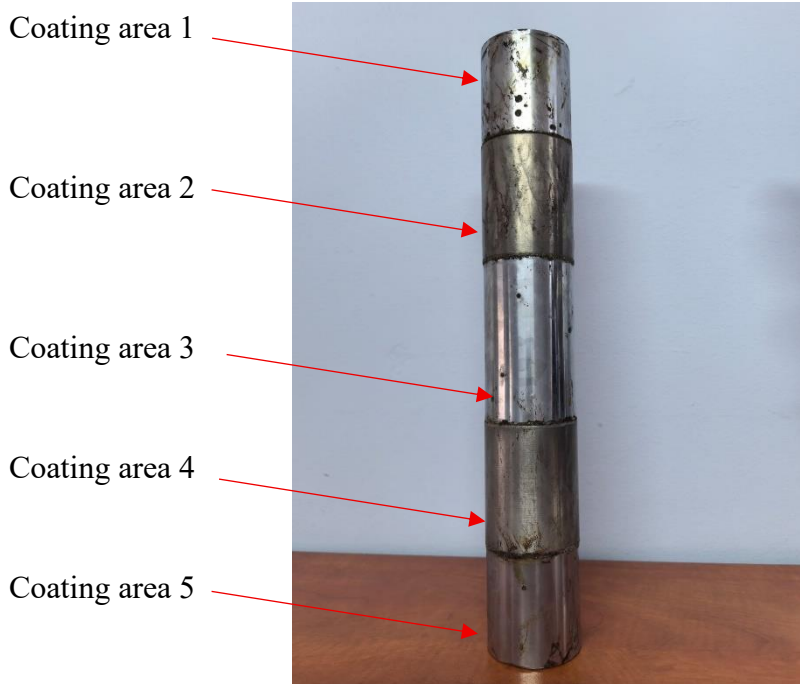
<i>Condition</i>	SANS / ISO 9227: 2014	Average
Temperature of exposure zone °C	35 ±2	35
Fog collection rate ml.80cm ⁻² .hr ⁻¹	1 – 2	1.05
pH of collected fog at 20°C	6.5 - 7.2	6.77
SG of collected fog @ 25°C		1.03
Salt concentration % (NaCl)	5% or 50g/l ±5g/l	4.81
Salt (NaCl) used for solution.		AP
Water used for solution.	De-ionised	De-ionised

OBSERVATIONS

After a TOTAL of 400 hours of exposure, the component was removed, rinsed in warm water and immediately dried.

Coating areas 1, 3 and 5 exhibit corrosion creep and pitting.

Coating areas 2 and 4 show no corrosion or degradation.



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Pitting and creep in coated areas 1, 3 and 5



Area 1



Area 3



Area 5

CONCLUSION

After 400 hours of exposure, areas with the 'Chrome' coating are showing pitting corrosion and delamination. The edges of the coating shows extensive corrosion creep into the coating.

The other coated areas show no signs of corrosion or pitting.

Technical Signatory

The results relate only to the items as received and tested.

*Results in this report are not included in the SANAS Schedule of accreditation for Scrooby's Laboratory. *Opinions and interpretations are outside the scope of the SANAS Schedule of accreditation for Scrooby's Laboratory*. Our SANAS accreditation demonstrates technical competency for*

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