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A Higher Level of Reliability

July 8, 2019

File Number: 60515078-Rev. 1

THERMEX METAL TREATING LTD.
7434 8TH STREET
EDMONTON, AB
T6P 1N8

Attention: Norm Hanson

Re: Salt Spray Test Results – P.O.11666

Two sets of coated coupons were submitted for salt spray testing in accordance with ASTM B117-16 Standard Practice for Operating Salt Spray Apparatus. Each set comprised of three coupons. The sets were marked as: FNC GN2 and QPQ.

The testing was carried out in a HARSHAW Environmental Chamber Model 22 S/N: 224029 under the operating conditions shown in the table below.

Table 1: Testing Parameters in Salt Spray Cabinet

CABINET TEMP °C	FOG CONDENSATION ml/hour/80cm ²	NaCl IN FOG %	pH
35	1.20	4.0	6.7

The coupons were held in the salt spray chamber at an angle of 20° from the vertical and were exposed to the salt fog for 336 hours. Photographs were taken on a daily basis throughout the duration of the test with the exemption of weekends. On completion of testing, the coupons were rinsed with warm water and the designated tilted areas were examined for corrosion.

The FNC GN2 coupons are shown in Figures 1 to 13 in Appendix 1. Two out of three coupons developed small rust marks in the tilted area after six days of exposure (Figure 18). Only one of the marks progressed further during subsequent exposure. At the end of testing, two coupons had rust marks in the tilted area and all coupons had rust deposits along the edges. These coupons were the least corroded of the three sets provided.

QPQ coupons are shown in Figures 14 to 27 in Appendix 2. Some rust deposits occurred on the edges of 2 coupons as early as after 24 hours of exposure (Figure 28). Rust marks in the tilted area occurred after 4 days. Eventually, all coupons had rust marks in the tilted area as well as on the edges. The QPQ coupons did not perform as well as compared to the FNC GN2 variety.

Please contact the undersigned with any questions.



THERMEX METAL TREATING LTD.

Salt Spray Test Results – PO #11666

Page 2 of 18

Yours truly,

ACUREN GROUP INC.

Maria Kincer, MSc, ASCT

MK/kk

Reviewed by: Bill Johnson, ASCT
Laboratory Services Manager



APPENDIX 1

FNC GN2

FIGURES 1 – 13



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Figure 1 FNC GN2 – Start.

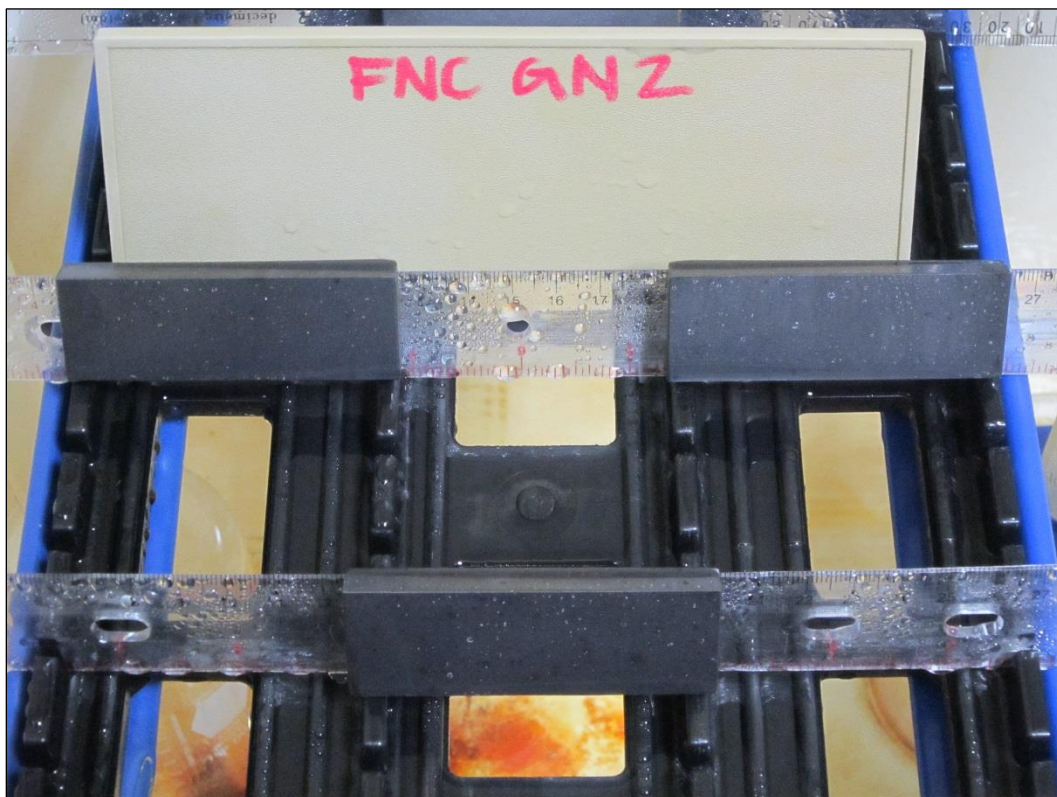


Figure 2 FNC GN2 – 24 hours (1 day) of testing



Figure 3 FNC GN2 – 96 hours (4 day) of testing.



Figure 4 FNC GN2 – 120 hours (5 days) of testing.

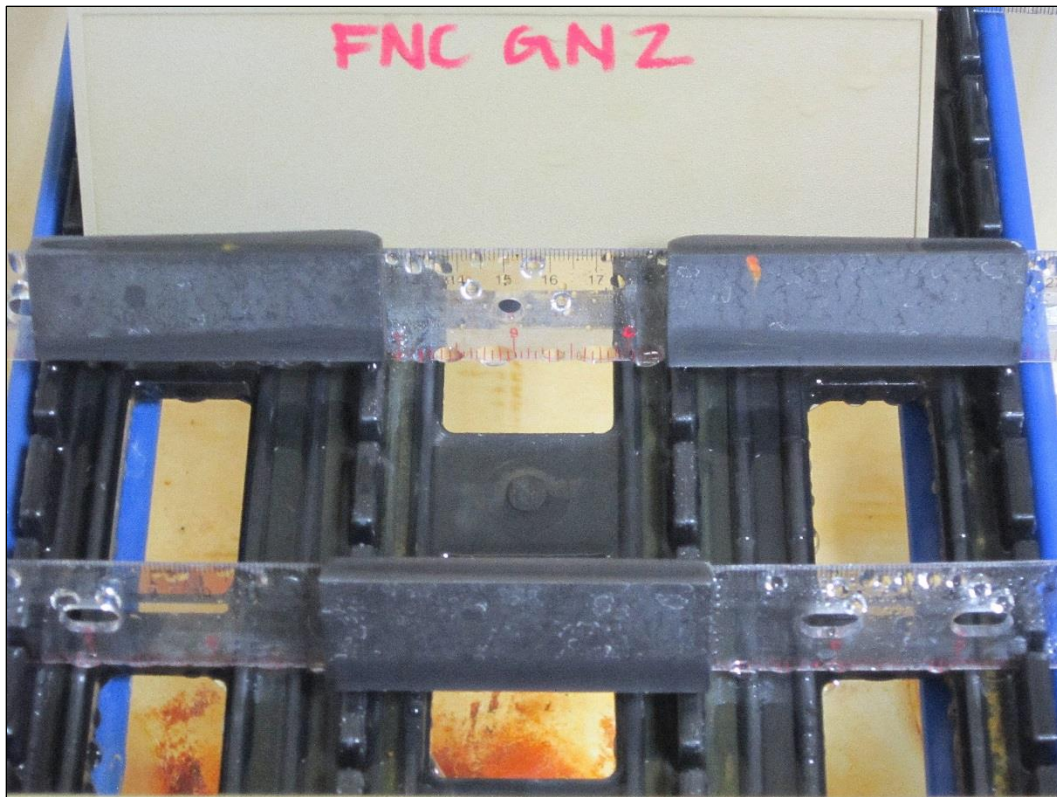


Figure 5 FNC GN2 – 144 hours (6 days) of testing.

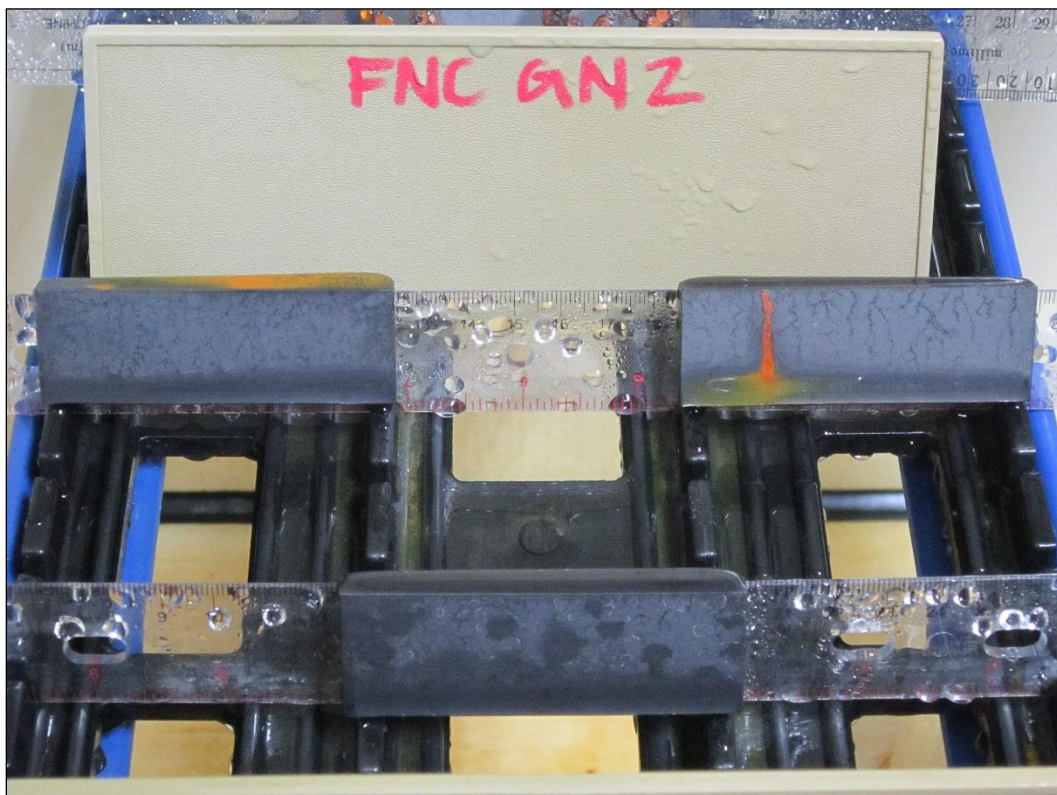


Figure 6 FNC GN2 – 168 hours (7 days) of testing.

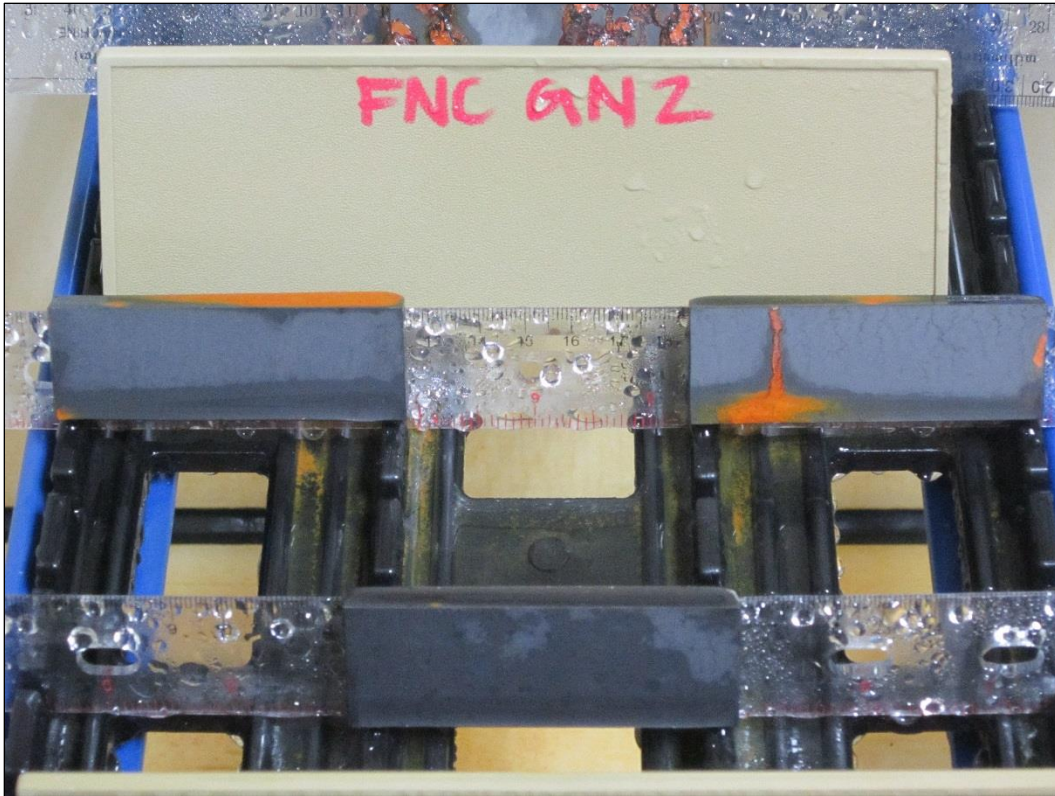


Figure 7 GN2 – 192 hours (8 days) of testing.

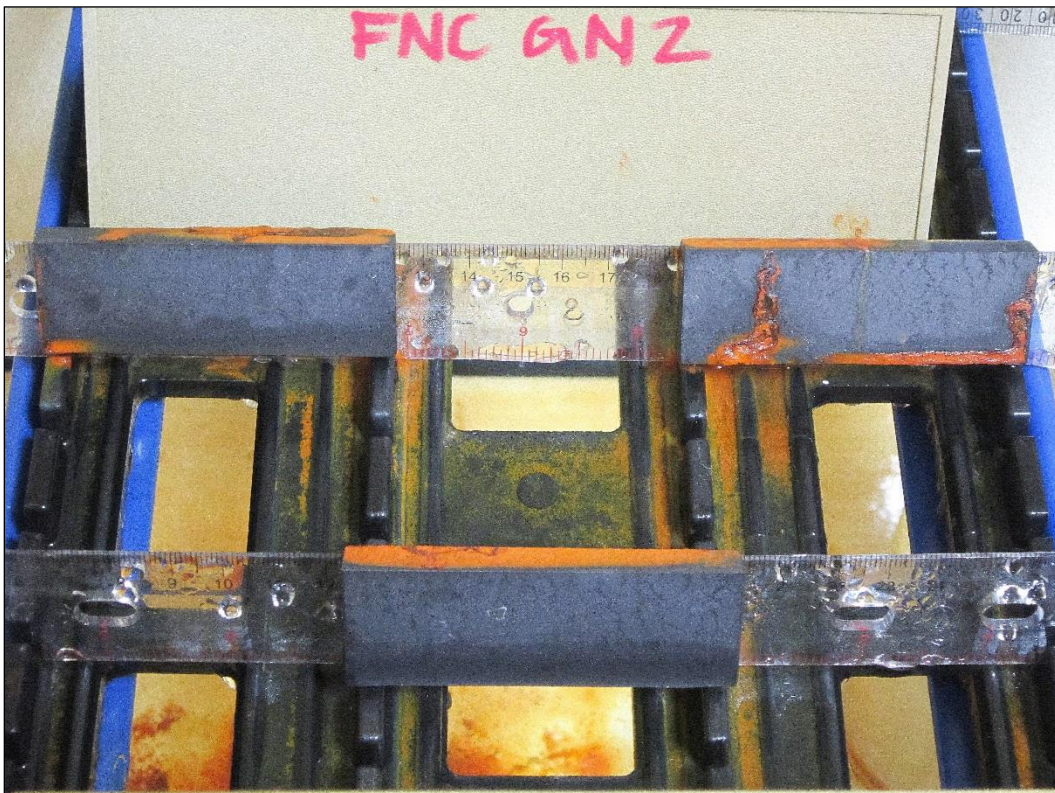


Figure 8 FNC GN2 – 288 hours (12 days) of testing.



Figure 9 FNC GN2 – 312 hours (13 days) of testing.

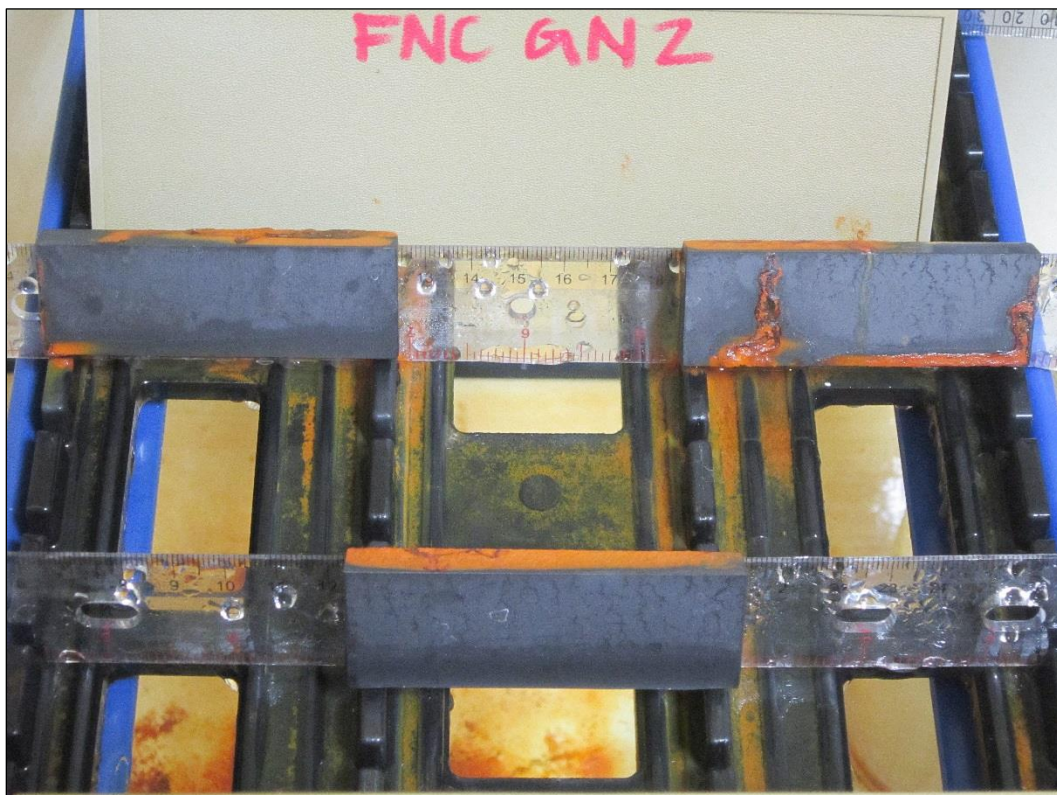


Figure 10 FNC GN2 – 336 hours (14 days) of testing.



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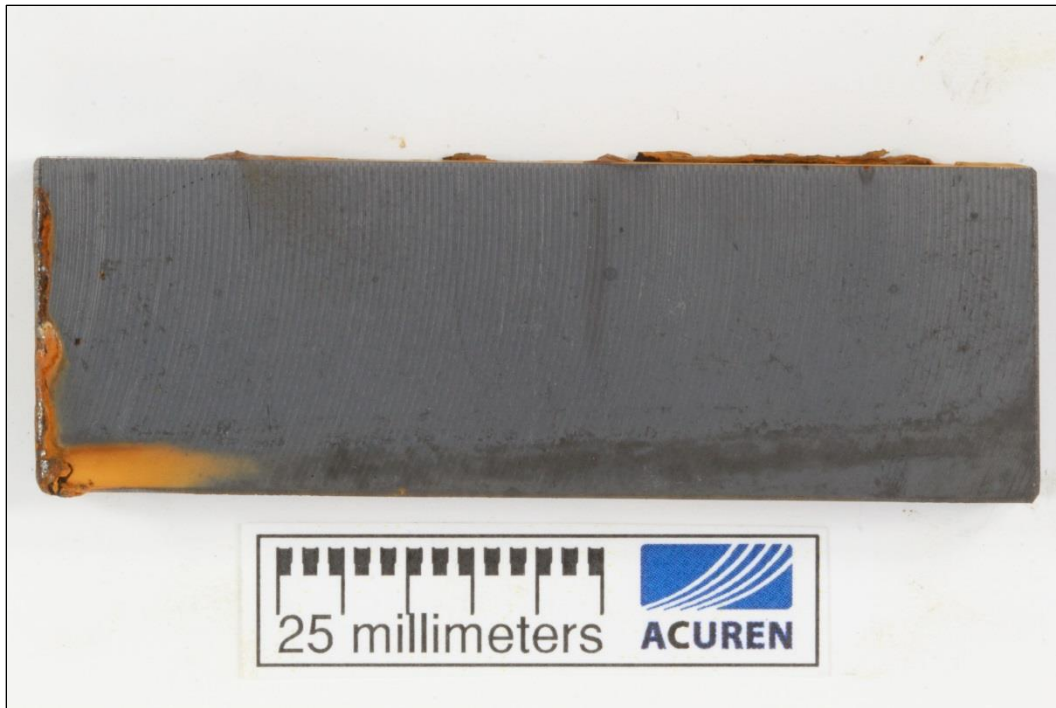


Figure 11 FNC GN2 – Coupon 1 – 336 hours (14 days) of testing.



Figure 12 FNC GN2 – Coupon 2 – 336 hours (14 days) of testing.



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Figure 13 FNC GN2 – Coupon 3 – 336 hours (14 days) of testing.



APPENDIX 2

QPQ

FIGURES 14 – 26



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Figure 14 QPQ – Start.

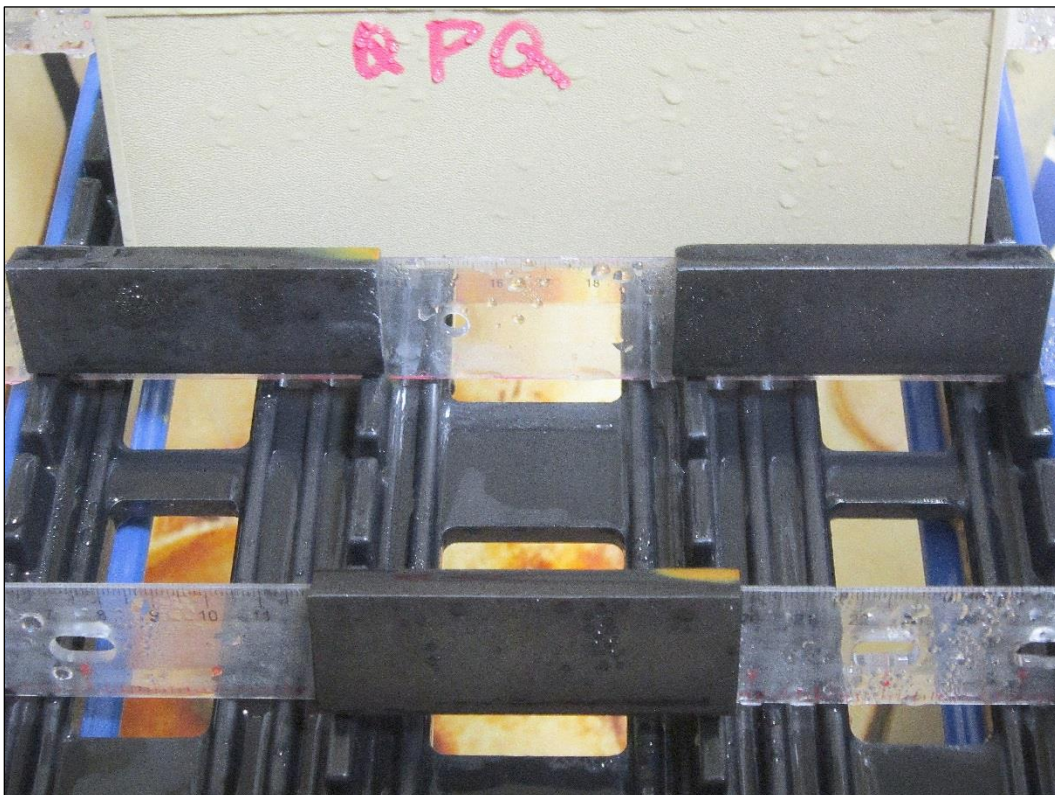


Figure 15 QPQ – 24 hours (1 day) of testing

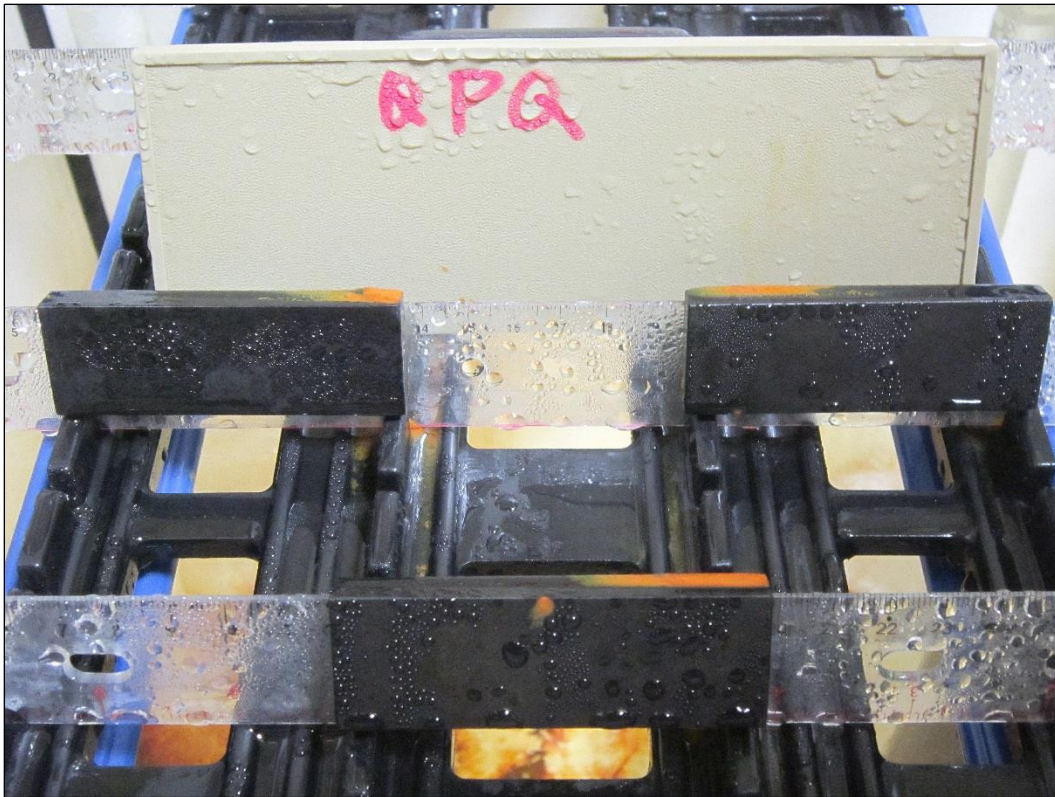


Figure 16 QPQ – 96 hours (4 day) of testing.

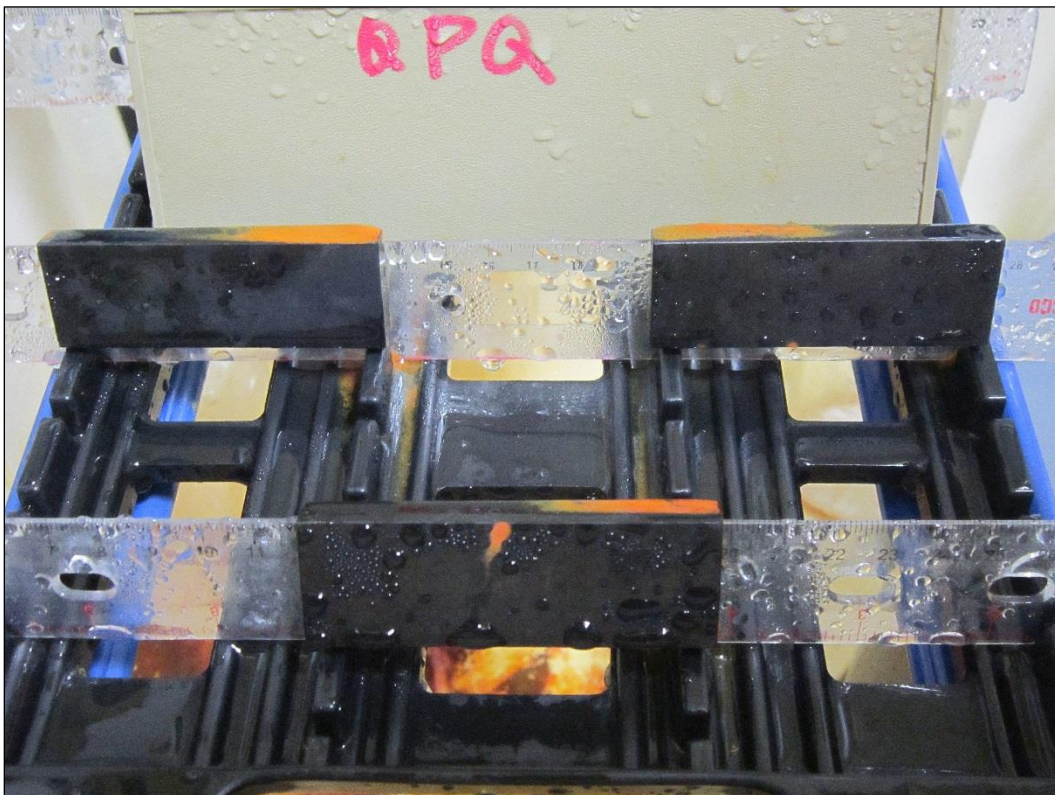


Figure 17 QPQ – 120 hours (5 days) of testing.



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Figure 18 QPQ – 144 hours (6 days) of testing.



Figure 19 QPQ – 168 hours (7 days) of testing.



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Figure 20 QPQ – 192 hours (8 days) of testing.



Figure 21 QPQ – 288 hours (12 days) of testing.



Figure 22 QPQ – 312 hours (13days) of testing.



Figure 23 QPQ – 336 hours (14 days) of testing.



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Figure 24 QPQ – Coupon 1 – 336 hours (14 days) of testing.



Figure 25 QPQ – Coupon 2 – 336 hours (14 days) of testing.



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Figure 26 QPQ – Coupon 3 – 336 hours (14 days) of testing.