Salt Spray Corrosion Testing for

Link Lock™ Sleeve

The following results show the effectiveness of powder coating for corrosion resistance on a Link Lock™ Sleeve. This test was conducted to ASTM standard B117-11 “Standard Practice for Operating Salt Spray (Fog) Apparatus. A powder coating was applied to the Link Lock sleeve. There was no other coating or preparation other that standard cleaning done before powder coating. This test was conducted over a 500 hour period with regular checks and adjustments per the standard.

In particular, these checks and adjustments consisted of brief interruptions to check the conditions of the test chamber and to adjust the conditions to stay in line with the standard B 117-11. This time was also used to take pictures, after the checks the test was continued. Photographs of the specimen at the start and after 500 hours of salt spray are shown on page 9 of this report. For the final photo, the specimen was cleaned with a nylon brush to remove the minor amount of rust bleed that occurred over the 500 hour test.

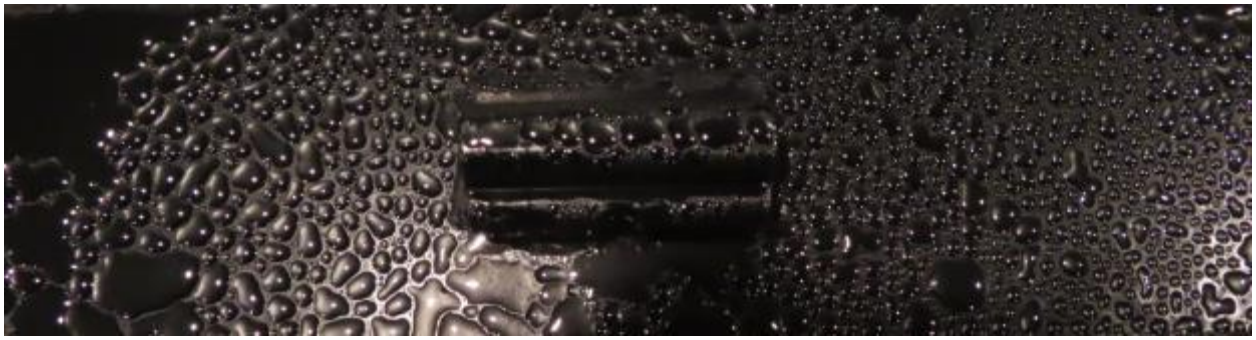
As will be shown in the photos below, powder coating is very effective in providing corrosion resistance to the Link Lock™ sleeve. As would be expected, there was some rust bleed from the edges at the end of the sleeve and around the holes (this did not occur until approximately 200 hours of salt spray). In spite of this, the corrosion was limited. Nowhere on the specimen was there any flaking of the powder coat, even at the edges of the ends and holes where some rust bleed occurred.

In conclusion, this test shows that powder coating provides good protection against corrosion. As the corrosion only appear to be at the sharp corners of the ends and holes, it is surmised that tumbling the sleeves with an abrasive media would remove the sharp edges and even further increase the corrosion effectiveness of the powder coating.

If even further corrosion resistance is desired, the sleeves can be zinc plated before powder coating. Link Lock™ has provided testing data as to welding such plated sleeves without having to grind the plating off to weld them. The welds are not compromised and the fumes have been shown not to be toxic and to cause no problems if minor precautions are taken.

0 hours Salt Spray:

1 hour Salt Spray:



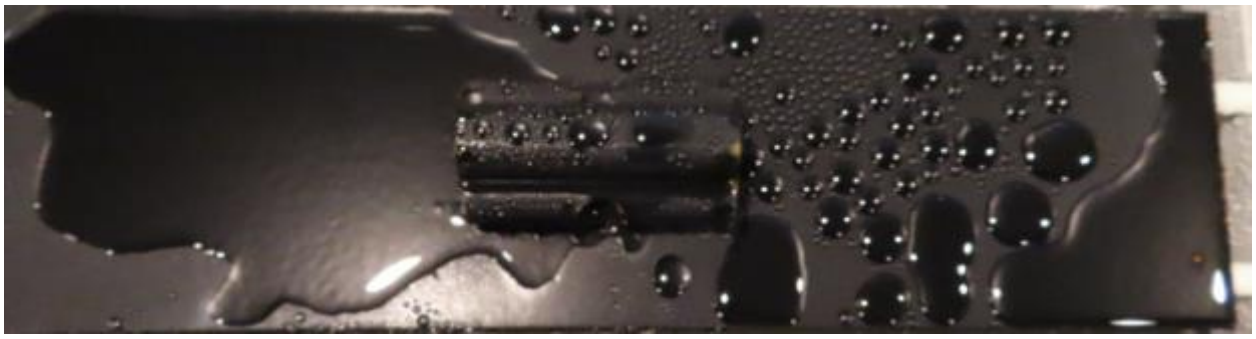
2 hours Salt Spray:

17 hours Salt Spray:

31 hours Salt Spray:

62 hours Salt Spray:

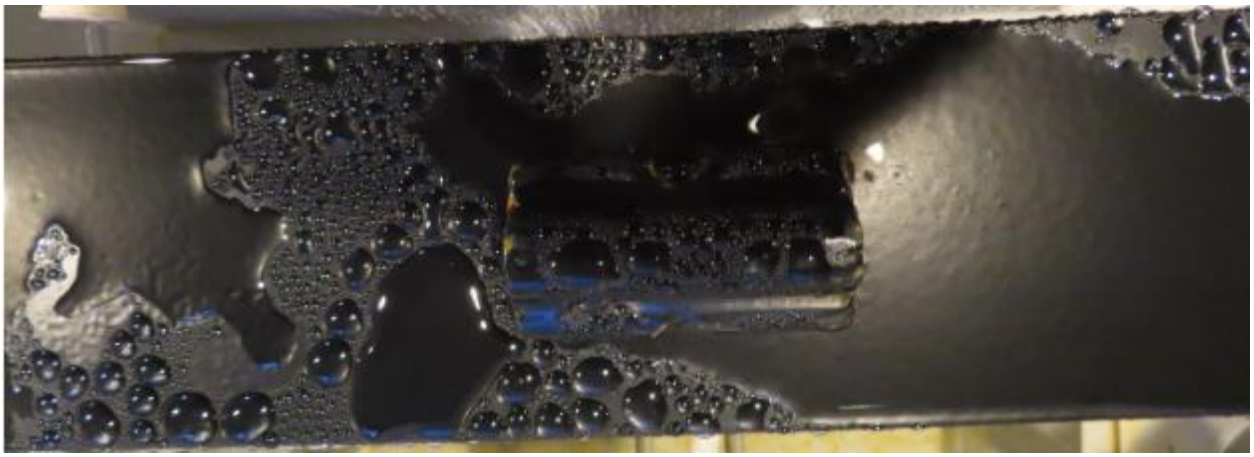
70 hours Salt Spray:



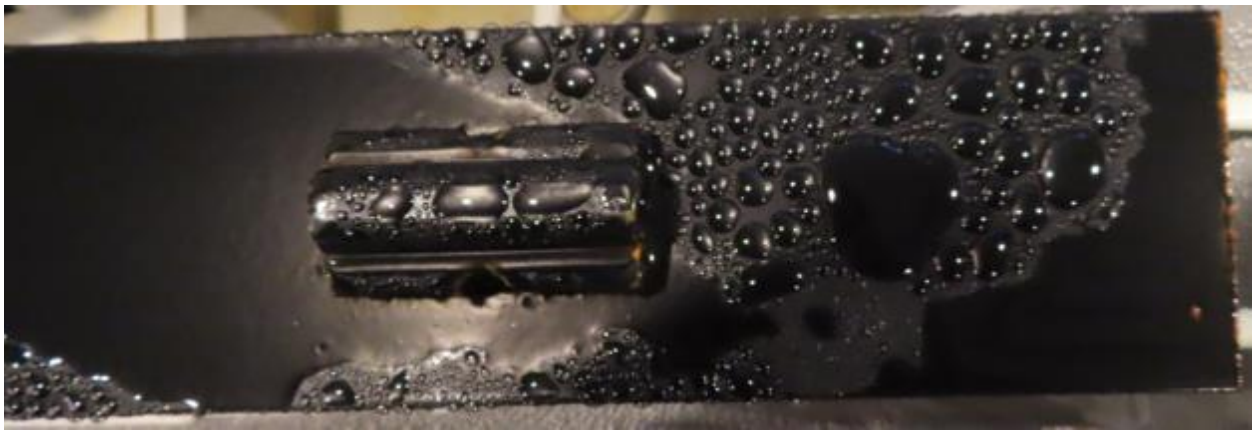
100 hours Salt Spray:

141 hours Salt Spray:

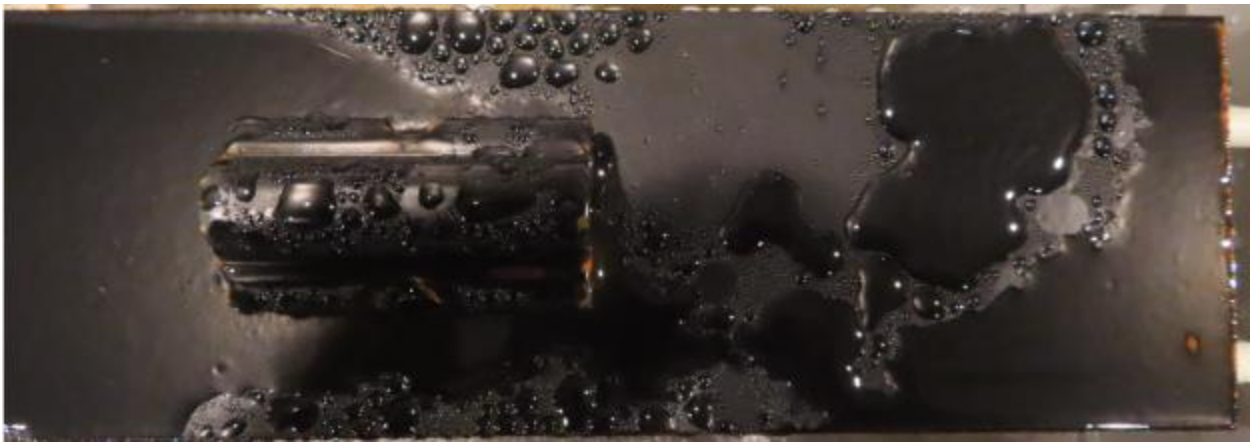
158 hours Salt Spray:



167 hours Salt Spray:

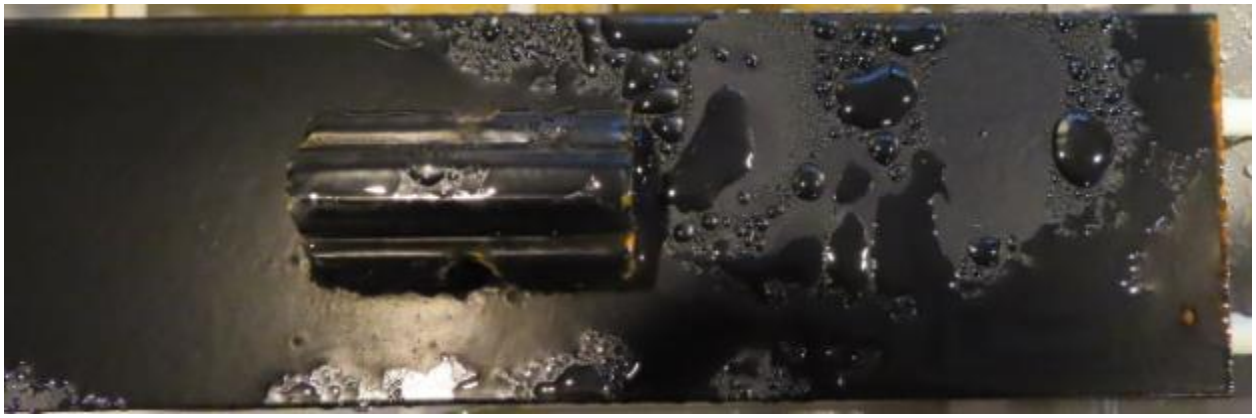


213 hours Salt Spray:



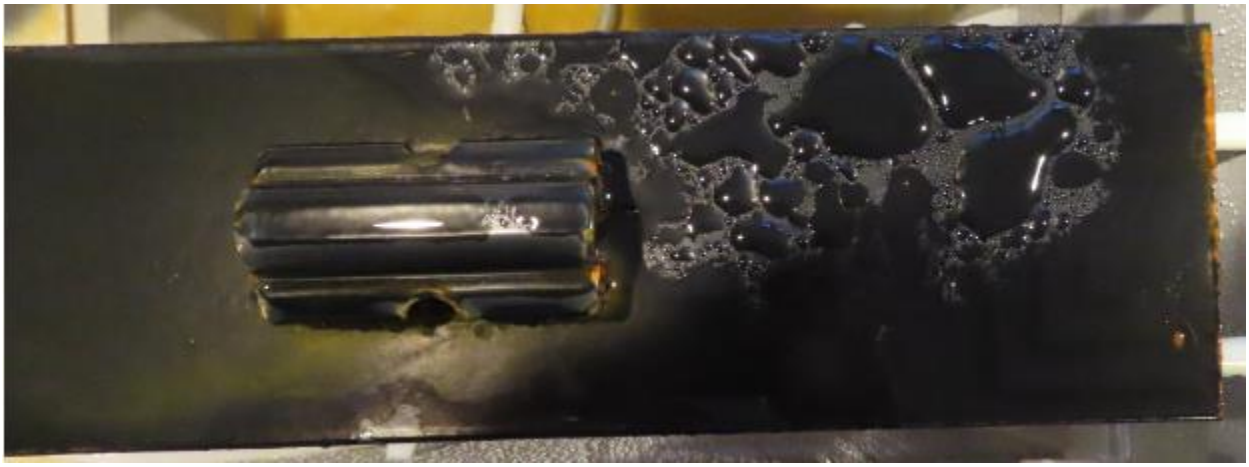
231 hours Salt Spray:

310 hours Salt Spray:



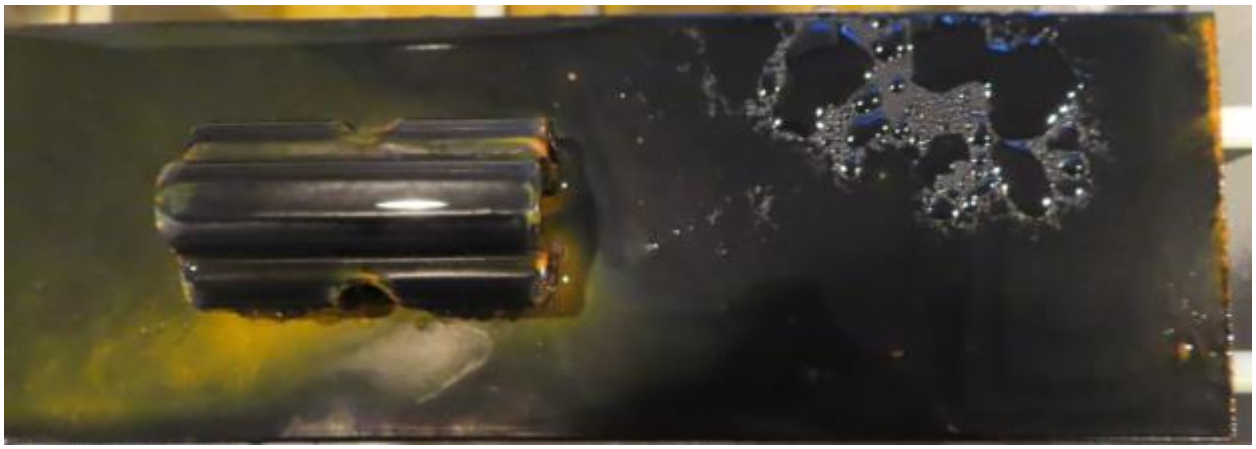
328 hours Salt Spray:

407 hours Salt Spray:

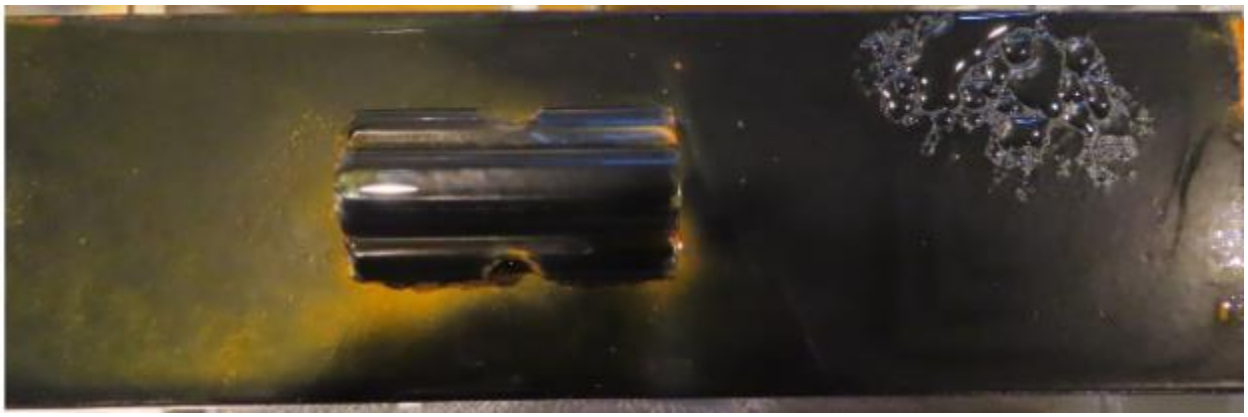


428 hours Salt Spray:

455 hours Salt Spray:

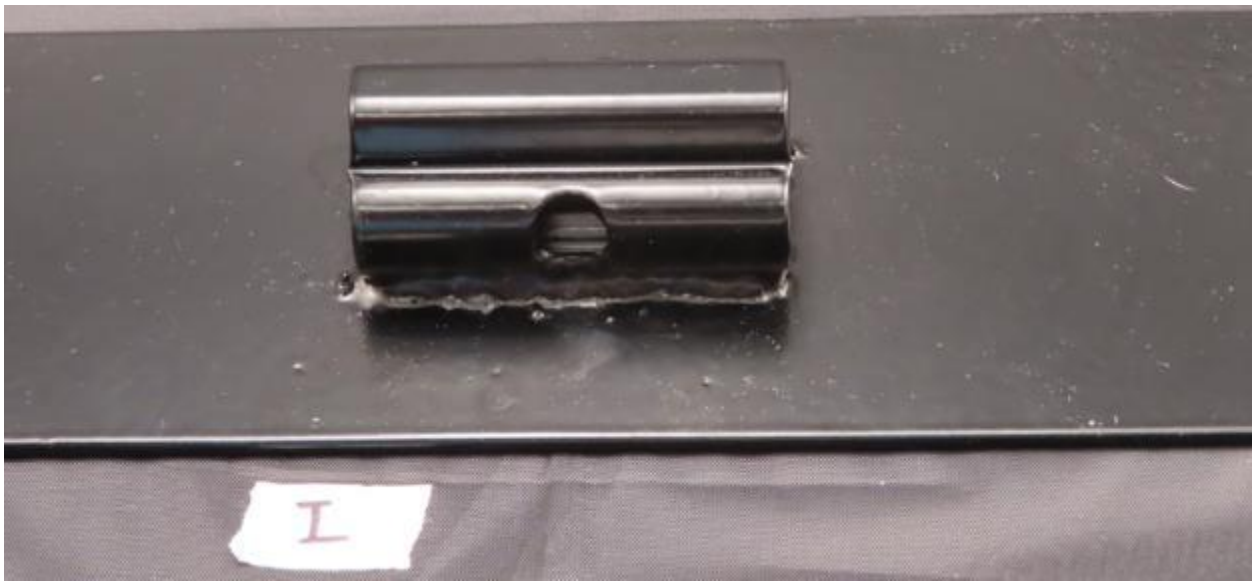


500 hours Salt Spray:



Powder coating effectiveness:

Sleeve appearance before 500 hours salt spray.



Sleeve appearance after 500 hours salt spray and nylon brush cleaning.