VIA Protection of MetPro VCI Emitter Cards
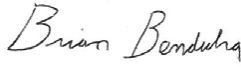
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Background: Our customer currently uses Cortec's VpCI-126 bags and BioPad for protection of castings in transit to a machining facility or end users and is happy with the protection Cortec is providing. Our customer received samples of MetPro VCI Emitter Cards and though they are not experiencing any corrosion issues using Cortec's system, they want to see if the MetPro VCI Emitter Cards provide any substantial corrosion protection.

Samples Received: Five MetPro Emitter Cards (2"x4" per card), received on 3-27-19 in good condition.

Method: NACE VIA Test, TM0208-2008, item No. 21253

Materials: VIA test kit (testing jars/apparatus, steel plugs, 400grit sandpaper)
Glycerol (lot #Q10A018)
Methanol, ACS grade (lot #18F066507)

Procedure: The NACE VIA test was conducted according to standard procedure except the sample size used was one competitor emitter card (2"x4") per jar. Standard NACE procedure calls for two strips of sample (1"x6" per sample) per quart size jar.
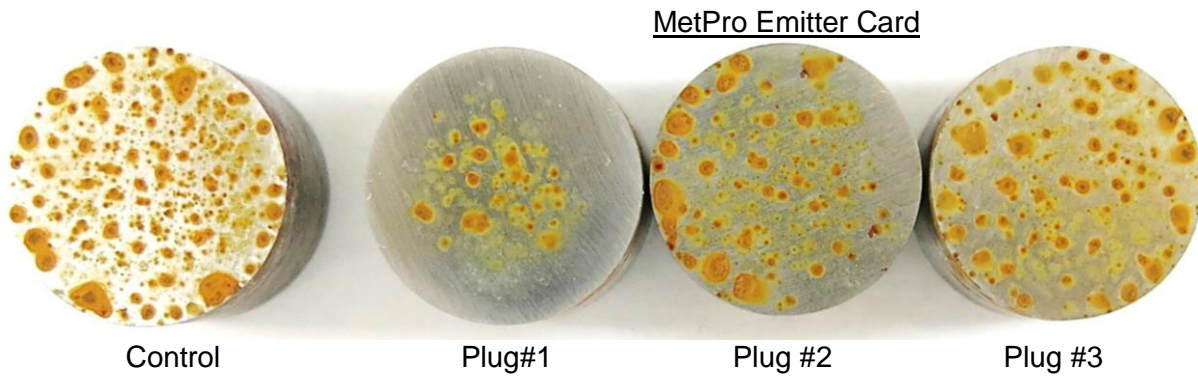
Results: The following results were found:

NACE VIA Test

Sample	Plug #1	Plug #2	Plug #3	End Result
MetPro VCI Emitter Card	Grade 1	Grade 0	Grade 0	Fail
Control	Grade 0	-	-	Fail

Interpretations: The MetPro VCI emitter card did not provide sufficient vapor phase corrosion protection to pass the NACE VIA test.

Photo from the NACE VIA test:

<u>MetPro Emitter Card</u>

Control   Plug#1   Plug #2   Plug #3

VIA Test Grades (Grade 2 or 3 are passing)
All three plugs must be grade 2 or better to pass the test

Grade 0:   Blind test
             No corrosion inhibiting effect
Grade 1:   Blind test
             Minute corrosion inhibiting effect
Grade 2:   Blind test
             Medium corrosion inhibiting effect
Grade 3:   Blind test
             Good corrosion inhibiting effect