

Stress Corrosion Cracking Threshold for Dissimilar Capacitive Discharge Welding Joint with Varied Surface Geometry

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The porosity analysis using Phenom Phorometric.

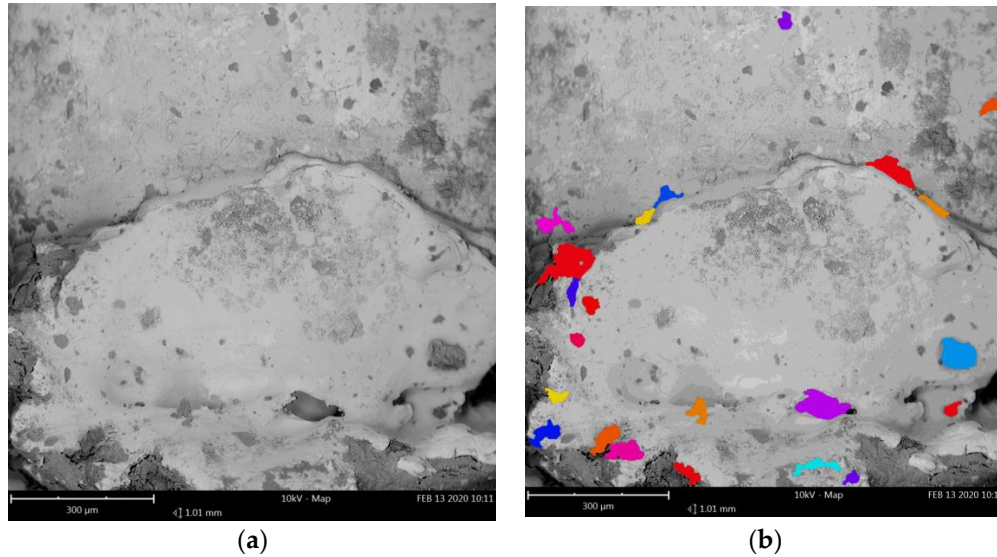


Figure S1: The porosity analysis on α_0 specimen.

S1 image with a total of 22 Pores

Table S1. Average Pore Area Ratio is 9.09%, calculated for S1 image.

Property	Median	Average
Circle equivalent diameter	38.3 μm	44.7 μm
Major axis	62.4 μm	63.4 μm
Minor axis	28.2 μm	32.4 μm
Circumference	179 μm	191 μm
Convex hull	162 μm	176 μm
Circumscribed circle diameter	71.3 μm	73.5 μm
Area	1.15E+03 μm^2	1.76E+03 μm^2
Volume by area	2.95E+04 μm^3	6.57E+04 μm^3
Pixel count	1178	1793
Aspect ratio	0.53	0.542
Circularity	0.579	0.589
Convexity	0.941	0.934
Elongation	0.47	0.458
Grayscale	146	147
Inscribed circle diameter	26.3 μm	28.9 μm

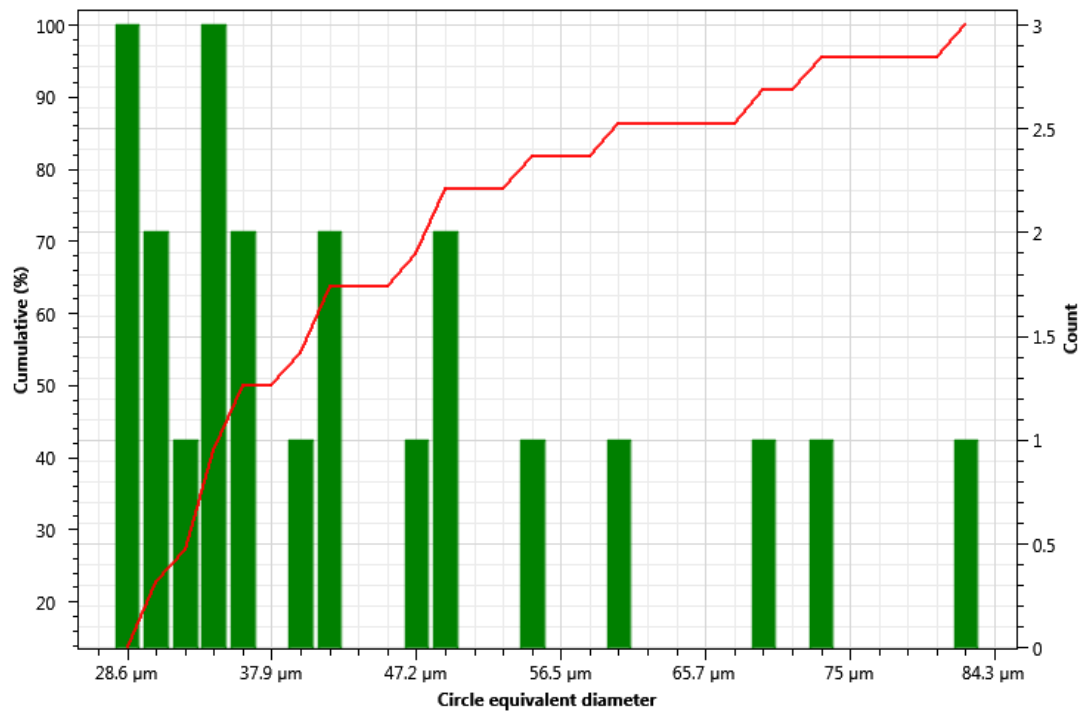
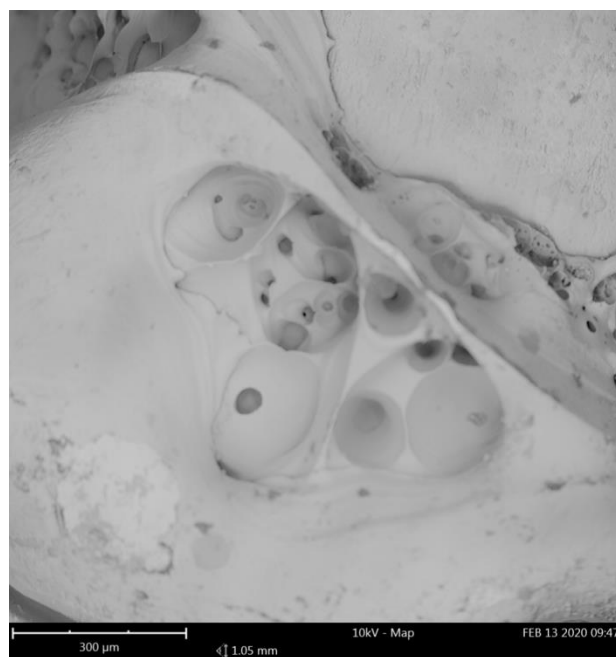
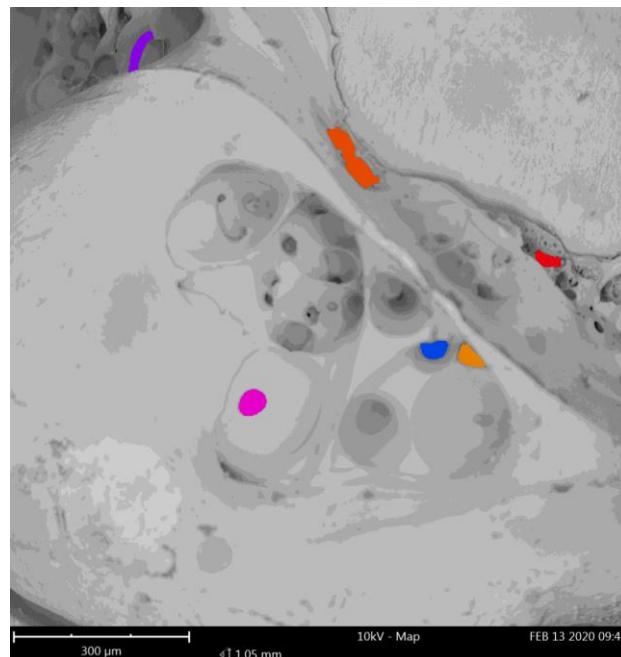


Figure S2. The porosity area of welded joint on interface of α_0 specimen.



(a)



(b)

Figure S3. The porosity analysis on α_1 specimen.

S3 image with a total of 6 Pores

Table S2. Average Pore Area Ratio is 1.13%, calculated for S3 image

Property	Median	Average
Circle equivalent diameter	38.3 μm	42.4 μm
Major axis	49.4 μm	66.2 μm
Minor axis	29 μm	28.7 μm
Circumference	137 μm	165 μm
Convex hull	137 μm	161 μm
Circumscribed circle diameter	52.1 μm	68.2 μm
Area	1.15E+03 μm^2	1.49E+03 μm^2
Volume by area	2.93E+04 μm^3	4.75E+04 μm^3
Pixel count	1098	1426
Aspect ratio	0.513	0.499
Circularity	0.778	0.723
Convexity	1	0.987
Elongation	0.487	0.501
Grayscale	167	160
Inscribed circle diameter	27.7 μm	27.4 μm

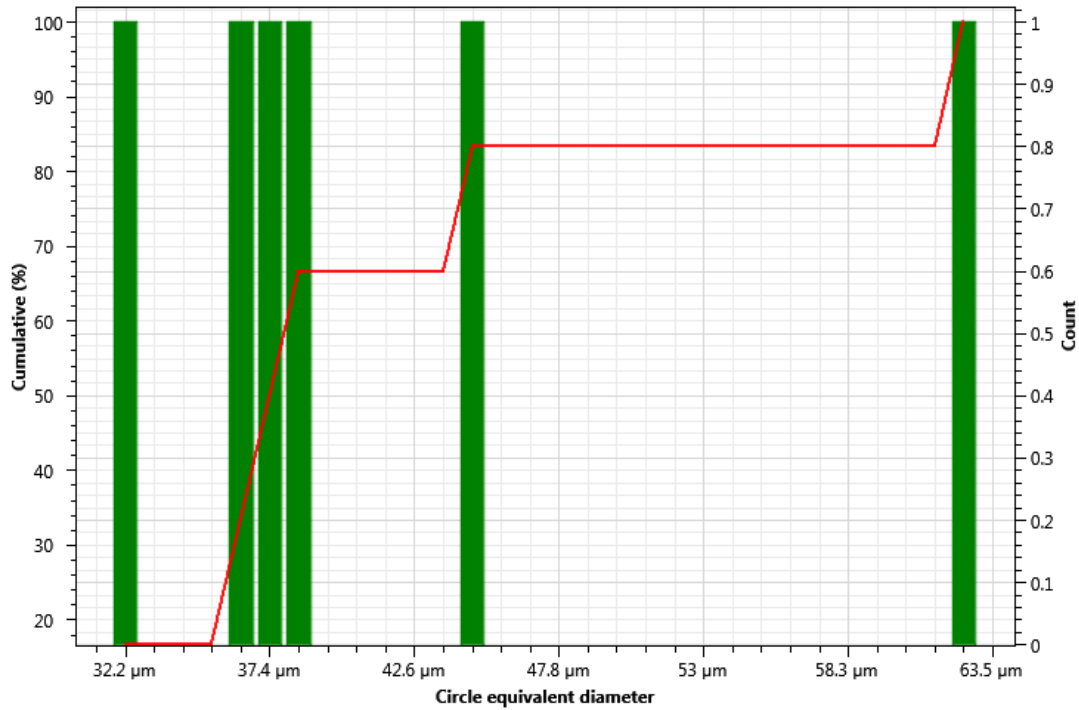


Figure S4. The porosity area of welded joint on interface of α_1 specimen.

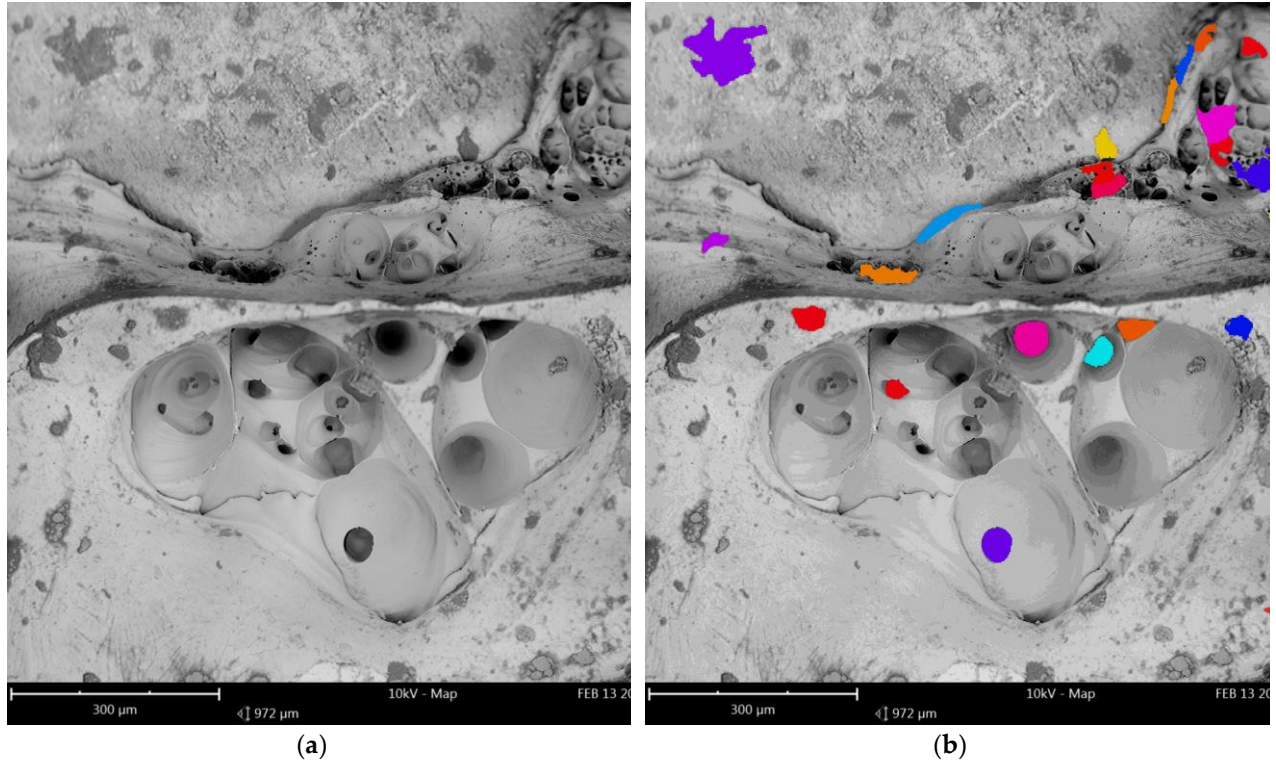


Figure S5. The porosity analysis on α_2 specimen.

S5 Image with a total of 23 Pores

Table S3. Average Pore Area Ratio is 4.96%, calculated for S5 image.

Property	Median	Average
Circle equivalent diameter	34.9 μm	39.8 μm
Major axis	49.8 μm	55.2 μm
Minor axis	27.3 μm	30.5 μm
Circumference	139 μm	167 μm
Convex hull	136 μm	151 μm
Circumscribed circle diameter	51.7 μm	61.7 μm
Area	955 μm^2	1.39E+03 μm^2
Volume by area	2.22E+04 μm^3	4.75E+04 μm^3
Pixel count	1060	1544
Aspect ratio	0.615	0.584
Circularity	0.638	0.637
Convexity	0.961	0.933
Elongation	0.385	0.416
Grayscale	162	173
Inscribed circle diameter	22.9 μm	27 μm

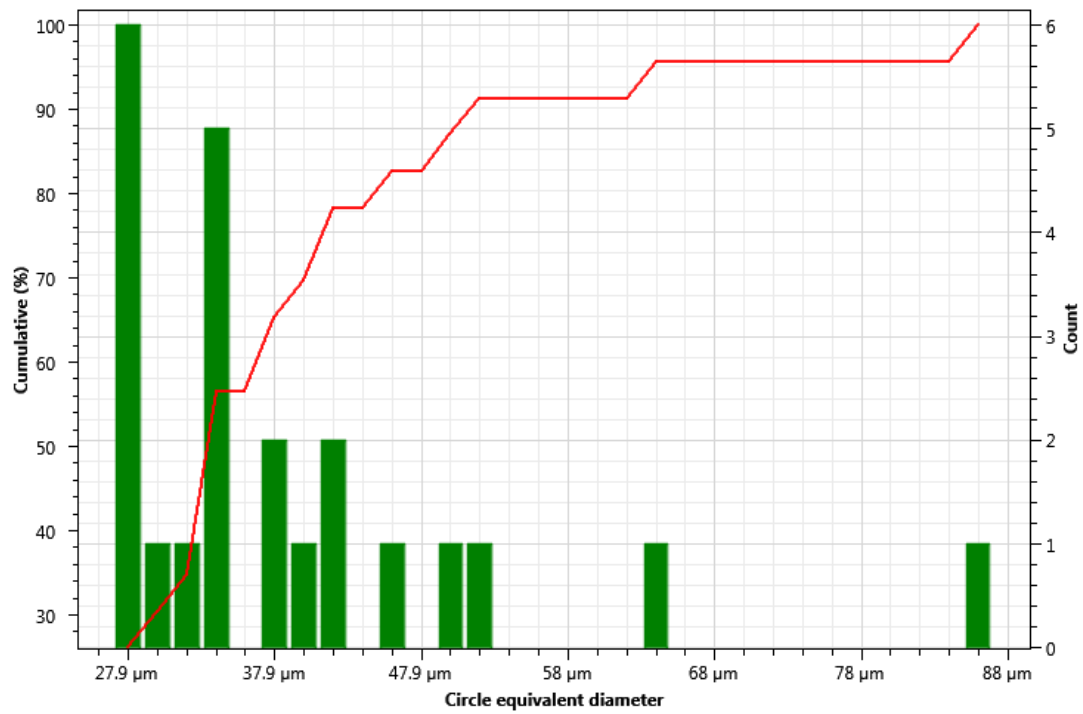


Figure S6. The porosity area of welded joint on interface of α_2 specimen.