308 --- Q200504140009

Scientific Notebook No. 669: Alloy 22 Repassivation Test (03/31/2005 through 02/24/2005)

LABORATORY NOTEBOOK

CNWRA/SwRI

NOTEBOOK NO. _____

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CNWRA
CONTROLLED
COPY 669

Brian K. Derby - BKD

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Project No.
TITLE Book No.

Initial Scientific notebook entry for crevice corrosion repassivation potential measurements

Title: Alloy 22 Repassivation Tests

Tests Preformed by: Darrell S. Dunn, Div 20; Brian Derby, Div. 18. Steve Young. Div 18

Objectives: Measure Crevice Corrosion Repassivation Potentials for Alloy 22 as a function of solution chemistry, temperature and metallurgical condition

Equipment:. Keithley 614/617. Potentiostat (Solartron 1287/1480, EG&G 273, PAR 263 or equivalent) and CorrView Software or equivalent, Electrochemical test cell.

Laboratory oven for exposure of test specimens at 600 to 900 °C, Thermocouple and thermocouple meter for thermally aged specimens

Laboratory oven for exposure of test specimens at 1100 to 1350 °C, Thermocouple and thermocouple meter for solution annealed specimens

Materials: Alloy C-22, heat to be identified in each test. Other materials and heats to be added and identified prior to testing.

Specimen specifications: Specimens will be equivalent to 20.01402.571.027 or a similar crevice corrosion specimen unless otherwise specified.

Measurement Parameters: Potential and Current of specimen during test. Temperature and time of exposure for thermally aged or heat treated specimens.

Required level of accuracy: Temperature ± 5 °C, Time of exposure ± 1 minute, Potentials ± 1mV, Current ± 0.01 microamp.

Uncertainty and Sources of Error: Current measurement error can occur for localized corrosion processes because the actively corroding area is not the same as the surface area of the test specimen.

Recorded by Steve Young 3/31/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal: 9/3/04** **SN:** 1001200319 **Due: 3/3/05**

Initial Weight: 41.41213g **Final Weight:** 41.40839g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: 0.0001 M NaCl
0.018g NaCl Lot # 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **Cal: 7/15/04** **SN:** 2883 **Due:**1/15/05

Initial pH: 4.509 **Final pH:** 6.357 **Model:** Orion EA 940 **Cal:**7/21/04 **Due:** 7/21/05 **SN:** 2330
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **Cal:**10/14/04 **SN:** 323007 **Due:**10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: -.354 V_{SCE} **Ept:** +.228 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:**12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 1a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No Crevice Corrosion

Very Mild Surface Staining

* Repolish for further testing

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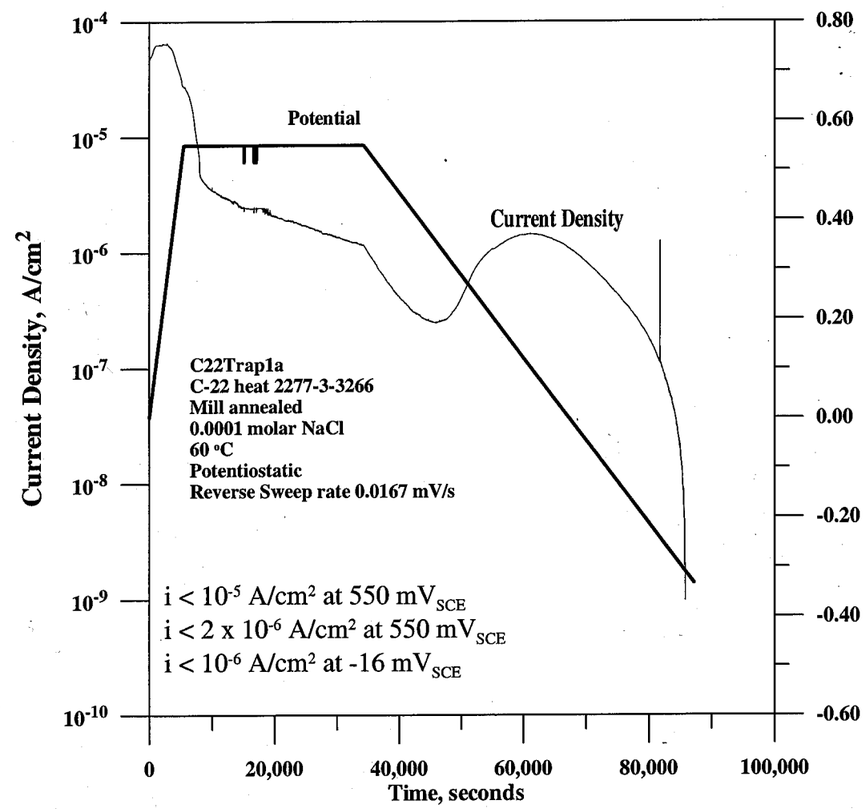

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.22074g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.22017g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.0001M NaCl
0.011g NaCl Lot # 041475
+DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: 7/15/04 **Due:** 1/15/05

Initial pH: 5.780 **Model:** Orion EA 940 **SN:** 2330
Final pH: 6.971 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** 323007
Cal: 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −0.266 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: +0.194 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 1b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No Crevice Corrosion

Very Mild Surface Staining

* Repolish for further testing

No.

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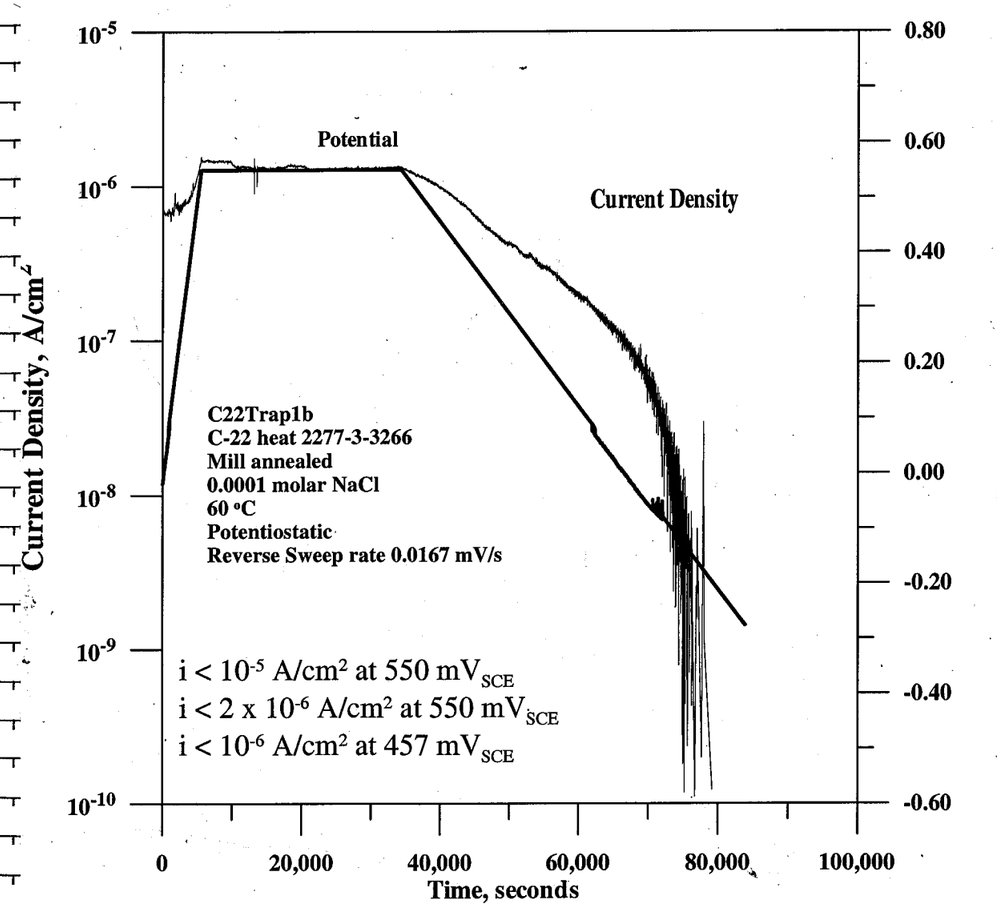

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 41.34412 g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.34259 g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.0005 M NaCl
0.058 g NaCl Lot # 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883 **Cal:** 7/15/04 **Due:** 1/15/05

Initial pH: not taken **Model:** Orion EA 940 **SN:** 2330
Final pH: 6.993 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** 323007 **Cal:** 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: − 229 mV$_{SCE}$ **Model:** Keithley 614 **SN:** 467374
Ept: + 128 mV$_{SCE}$ **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 2a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No Crevise Corrosion

Very Mild Staining

* Repolish for further testing

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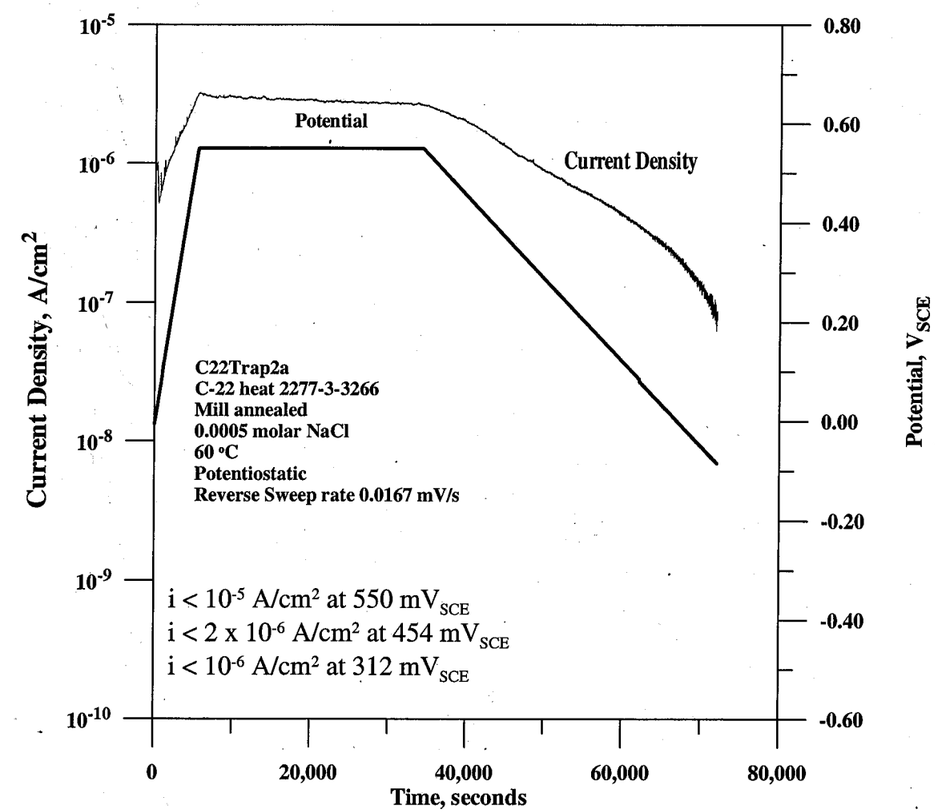

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 41.22808g **Final Weight:** 41.22665g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: 0.0005 M NaCl
0.058g NaCl Lot # 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **Cal:** 7/15/04 **SN:** 2883 **Due:** 1/15/05

Initial pH: 5.764 **Final pH:** 5.847 **Model:** Orion EA 940 **Cal:** 7/21/04 **Due:** 7/21/05 **pH Probe:** #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **Cal:** 01/07/05 **SN:** E98-191 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −0.268 V_{SCE} **Ept:** +0.277 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 2b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No Crevice Corrosion
Very Mild Surface Staining

* Repolish for further testing

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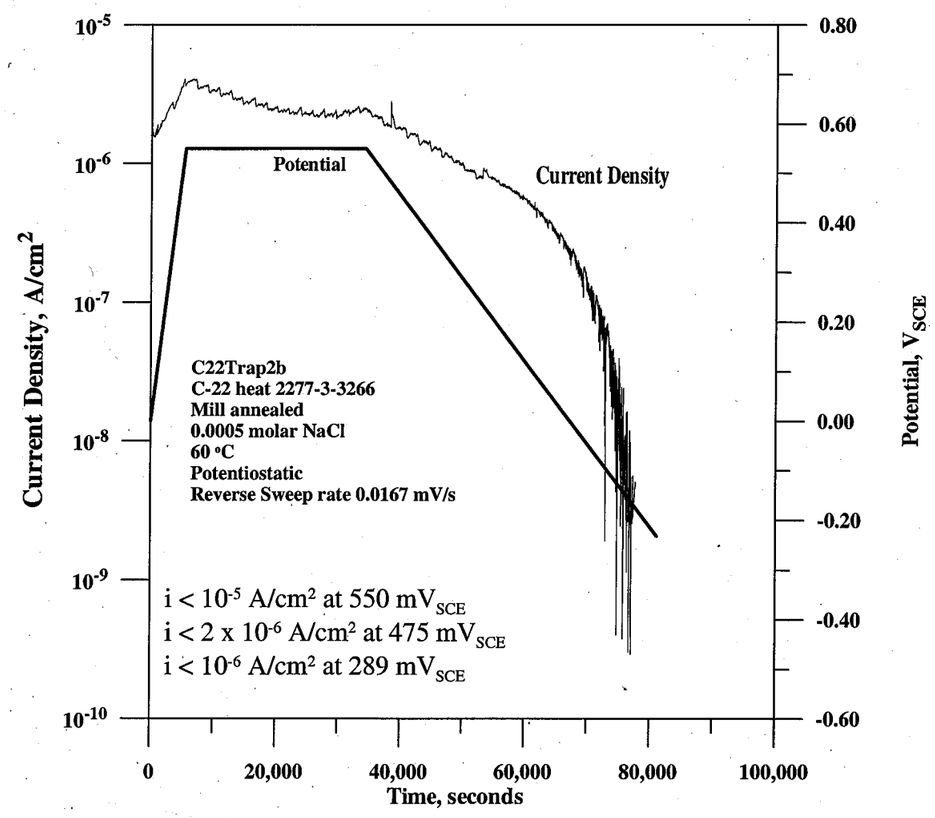

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 41.15075g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.14932g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.001 M NaCl
0.114g NaCl Lot #041475
+DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883 **Cal:** 7/15/04 **Due:** 1/15/05

Initial pH: 5.913 **Model:** Orion EA 940 **SN:** 2330
Final pH: 6.846 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** 323007 **Cal:** 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −0.1308 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: +0.1524 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 3a

Number of Crevice Corrosion Sites: 0/24 (24 max.)

No Crevice Corrosion

Very Mild Staining

* Repolish for further testing

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Witnessed & Understood by me,	Date	Invented by	Date
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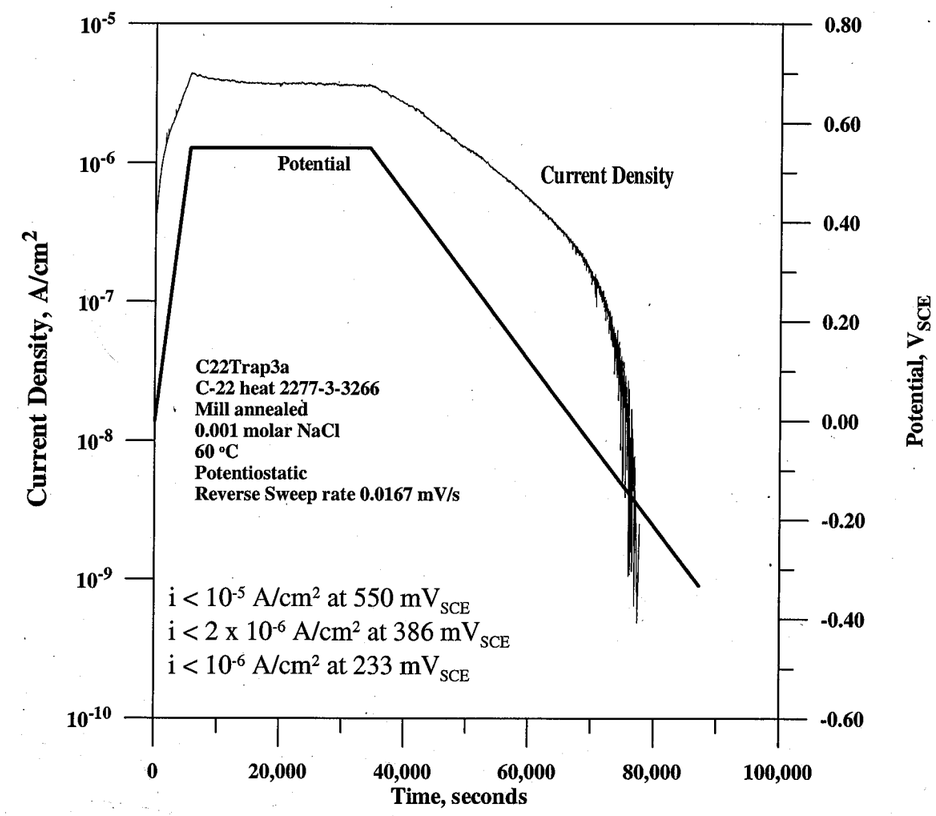

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 41.37521 **Final Weight:** 41.37348 **Model:** Sartorius Genius **SN:** 12809099 **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.001 M NaCl
0.117g NaCl Lot #041475
+ DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883 **Cal:** 7/15/04 **Due:** 1/15/05

Initial pH: 5.608 **Final pH:** 6.520 **Model:** Orion EA 940 **SN:** 2330 **Cal:** 7/21/04 **Due:** 7/21/05 **pH Probe:** #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** E98-191 **Cal:** 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -0.232 V_{SCE} **Ept:** +0.137 V_{SCE} **Model:** Keithley 614 **SN:** 467374 **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 3b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No Crevice Corrosion
Very Mild Surface Staining

* Repolish for further testing

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		Recorded by Steve Young	1/13/05

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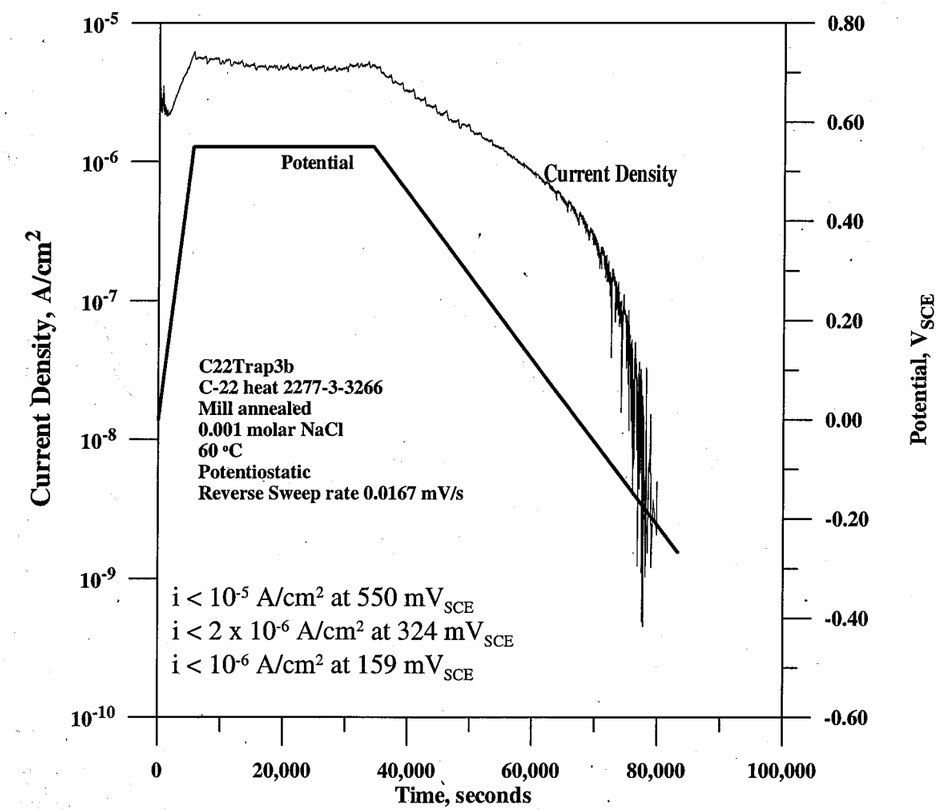

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		Recorded by Steve Young	1/13/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver:	Snap-on USA **Cal:** 9/3/04	**SN:** 1001200319 **Due:** 3/3/05
Initial Weight: 40.92083 **Final Weight:** 40.91765	**Model:** Sartorius Genius **Cal:** 11/10/04	**SN:** 12809099 **Due:** 5/10/05
Solution: 0.005M NaCl 0.583g NaCl Lot # 041475 + DI to 2Ls		
Reagents measured with	**Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05	**SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05
Initial pH: 6.145 **Final pH:** 7.274	**Model:** Orion EA 940 **Cal:**7/21/04 **pH Probe:** #13-620-296	**SN:** 2330 **Due:** 7/21/05 **SN:** 4079126
Test Temperature: 60°C	**Measured with Hg Thermometer** **Cal:**10/14/04	**SN:** 323007 **Due:**10/14/2005
Counter Electrode: Platinum Flag		
Reference Electrode: Fisher 13-620-52		**SN:** 4028036
Gas: 99.999% Nitrogen Gas		
Ecorr: -0.1874V vs SCE SBY 3/25/05 **Ept:** +0.1477V vs SCE SBY 3/25/05	**Model:** Keithley 614 **Cal:** 12/2/04	**SN:** 467374 **Due:**12/2/2005
Potentiostat: Solartron 1480		**SN:** 00240551

DATA FILE: C-22 Trap 4a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No Crevice Correction

Very Mild Surface Staining

* Repolish for further testing

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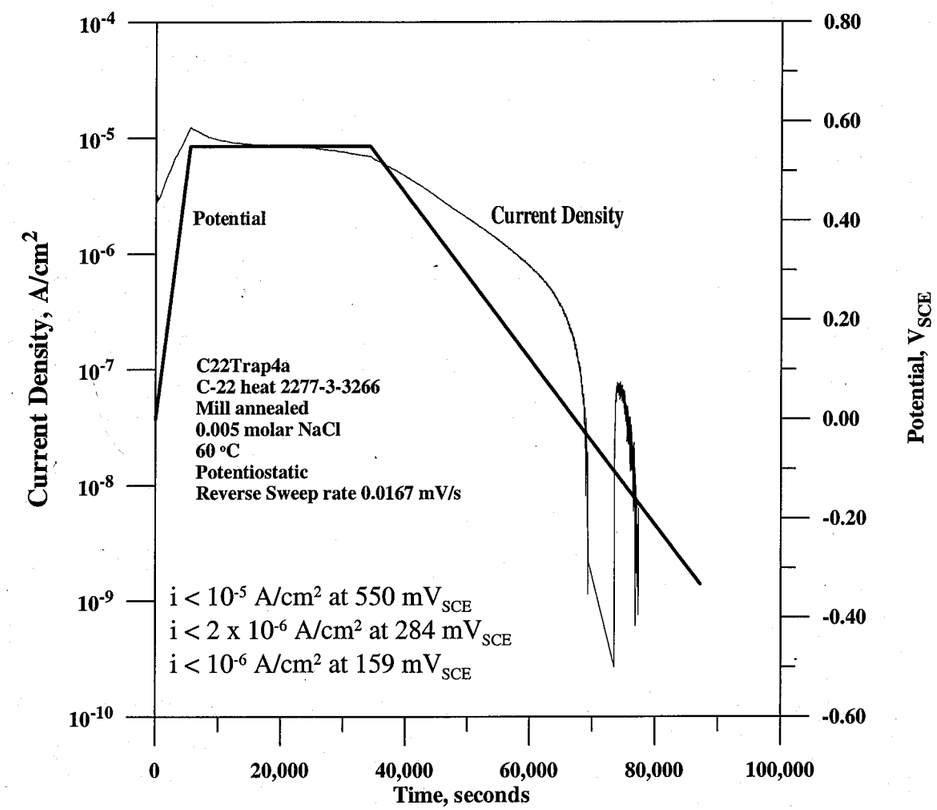

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 41.37167 g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.36867 g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.005M NaCl
0.587g NaCl Lot #041475
+DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~4/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.965 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.372 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −0.2191 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: +0.0452 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 4b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No Crevice Corrosion

Very Mild Surface Staining

* Repolish for further testing

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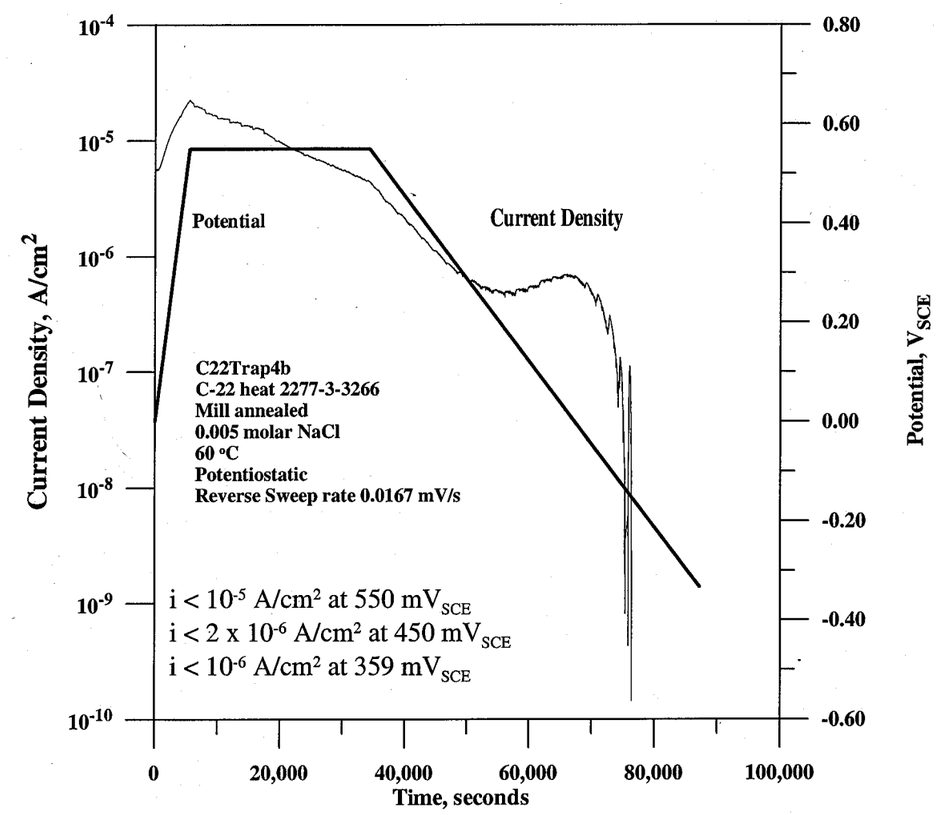

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver:	Snap-on USA **Cal:** 9/3/04	**SN:** 1001200319 **Due:** 3/3/05
Initial Weight: 41.07630 **Final Weight:** 41.07301	**Model:** Sartorius Genius **Cal:** 11/10/04	**SN:** 12809099 **Due:** 5/10/05

Solution: 0.01 M NaCl
1.168g NaCl Lot: 041475
+DI to 2Ls

Reagents measured with	**Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05	**SN:** 2883 **Due:** ~~4/15/05~~ 7/14/05 SBY 3/25/05
Initial pH: 5.815 **Final pH:** 6.902	**Model:** Orion EA 940 **Cal:** 7/21/04 **pH Probe:** #13-620-296	**SN:** 2330 **Due:** 7/21/05 **SN:** 4079126
Test Temperature: 60°C	**Measured with Hg Thermometer** **Cal:** 10/14/04	**SN:** 323007 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −0.4075 V_{SCE} **Ept:** +0.1722 V_{SCE}	**Model:** Keithley 614 **Cal:** 12/2/04	**SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 5a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

Slight surface staining.
No crevice corrosion.
* Repolish for further testing.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/18/05

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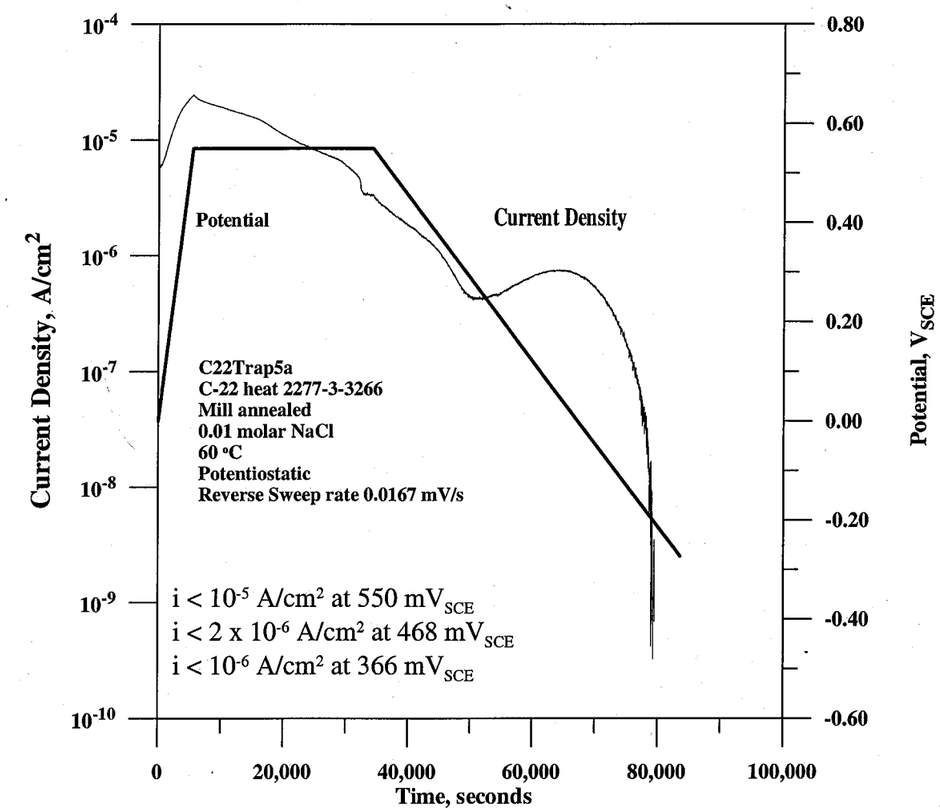

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.16101g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.15759g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.01M NaCl
1.170g NaCl Lot: 041475
+DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883 7/14/05
Cal: ~~7/15/04~~ 1/14/05 **Due:** ~~4/15/05~~ ~~7/15~~ 7/14/05
SBY 3/25/05 SBY 3/25/05

Initial pH: 5.778 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.319 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −0.2328 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: +0.1236 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 5b

Number of Crevice Corrosion Sites: 0/24 (24 max.)

Very slight staining.

No crevice corrosion.

* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/18/05

TITLE_____ Project No._____
Book No._____

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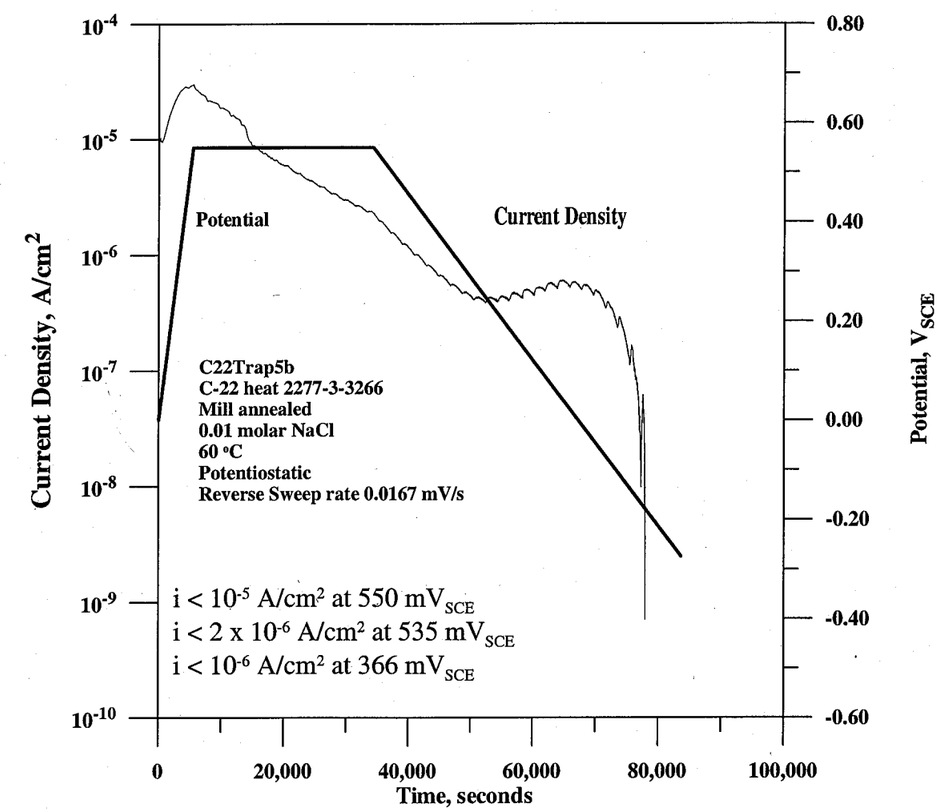

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/18/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.47278g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.46919g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.05M NaCl
5.850g NaCl Lot: 041475
+ DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~1/15/06~~ 7/14/05 SBY 3/25/05

Initial pH: 5.791 **Model:** Orion EA 940 **SN:** 2330
Final pH: Not Taken **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** 323007
Cal: 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −0.1734 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: +0.1200 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 6a

Number of Crevice Corrosion Sites: 0/24 (24 max.)

Surface Staining.
No crevice corrosion.

* Repolish for further testing.

No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/19/05

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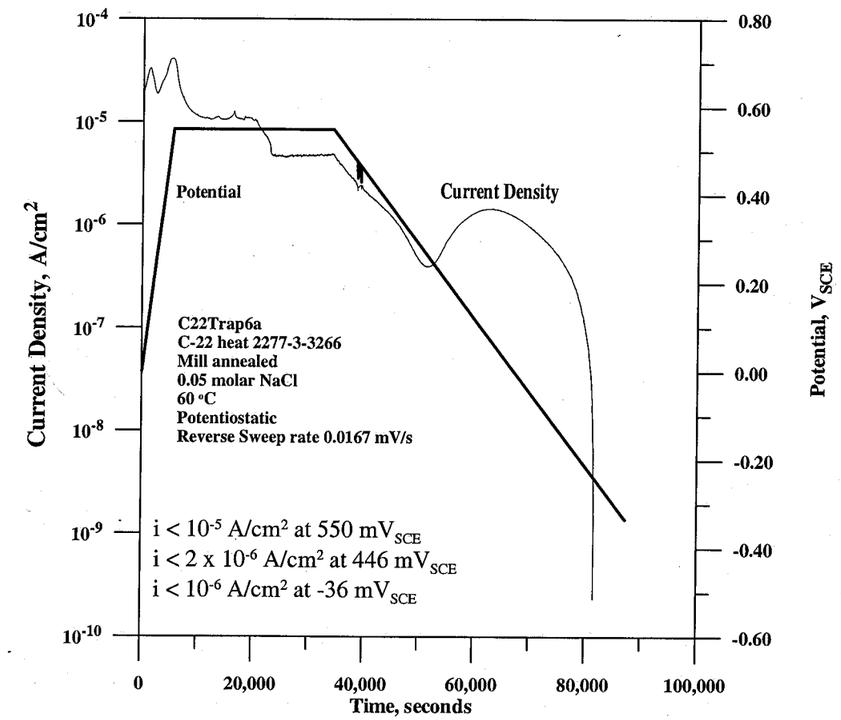

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/19/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.40153g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.39824g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.05M NaCl
5.846g NaCl Lot: 041475
+ DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.779 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.476 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: $-0.2299 V_{SCE}$ **Model:** Keithley 614 **SN:** 467374
Ept: $+0.0153 V_{SCE}$ **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 6b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

Slight staining.

No crevice corrosion.

*Repolish for further testing.

To Page No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/19/05

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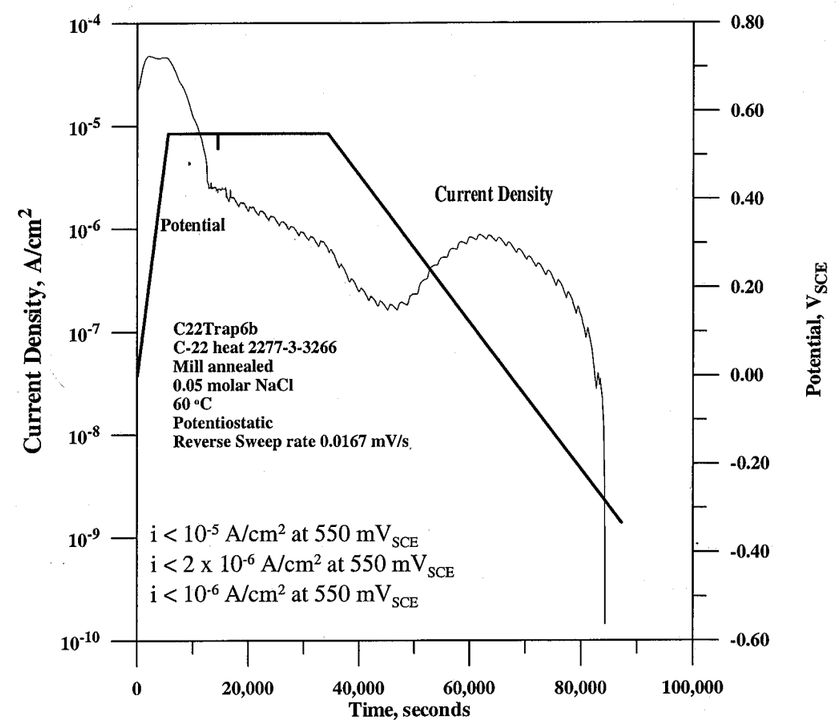

To Page No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/19/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.31723 **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.31645 **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.1M NaCl
11.690g NaCl Lot: 041475
+DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.684 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.599 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** 323007
Cal: 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −0.1354 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: −0.0169 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 7a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

Surface staining.
No crevice corrosion.

* Repolish for further testing.

No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/20/05

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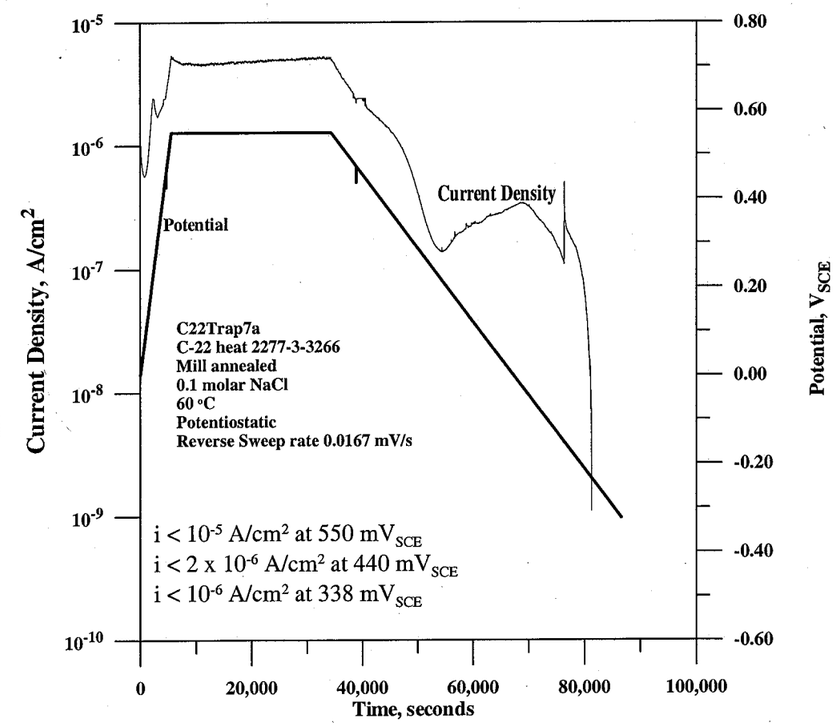

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/20/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.32029 **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.31765 **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.1M NaCl
11.687g NaCl Lot: 041475
+ DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.860 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.174 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: $-0.2960 V_{SCE}$ **Model:** Keithley 614 **SN:** 467374
Ept: $-0.3200 V_{SCE}$ **Cal:** 12/2/04 **Due:** 12/2/2005
Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 7b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

Slight surface staining.

No crevice corrosion.

*Repolish for further testing.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/20/05

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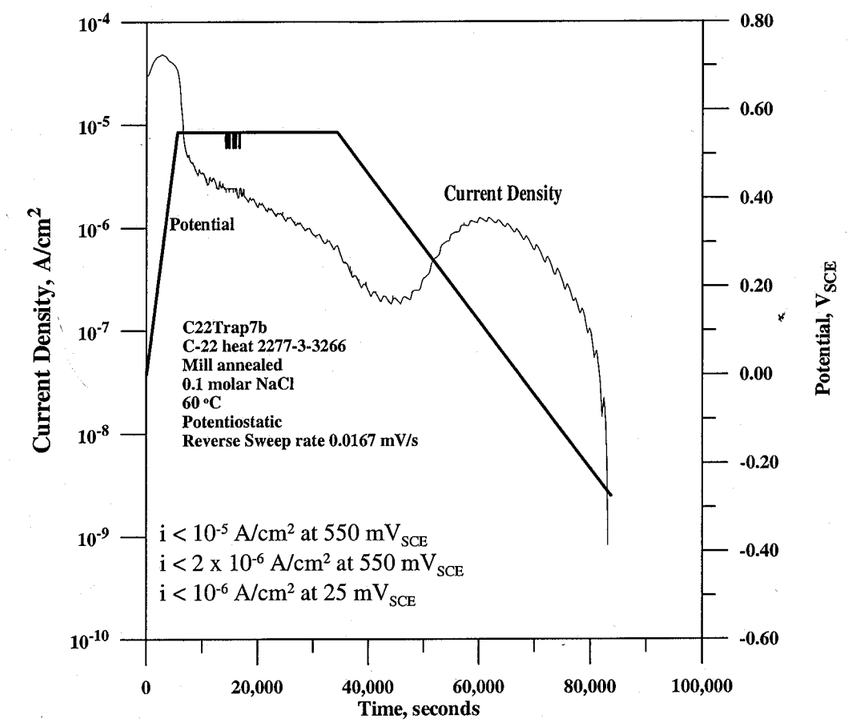

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Witnessed & Understood by me,	Date	Invented by	Date
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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 41.23617g **Final Weight:** 41.23398g **Model:** Sartorius Genius **SN:** 12809099 **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.5M NaCl
58.46g NaCl Lot: 041475
+ DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883 **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~4/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 6.095 **Final pH:** 8.102 **Model:** Orion EA 940 **SN:** 2330 **Cal:** 7/21/04 **Due:** 7/21/05 **pH Probe:** #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** 323007 **Cal:** 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −.352 V_{SCE} **Ept:** +.29 V_{SCE} **Model:** Keithley 614 **SN:** 467374 **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 8a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

Slight surface etching.
Mild surface staining.
No crevice corrosion.
* Repolish for future testing.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/21/05

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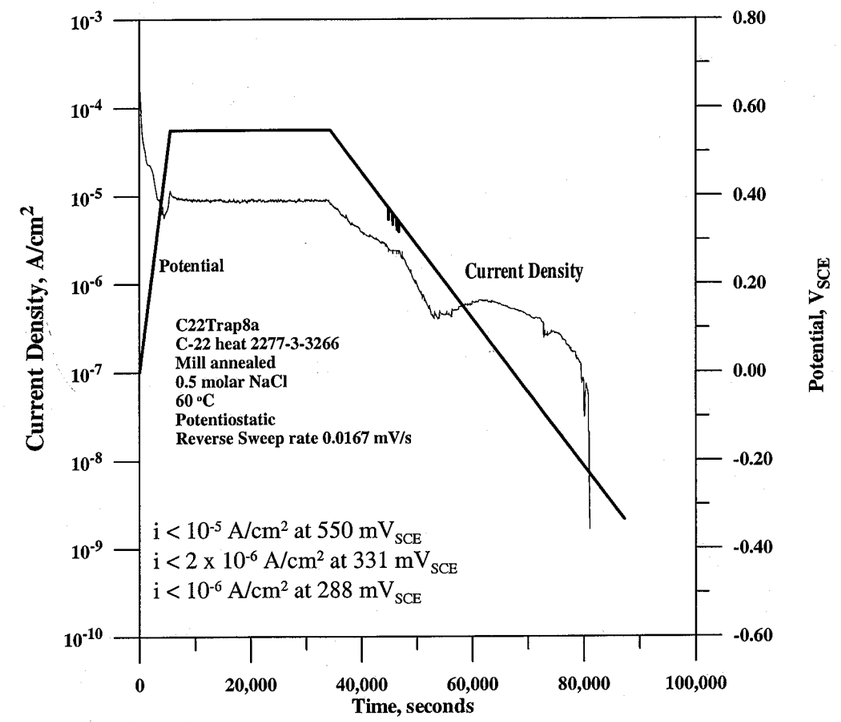

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/21/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 41.09328g **Final Weight:** 41.09144g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: 0.5M NaCl
58.43g NaCl Lot: 041475
+DI to 2Ls

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 6.235 **Final pH:** 7.745 **Model:** Orion EA 940 **Cal:** 7/21/04 **SN:** 2330 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **Cal:** 01/07/05 **SN:** E98-191 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −0.335 V_{SCE} **Ept:** +0.320 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 8b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

Surface staining.

No crevice corrosion.

* Repolish for further testing.

To Page No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/21/05

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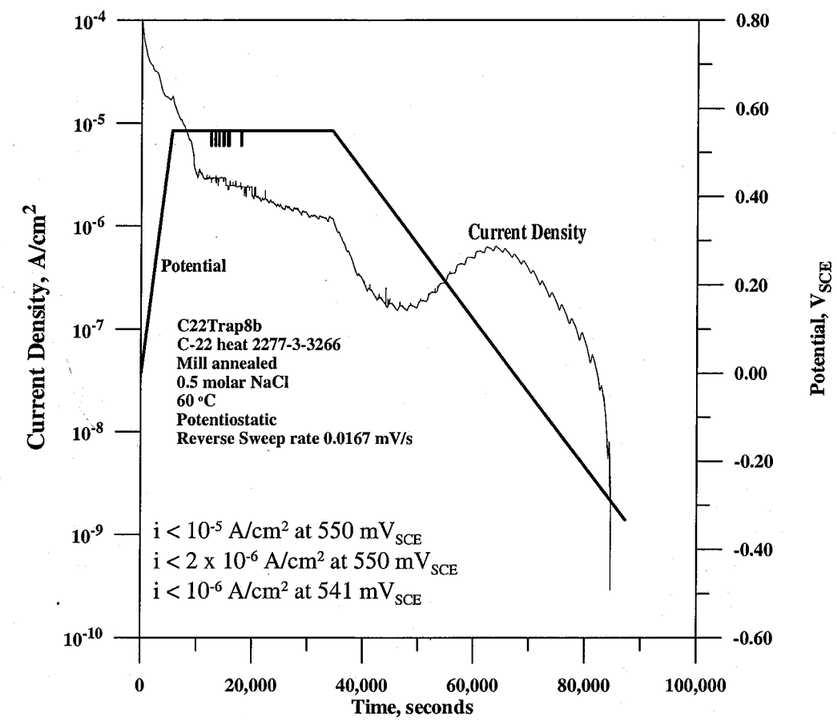

To Page No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/21/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 40.87789g **Final Weight:** 40.876658g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: 1M NaCl
116.87g NaCl Lot: 041475
+ DI to 2Ls

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 6.607 **Final pH:** 6.798 **Model:** Orion EA 940 **Cal:** 7/21/04 **SN:** 2330 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **Cal:** 10/14/04 **SN:** 323007 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −.268 V_{SCE} **Ept:** −.022 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 9a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Staining and crystal formations.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/25/05

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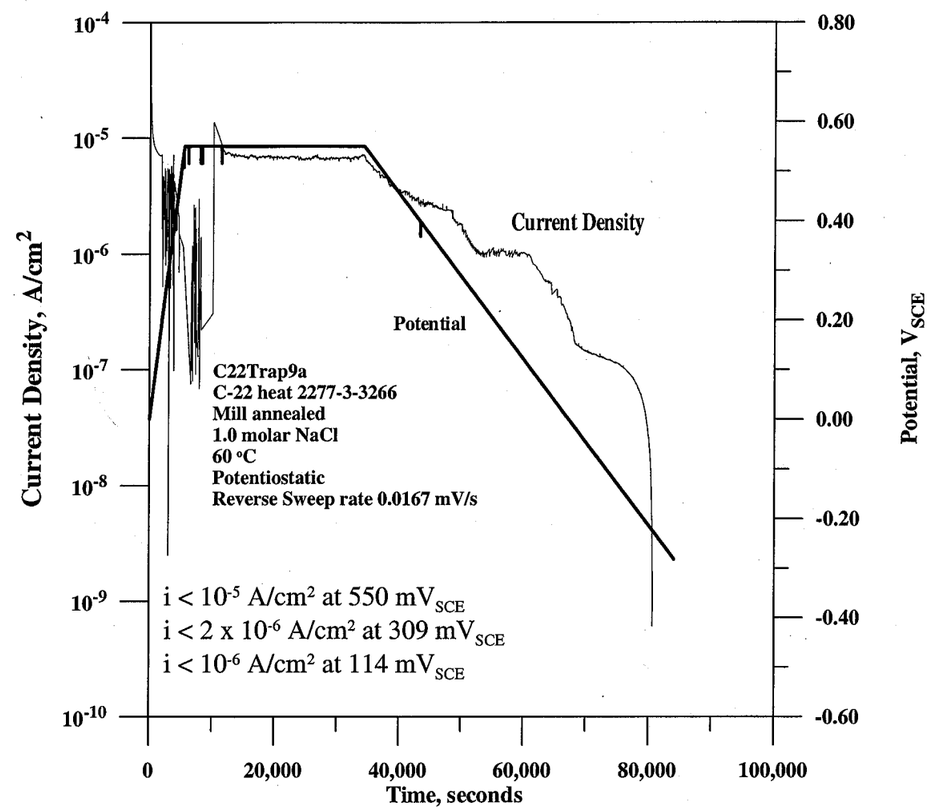

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/25/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.37295g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.37265g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 1M NaCl
116.88g NaCl Lot: 041475
+ DI to 2Ls

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 **Due:** ~~1/15/05~~ 7/14/05
SBY 3/25/05 SBY 3/25/05

Initial pH: 6.515 **Model:** Orion EA 940 **SN:** 2330
Final pH: 6.752 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -.414 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: -.039 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 9b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.

Staining and crystal formations.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/25/05

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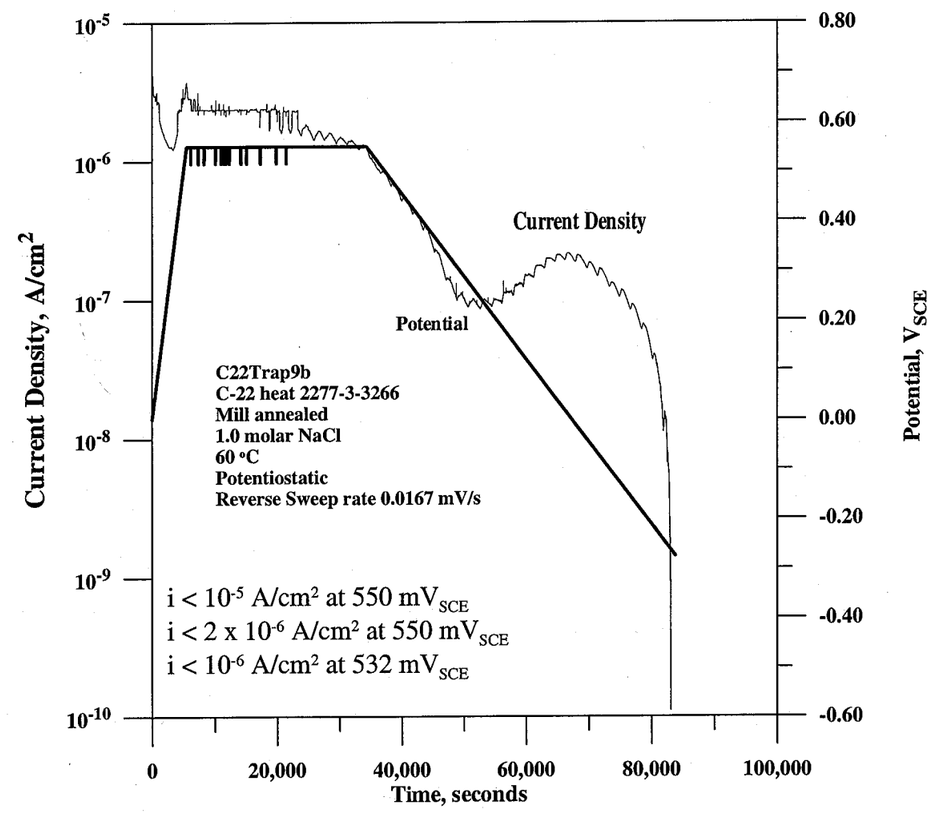

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/25/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver:	Snap-on USA **Cal:** 9/3/04	**SN:** 1001200319 **Due:** 3/3/05
Initial Weight: 38.85922g **Final Weight:** 38.85476g	**Model:** Sartorius Genius **Cal:** 11/10/04	**SN:** 12809099 **Due:** 5/10/05
Solution: 4M NaCl 467.52g NaCl Lot: 042966 + DI to 2L		
Reagents measured with	**Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05	**SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05
Initial pH: 8.194 **Final pH:** 8.070	**Model:** Orion EA 940 **Cal:**7/21/04 **pH Probe:** #13-620-296	**SN:** 2330 **Due:** 7/21/05 **SN:** 4079126
Test Temperature: 60°C	**Measured with Hg Thermometer** **Cal:**10/14/04	**SN:** 323007 **Due:**10/14/2005
Counter Electrode: Platinum Flag		
Reference Electrode: Fisher 13-620-52		**SN:** 4028036
Gas: 99.999% Nitrogen Gas		
Ecorr: -.364V$_{SCE}$ **Ept:** -.574V$_{SCE}$	**Model:** Keithley 614 **Cal:** 12/2/04	**SN:** 467374 **Due:**12/2/2005
Potentiostat: Solartron 1480		**SN:** 00240551

DATA FILE: C-22 Trap 10a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Slight gold staining on all surfaces.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/18/05

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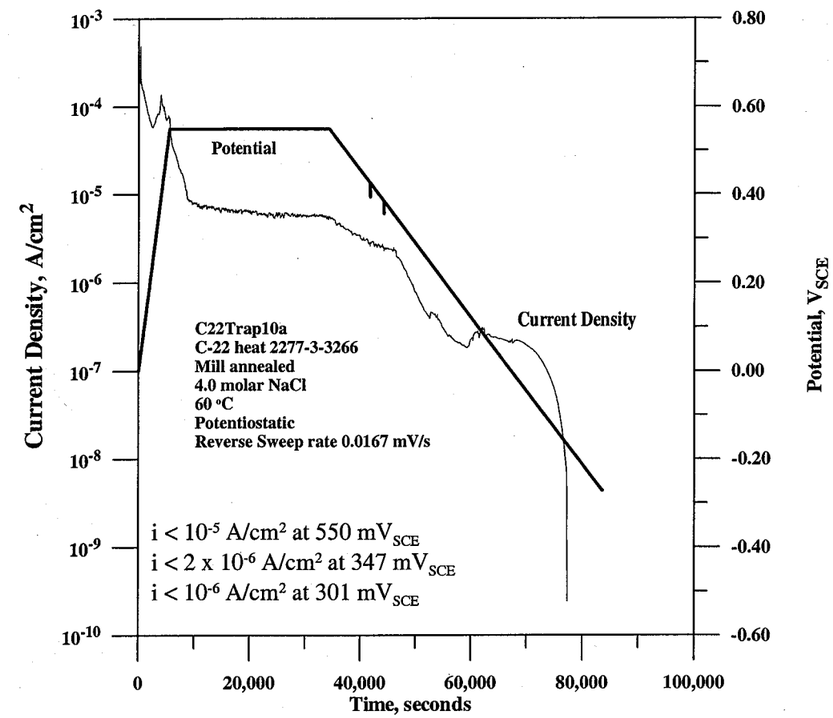

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/18/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 40.34299g **Final Weight:** 40.34001g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: 4M NaCl
467.51g NaCl Lot: 042966
+ DI to 2L

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 8.691 **Final pH:** 8.106 **Model:** Orion EA 940 **Cal:** 7/21/04 **pH Probe:** #13-620-296 **SN:** 2330 **Due:** 7/21/05 **SN:** 4079126

Test Temperature: 60°C **Measured with Hg Thermometer** **Cal:** 01/07/05 **SN:** E98-191 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -.380 V_{SCE} **Ept:** -.497 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 10b

Number of Crevice Corrosion Sites: 0/24 (24 max.)

No crevice corrosion.
Blue and gold surface staining.
* Repolish for further testing.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/18/05

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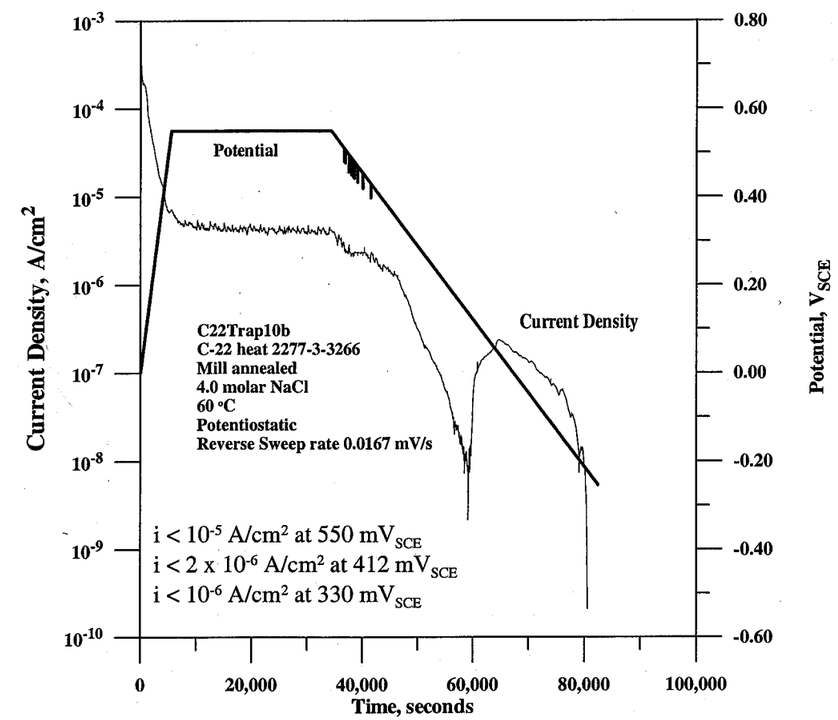

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/18/05

Project No._____
Book No._____ TITLE_____

From Page No.____

POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver:	Snap-on USA **Cal:** 9/3/04	**SN:** 1001200319 **Due:** 3/3/05
Initial Weight: 41.02800g **Final Weight:** 41.02735g	**Model:** Sartorius Genius **Cal:** 11/10/04	**SN:** 12809099 **Due:** 5/10/05

Solution: .0001M NaCl
.015g NaCl Lot: 041475
+ DI to 2L

Reagents measured with	**Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05	**SN:** 2883 **Due:** ~~4/15/05~~ 7/14/05 SBY 3/25/05
Initial pH: 6.991 **Final pH:** 6.471	**Model:** Orion EA 940 **Cal:** 7/21/04 **pH Probe:** #13-620-296	**SN:** 2330 **Due:** 7/21/05 **SN:** 4079126
Test Temperature: 80°C	**Measured with Hg Thermometer** **Cal:** 10/14/04	**SN:** 323007 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −.352 V_{SCE} **Ept:** +.019 V_{SCE}	**Model:** Keithley 614 **Cal:** 12/2/04	**SN:** 467374 **Due:** 12/2/2005
Potentiostat: Solartron 1480		**SN:** 00240551

DATA FILE: C-22 Trap 11a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.

Very mild surface staining.

* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/26/05

TITLE_____ Project No._____
Book No._____

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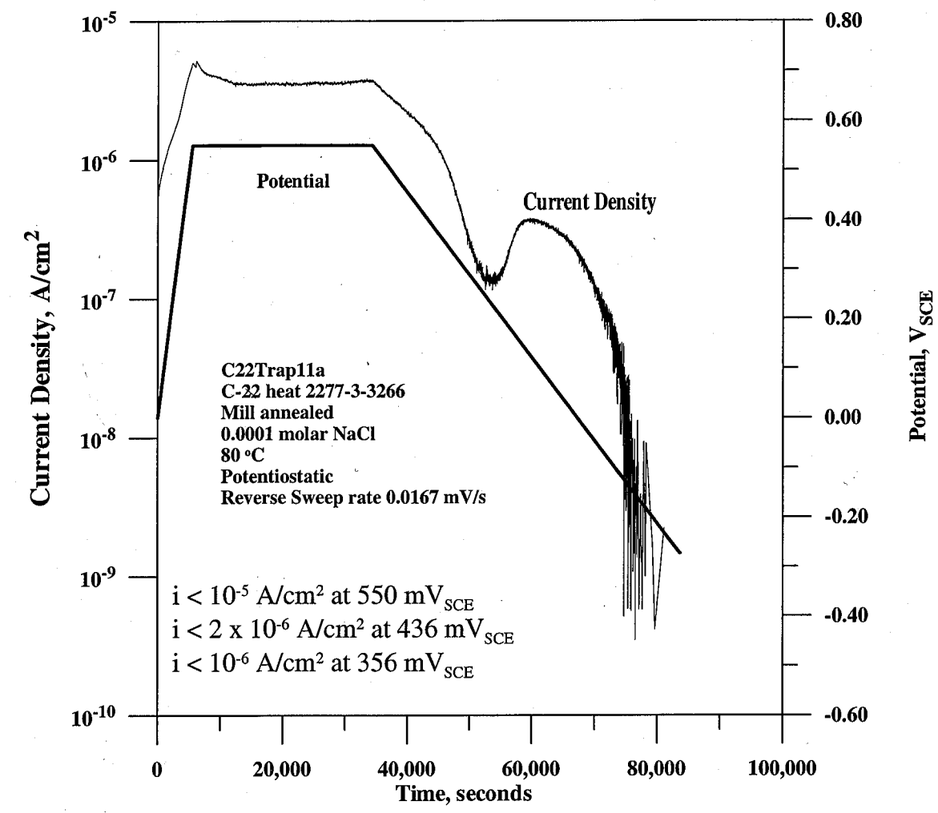

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/26/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 40.99475g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 40.99431g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: .0001 M NaCl
.015g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05
Initial pH: 6.167 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.302 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −.546 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: −.100 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 11b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Very mild surface staining.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/26/05

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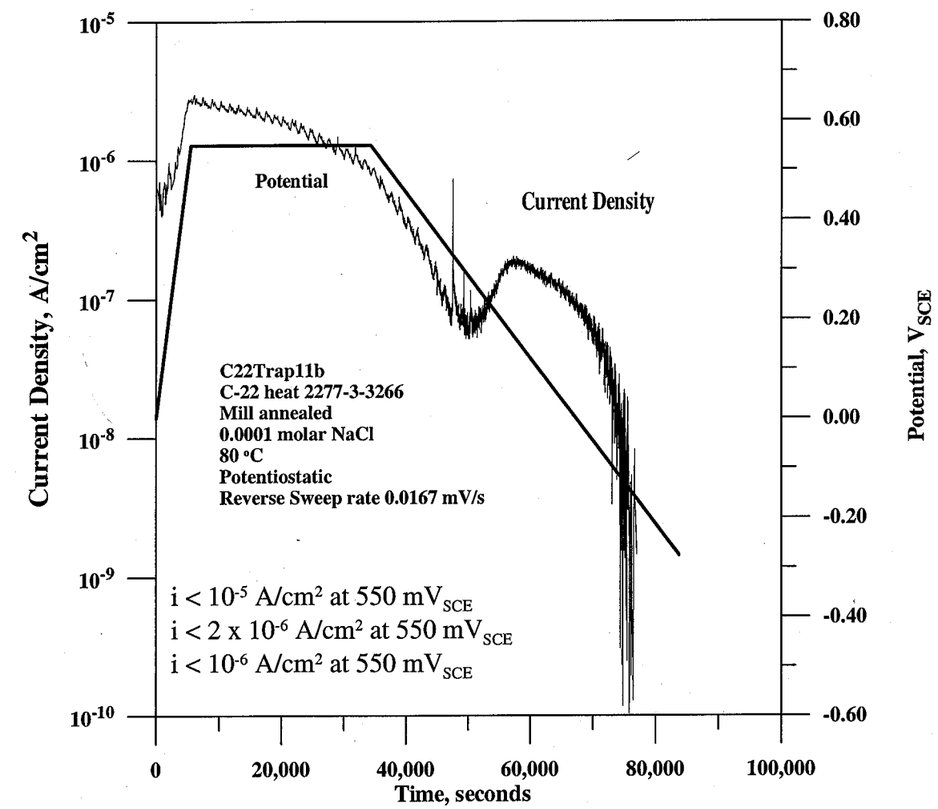

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/26/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA, **Cal:** 9/3/04, **SN:** 1001200319, **Due:** 3/3/05

Initial Weight: 41.17056g
Final Weight: 41.17041g
Model: Sartorius Genius, **Cal:** 11/10/04, **SN:** 12809099, **Due:** 5/10/05

Solution: .0005M NaCl
.058g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS, **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05, **SN:** 2883, **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.807
Final pH: 6.558
Model: Orion EA 940, **Cal:** 7/21/04, **Due:** 7/21/05, **SN:** 2330
pH Probe: #13-620-296, **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer**, **Cal:** 10/14/04, **SN:** 323007, **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52, **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: -.278 V_{SCE}
Ept: -.021 V_{SCE}
Model: Keithley 614, **Cal:** 12/2/04, **SN:** 467374, **Due:** 12/2/2005

Potentiostat: Solartron 1480, **SN:** 00240551

DATA FILE: C-22 Trap 12a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Very mild surface staining.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/28/05

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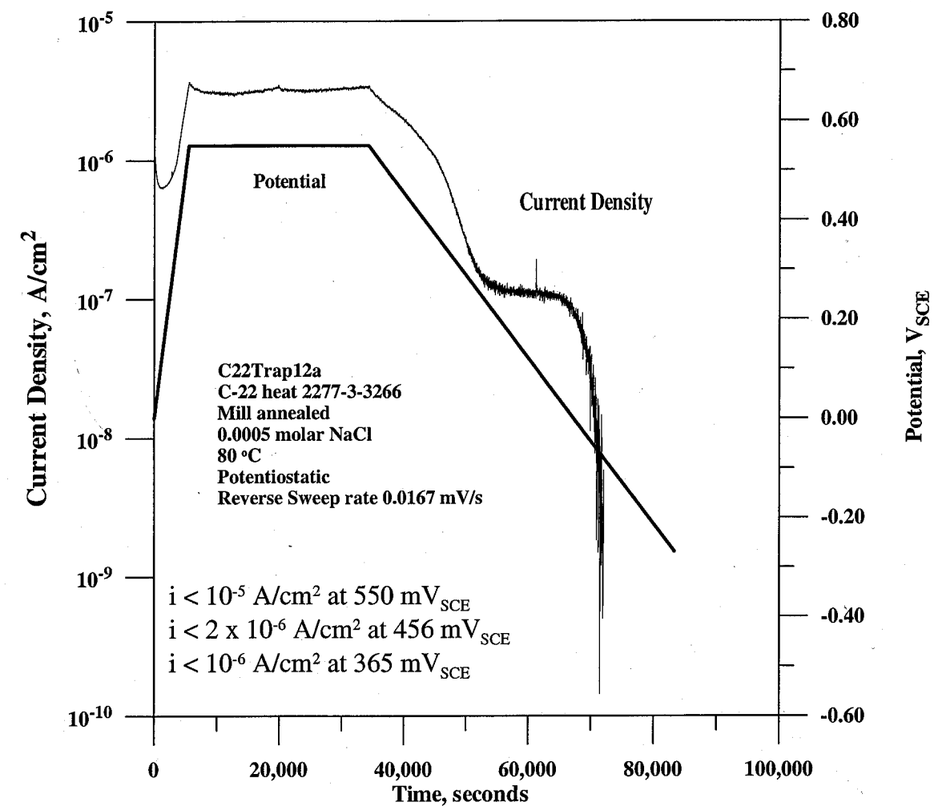

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/28/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.22048g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.22056g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: .0005 M NaCl
.058g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 **Due:** ~~1/15/05~~ 7/14/05
SBY 3/25/05 SBY 3/25/05
Initial pH: 5.870 **Model:** Orion EA 940 **SN:** 2330
Final pH: 6.786 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80° C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −.299 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: −.074 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 12b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Very mild surface staining.
* Repolish for further testing.

To Page No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/28/05

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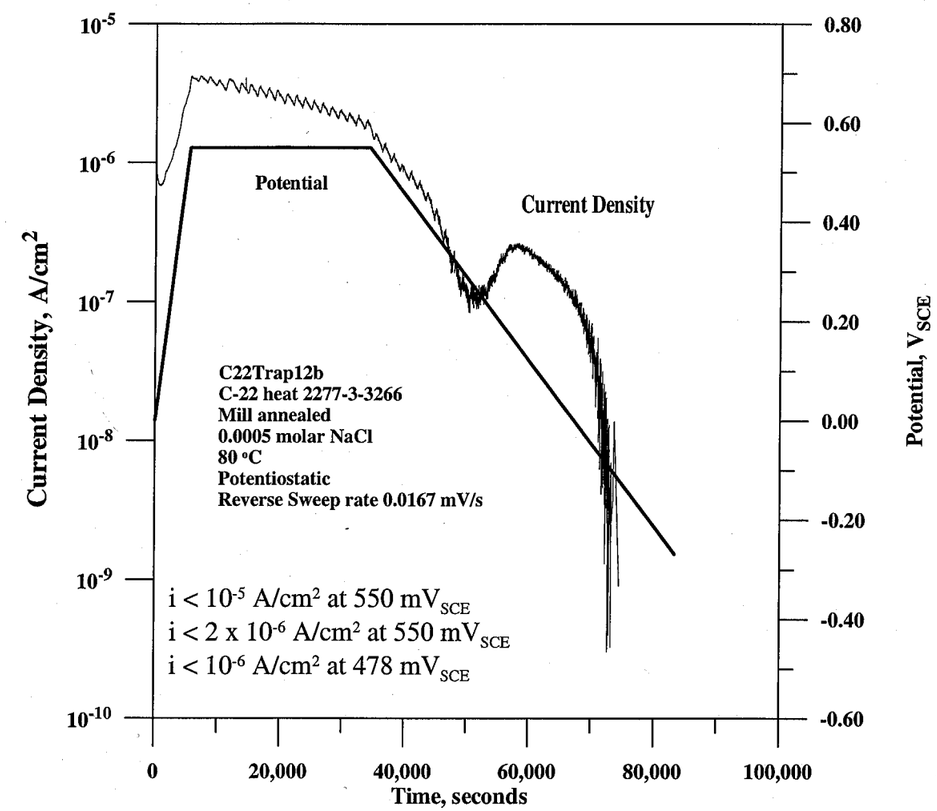

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/28/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 41.28546g **Final Weight:** 41.28500g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: .001M NaCl
.116g NaCl Lot: 041475
+DI to 2L

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.732 **Final pH:** 6.647 **Model:** Orion EA 940 **Cal:** 7/21/04 **Due:** 7/21/05 **SN:** 2330
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80° C **Measured with Hg Thermometer** **Cal:** 10/14/04 **SN:** 323007 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: -.582 V_{SCE} **Ept:** -.022 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 13a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Very mild surface staining.
* Repolish for further testing.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/29/05

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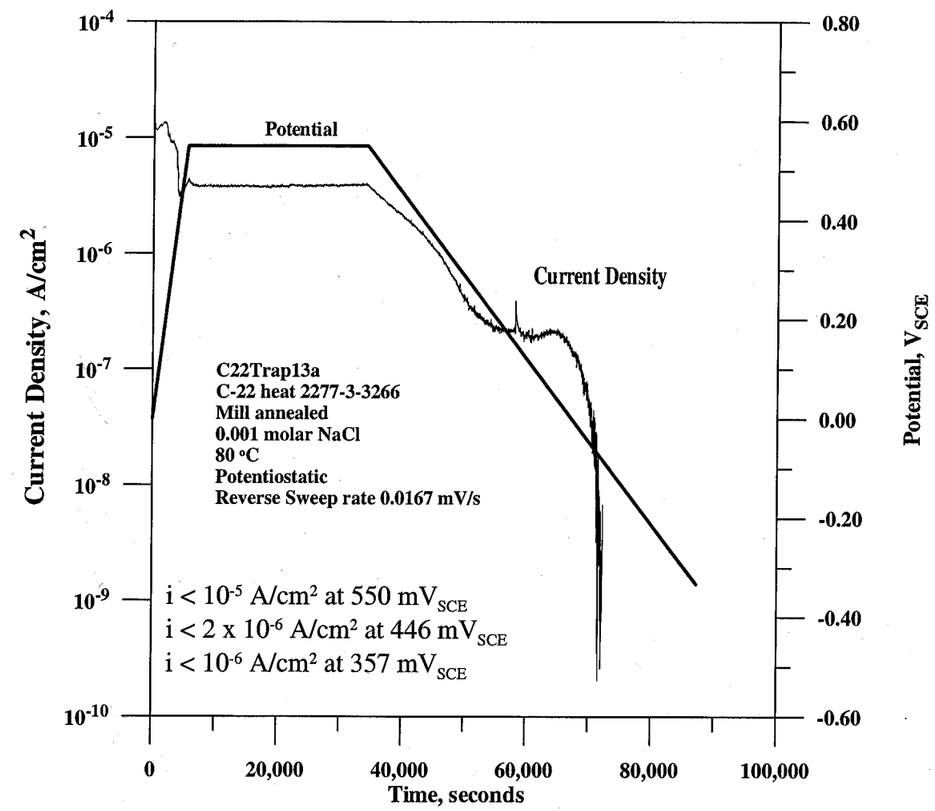

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/29/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.40548 g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.40514 g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: .001 M NaCl
.117 g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.706 **Model:** Orion EA 940 **SN:** 2330
Final pH: 6.907 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -.428 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: -.199 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 13b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Very mild surface staining.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/29/05

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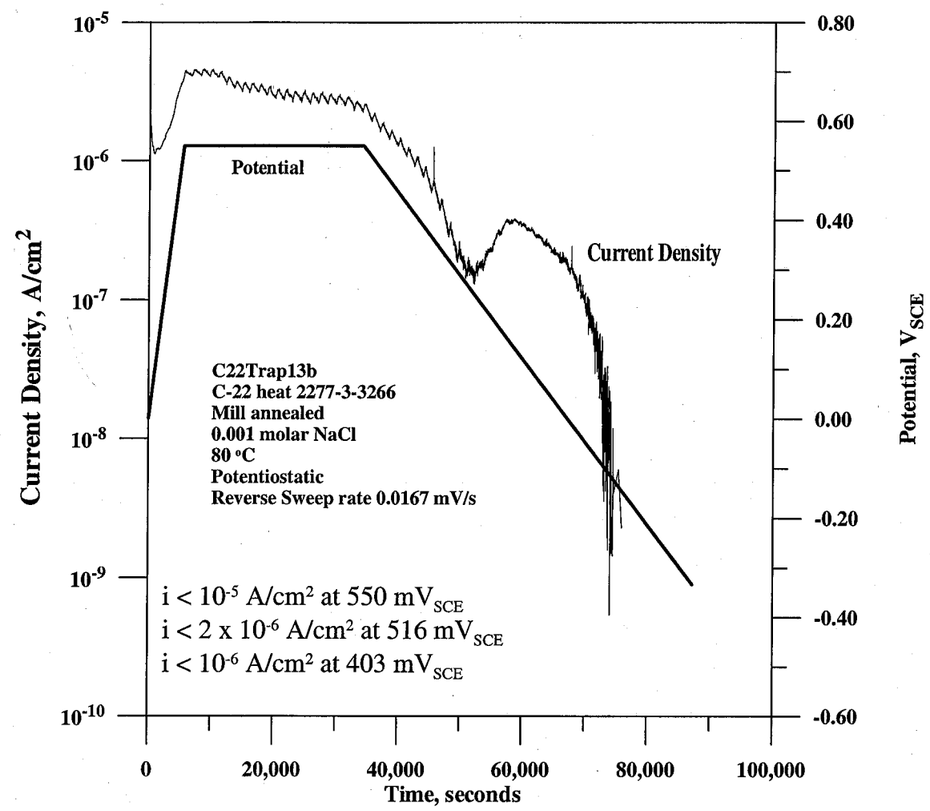

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	1/29/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.29968g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.29940g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: .005M NaCl
.586g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 **Due:** ~~4/15/05~~ 7/14/05
SBY 3/25/05 SBY 3/25/05

Initial pH: 5.921 **Model:** Orion EA 940 **SN:** 2330
Final pH: 6.611 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** 323007
Cal: 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: -.242 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: -.117 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 14a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Mild surface staining.
* Repolish for further testing.

To Page No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/1/05

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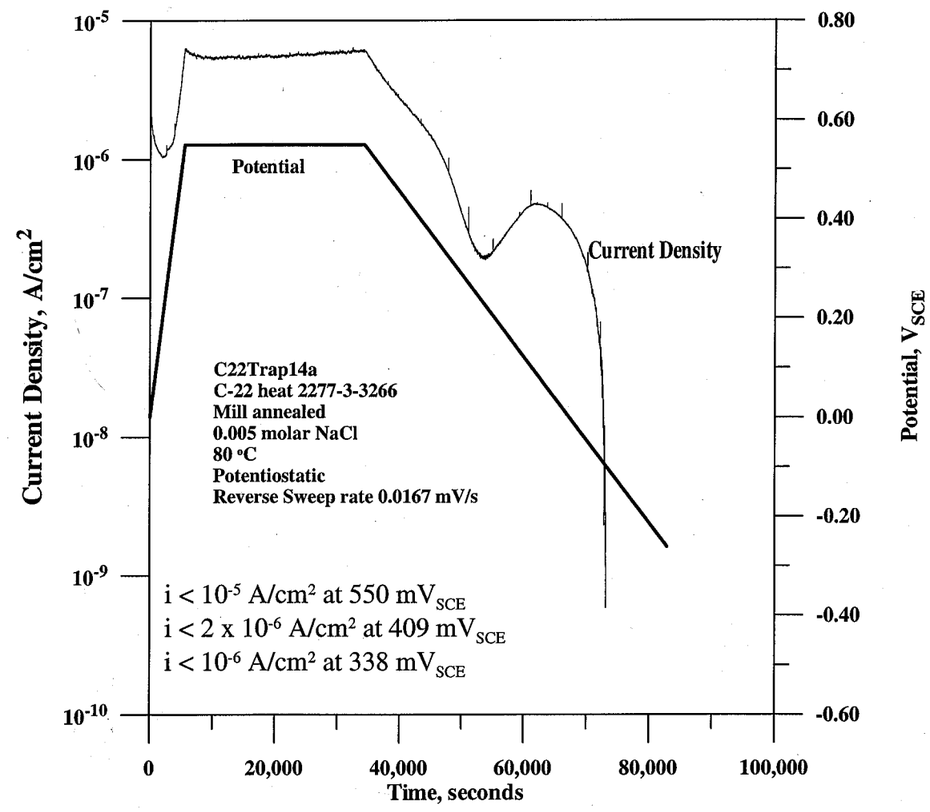

To Page No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/1/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver:	Snap-on USA **Cal:** 9/3/04	**SN:** 1001200319 **Due:** 3/3/05
Initial Weight: 41.03893g **Final Weight:** 41.03844g	**Model:** Sartorius Genius **Cal:** 11/10/04	**SN:** 12809099 **Due:** 5/10/05

Solution: .005M NaCl
.588g NaCl Lot: 041475
+ DI to 2L

Reagents measured with	**Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05	**SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05
Initial pH: 5.945 **Final pH:** 6.409	**Model:** Orion EA 940 **Cal:** 7/21/04 **pH Probe:** #13-620-296	**SN:** 2330 **Due:** 7/21/05 **SN:** 4079126
Test Temperature: 80°C	**Measured with Hg Thermometer** **Cal:** 01/07/05	**SN:** E98-191 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −.439 V_{SCE} **Ept:** +.024 V_{SCE}	**Model:** Keithley 614 **Cal:** 12/2/04	**SN:** 467374 **Due:** 12/2/2005
Potentiostat: Solartron 1480		**SN:** 00240551

DATA FILE: C-22 Trap 14b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Mild surface staining.
* Repolish for further testing.

To Page No.

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/1/05

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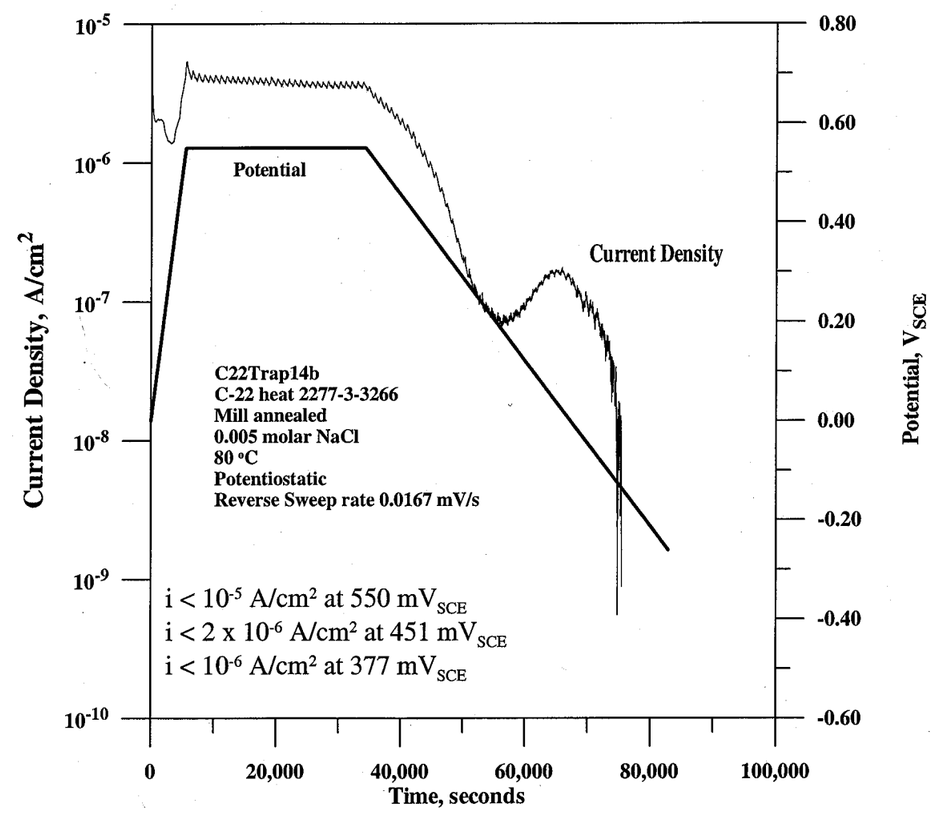

To Page No.

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/1/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 40.96545g **Final Weight:** 40.96474g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: .01 M NaCl
1.168 NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.844 **Final pH:** 6.617 **Model:** Orion EA 940 **Cal:** 7/21/04 **Due:** 7/21/05 **pH Probe:** #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **Cal:** 10/14/04 **SN:** 323007 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −.211 V_{SCE} **Ept:** +.054 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 15a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No surface corrosion.
Surface staining.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/2/05

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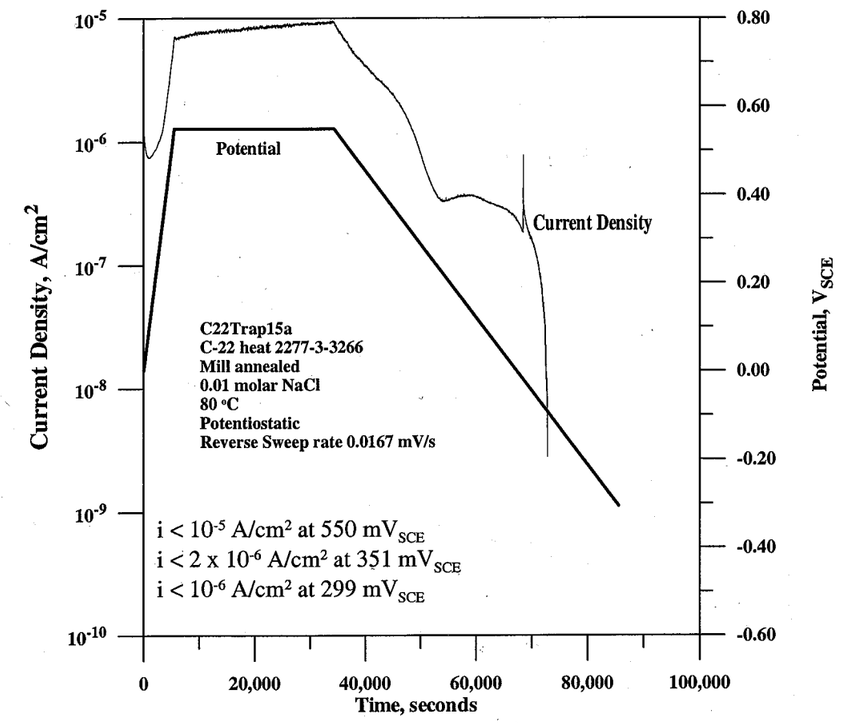

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/2/05

From Page No.____

POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 40.99832g **Final Weight:** 40.99740g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: .01 M NaCl
1.168g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.709 **Final pH:** 6.646 **Model:** Orion EA 940 **Cal:** 7/21/04 **Due:** 7/21/05 **SN:** 2330
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80° C **Measured with Hg Thermometer** **Cal:** 01/07/05 **SN:** E98-191 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −.443 V_{SCE} **Ept:** +.143 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 15b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Surface staining.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/2/05

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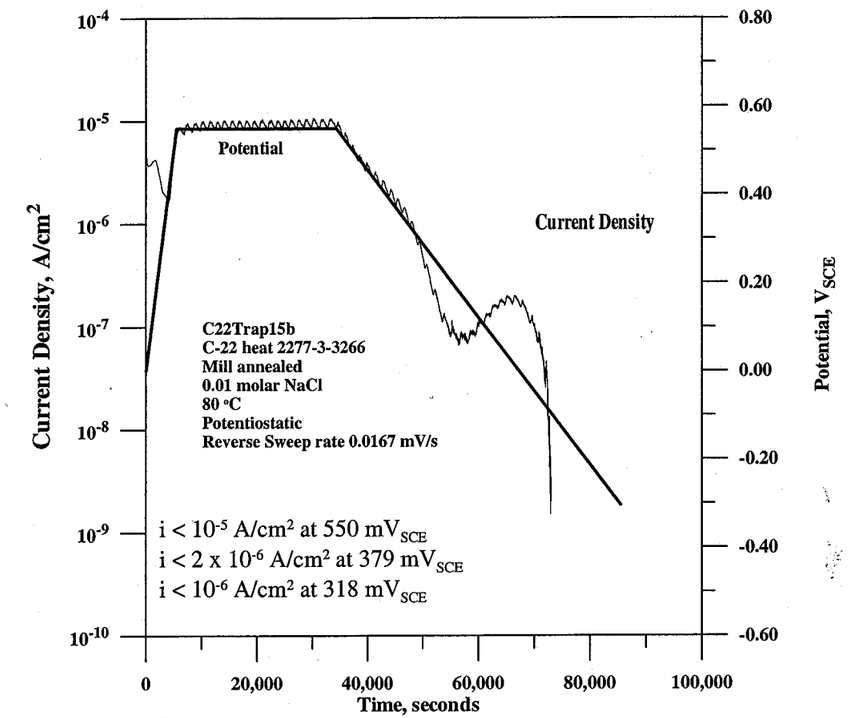

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/2/05

From Page No.____

POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 41.14821g **Final Weight:** 41.14718g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: 0.05 M NaCl
5.840g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 6.331 **Final pH:** 6.929 **Model:** Orion EA 940 **Cal:** 7/21/04 **pH Probe:** #13-620-296 **SN:** 2330 **Due:** 7/21/05 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **Cal:** 10/14/04 **SN:** 323007 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: −.231 V_{SCE} **Ept:** +.247 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 16a

Number of Crevice Corrosion Sites: 0/24 (24 max.)

No crevice corrosion.
Surface Staining.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/3/05

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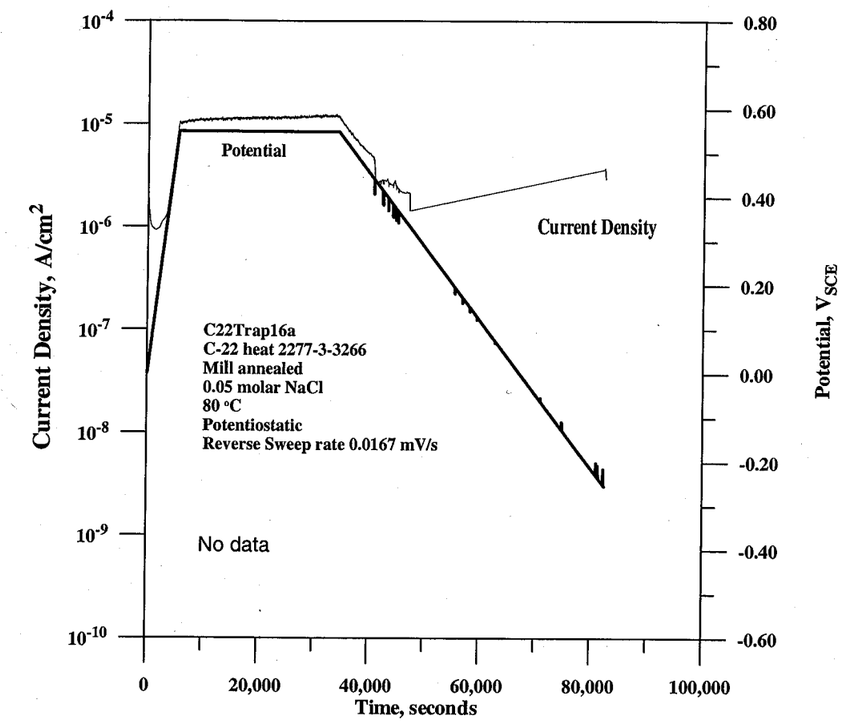

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/3/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.05273 g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.05172 g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.05M NaCl
5.841g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 **Due:** ~~1/15/05~~ 7/14/05
SBY 3/25/05 SBY 3/25/05

Initial pH: 6.396 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.133 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -.330 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: -.145 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 16b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Surface staining.
* Repolish for further testing.

Additional test (16c) was run on pg. 84.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/3/05

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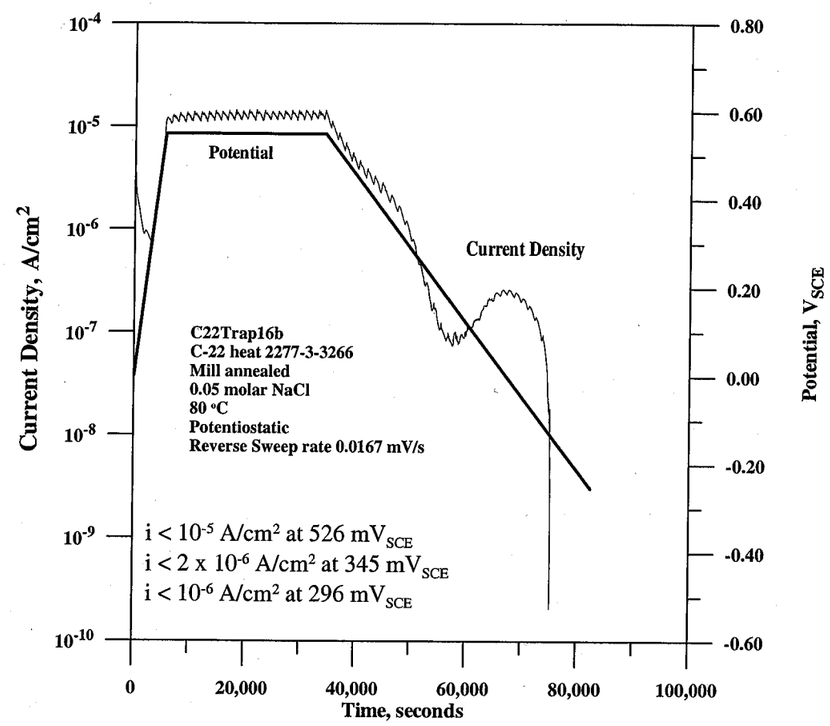

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/3/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 41.09846g **Final Weight:** 41.09723g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: 0.1M NaCl
11.686g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.757 **Final pH:** 7.223 **Model:** Orion EA 940 **Cal:** 7/21/04 **Due:** 7/21/05 **SN:** 2330
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **Cal:** 10/14/04 **SN:** 323007 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: -.465 V_{SCE} **Ept:** +.135 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 17a

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Surface staining.
* Repolish for further testing.
Additional test (17c) was run on pg. 86.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/4/05

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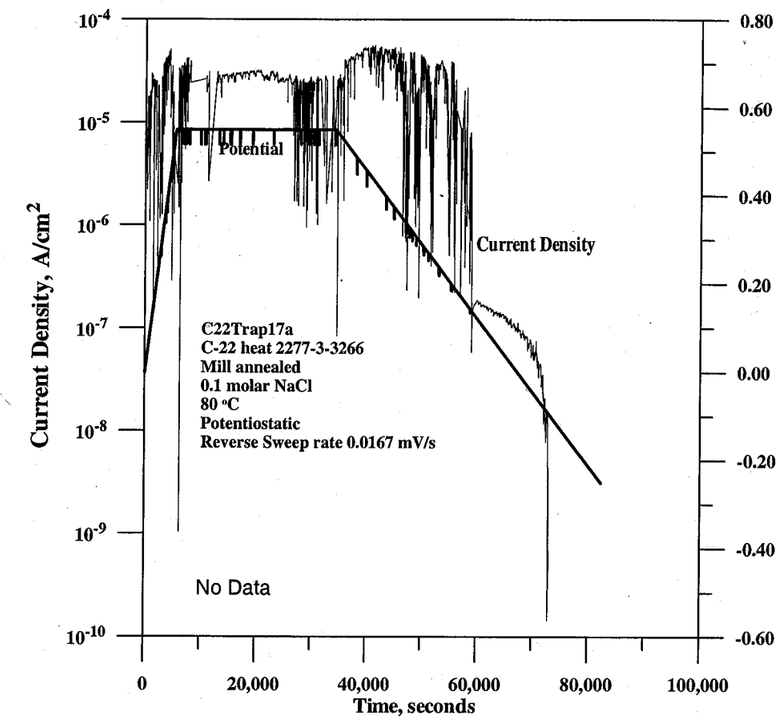

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/4/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 40.97913 g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 40.97784 g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.1M NaCl
11.689 g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 6.083 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.191 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −.582 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: −.237 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 17b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Surface staining.
* Repolish for further testing.

Additional test was run pg. 86 (17c).

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/4/05

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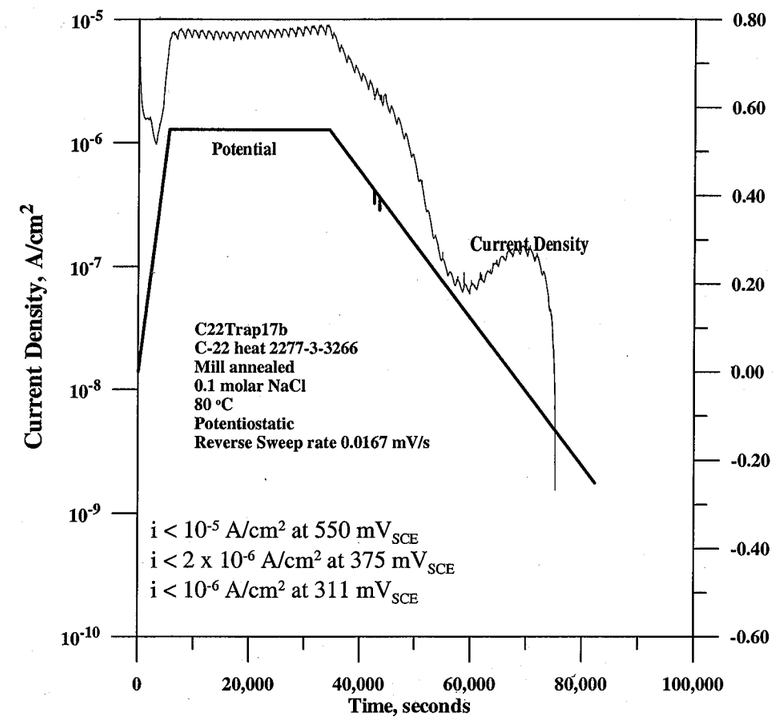

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/4/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 41.22293g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.22090g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.5M NaCl
58.43g NaCl Lot: 041475
+DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~4/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 5.778 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.909 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** 323007
Cal: 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: -.411 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: +.084 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 18a

Number of Crevice Corrosion Sites: 2 /24 (24 max.)

Crevice corrosion present.
Dull tint staining.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/8/05

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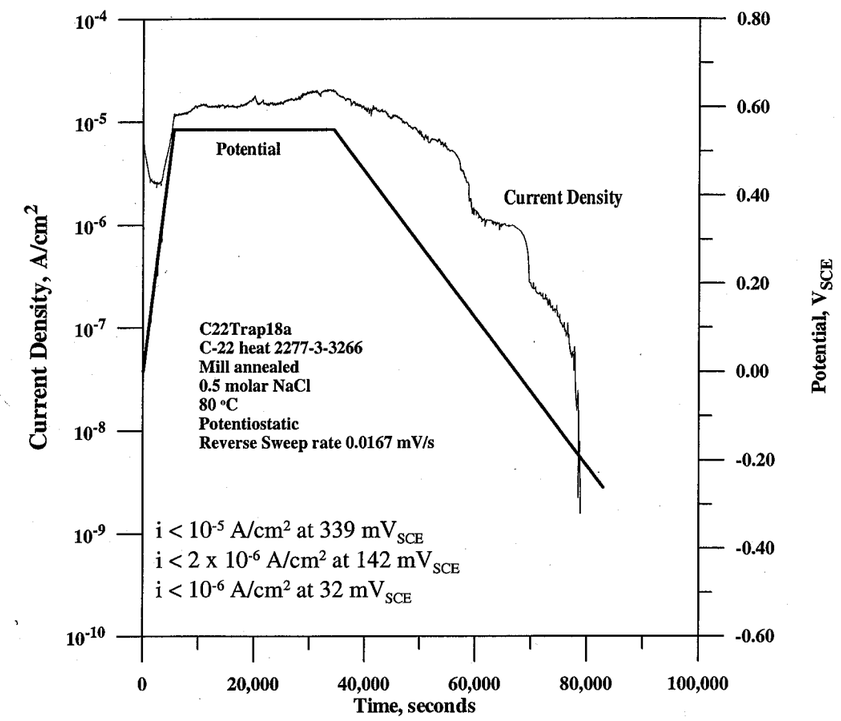

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/8/05

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Book No. TITLE

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.23864 g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.23769 g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 0.5 M NaCl
58.44g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 **Due:** ~~1/15/05~~ 7/14/05
SBY 3/25/05 SBY 3/29/05

Initial pH: 5.914 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.655 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -.413 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: -.148 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 18b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Slight gold tint staining.
*Repolish for further testing.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/8/05

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Project No.
Book No.

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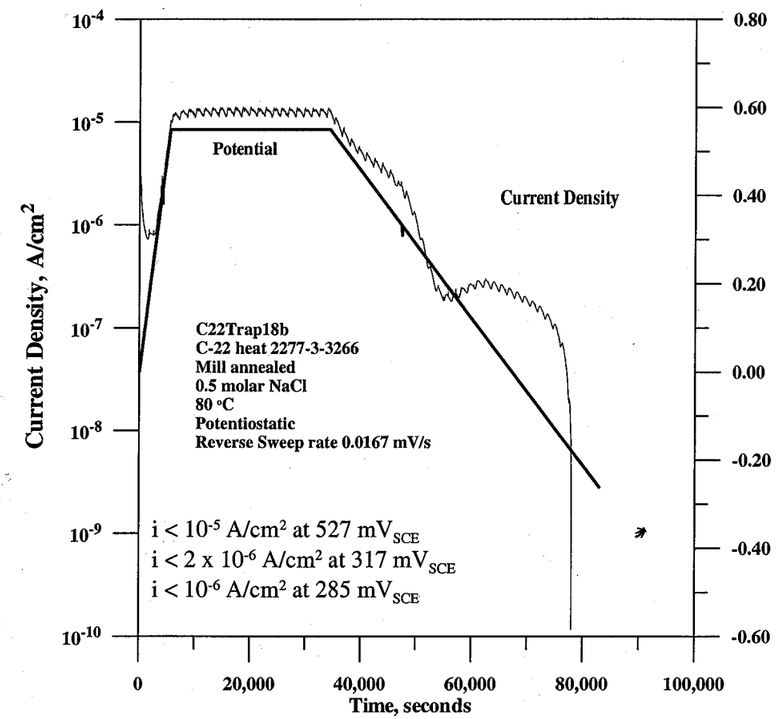

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/8/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 40.63122g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 40.62561g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 1M NaCl
116.88g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 **Due:** ~~1/15/05~~ 7/14/05
SBY 3/25/05 SBY 3/25/05

Initial pH: 6.326 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.972 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** 323007
Cal: 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: -.451 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: -.161 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 19a

Number of Crevice Corrosion Sites: 6 /24 (24 max.)

Crevice corrosion present.
Dull tint staining.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/9/05

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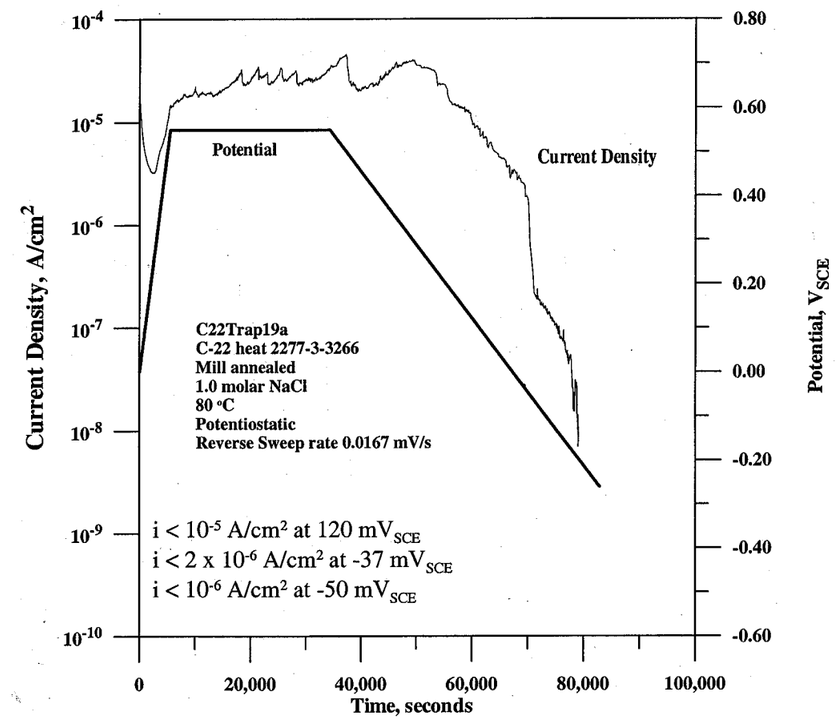

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/9/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 40.90240 g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 40.90203 g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 1M NaCl
116.87g NaCl Lot: 041475
+DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 **Due:** ~~1/15/05~~ 7/14/05
SBY 3/25/05 SBY 3/25/05

Initial pH: 6.435 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.933 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -.483 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: -.304 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 19b

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevise corrosion.
Staining and crystal formation.
* Repolish for further testing.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/9/05

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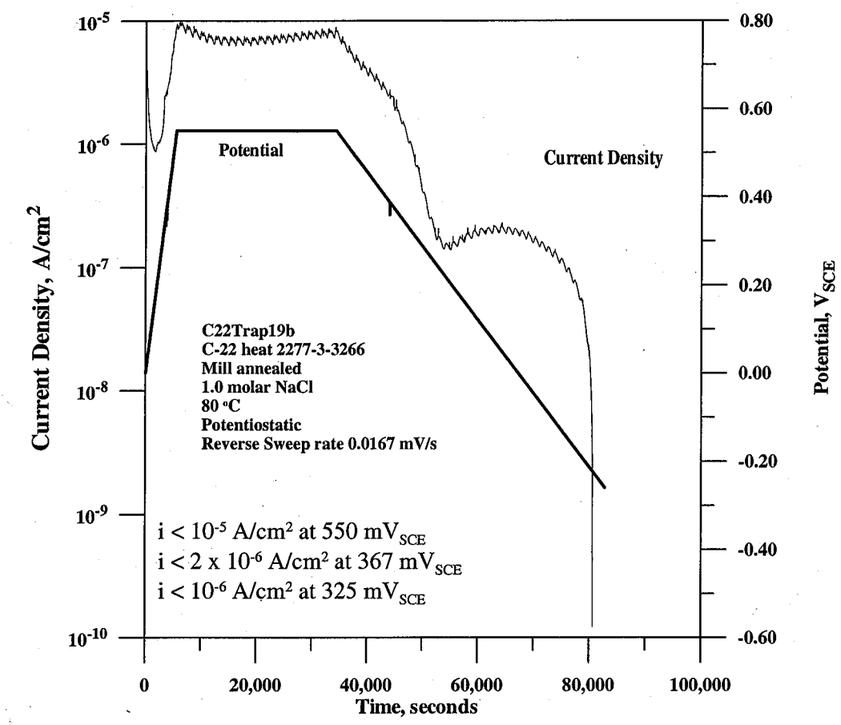

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/9/05

From Page No.____

POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 40.82378g **Final Weight:** 40.79159g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: 4M NaCl
467.52g NaCl Lot: 041475
+ DI to 2L

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~4/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 6.612 **Final pH:** 7.609 **Model:** Orion EA 940 **Cal:** 7/21/04 **pH Probe:** #13-620-296 **SN:** 2330 **Due:** 7/21/05 **SN:** 4079126

Test Temperature: 80° C **Measured with Hg Thermometer** **Cal:** 10/14/04 **SN:** 323007 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: -.354 V_{SCE} **Ept:** -.317 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 20a

Number of Crevice Corrosion Sites: 16/24 (24 max.)

Crevice corrosion present.
Dull tint staining.

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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/10/05

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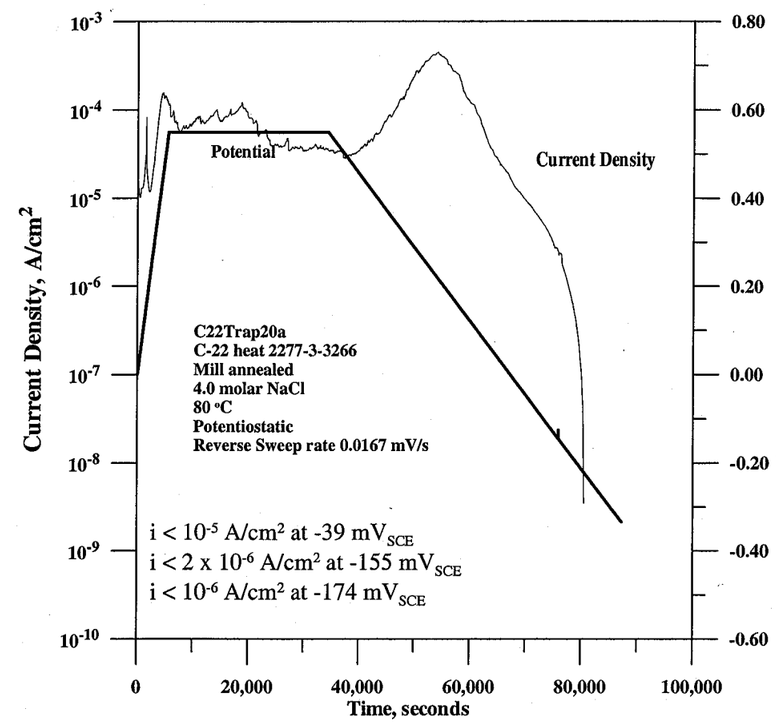

To Page No.____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/10/05

From Page No.____

POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319
Cal: 9/3/04 **Due:** 3/3/05

Initial Weight: 41.19850g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.19347g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 4M NaCl
467.52g NaCl Lot: 041475

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 **Due:** ~~1/15/05~~ 7/14/05
SBY 3/25/05 SBY 3/25/05
Initial pH: 8.268 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.860 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -.319 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: -.328 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 20b

Number of Crevice Corrosion Sites: 6/24 (24 max.)

Crevice corrosion present.
Dull tint staining.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/10/05

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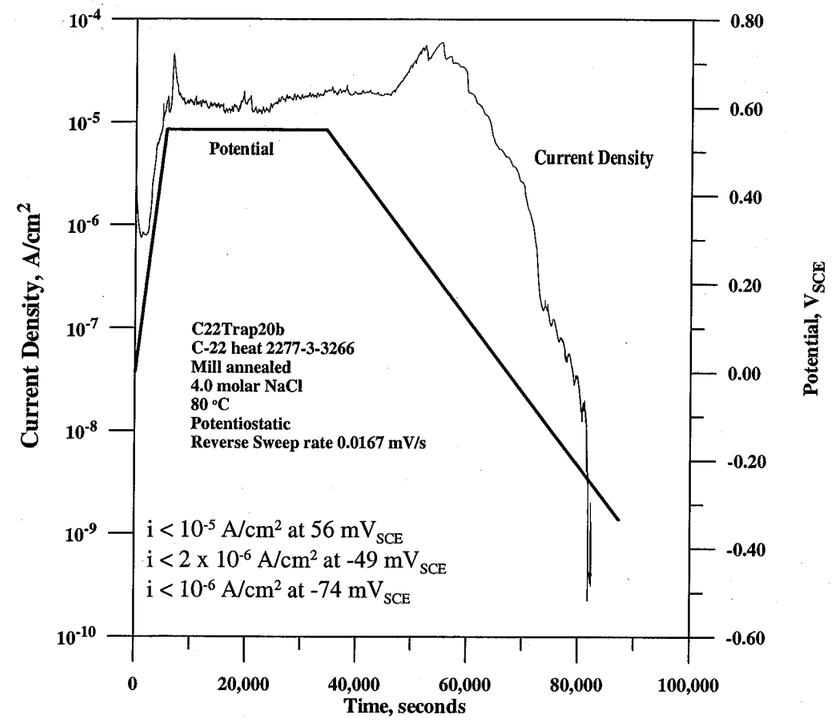


To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/10/05

From Page No.____

POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 38.96262g **Final Weight:** 38.95997g **Model:** Sartorius Genius **Cal:** 11/10/04 **SN:** 12809099 **Due:** 5/10/05

Solution: .1M NaCl
11.689g NaCl Lot: 042966
+DI to 2L

Reagents measured with **Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05 **SN:** 2883 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 6.223 **Final pH:** 7.532 **Model:** Orion EA 940 **Cal:** 7/21/04 **Due:** 7/21/05 **SN:** 2330
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80°C **Measured with Hg Thermometer** **Cal:** 01/07/05 **SN:** E98-191 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -400 V_{SCE} **Ept:** +141 V_{SCE} **Model:** Keithley 614 **Cal:** 12/2/04 **SN:** 467374 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 17c

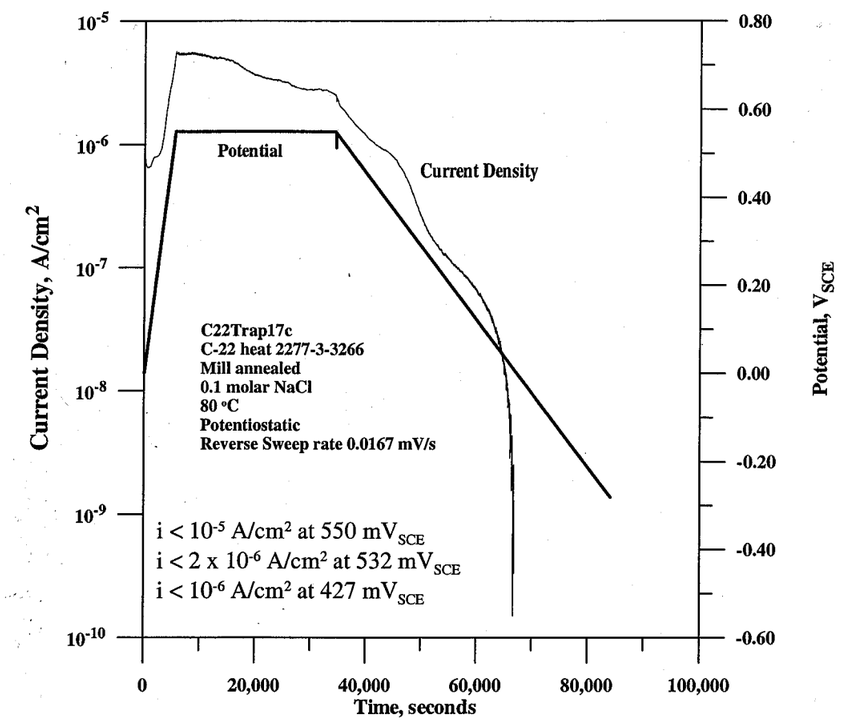
Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Light surface staining.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/15/05

From Page No.____



To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/15/05

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POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver:	Snap-on USA **Cal:** 9/3/04	**SN:** 1001200319 **Due:** 3/3/05
Initial Weight: 39.90460g **Final Weight:** 39.90056g	**Model:** Sartorius Genius **Cal:** 11/10/04	**SN:** 12809099 **Due:** 5/10/05
Solution: 0.5M NaCl 58.45g NaCl Lot: 042966 + DI to 2L		
Reagents measured with	**Model:** OHAUS **Cal:** ~~7/15/04~~ 1/14/05 SBY 3/25/05	**SN:** 2883 **Due:** ~~4/15/05~~ 7/14/05 SBY 3/25/05
Initial pH: 6.104 **Final pH:** 6.127	**Model:** Orion EA 940 **Cal:**7/21/04 **pH Probe:** #13-620-296	**SN:** 2330 **Due:** 7/21/05 **SN:** 4079126
Test Temperature: 80°C	**Measured with Hg Thermometer** **Cal:**10/14/04	**SN:** 323007 **Due:**10/14/2005
Counter Electrode: Platinum Flag		
Reference Electrode: Fisher 13-620-52		**SN:** 4028036
Gas: 99.999% Nitrogen Gas		
Ecorr: -.352 V_{SCE} **Ept:** -.406 V_{SCE}	**Model:** Keithley 614 **Cal:** 12/2/04	**SN:** 467374 **Due:**12/2/2005
Potentiostat: Solartron 1480		**SN: 00240551**

DATA FILE: C-22 Trap 18c

Number of Crevice Corrosion Sites: 1 /24 (24 max.)

Crevice corrosion present.
Dull tint staining.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/17/05

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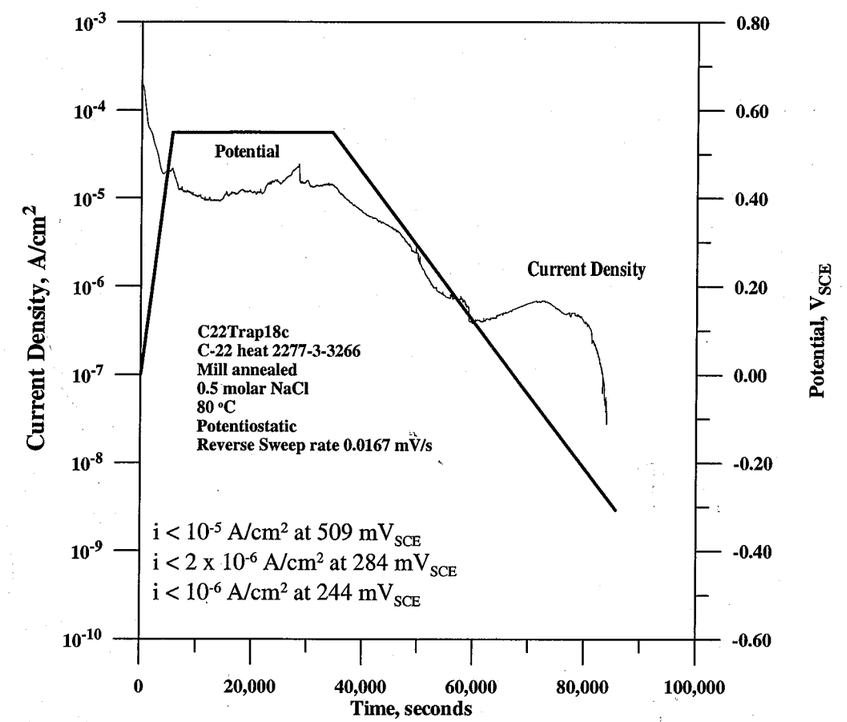

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/17/05

From Page No.

POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **Cal:** 9/3/04 **SN:** 1001200319 **Due:** 3/3/05

Initial Weight: 39.86500g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 39.86089g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 1M NaCl
116.89g NaCl Lot: 042966
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 6.716 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.845 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80° C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: −.360 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: −.508 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 19c

Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Slight gold staining.
* Repolish for further testing.

To Page No.

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/17/05

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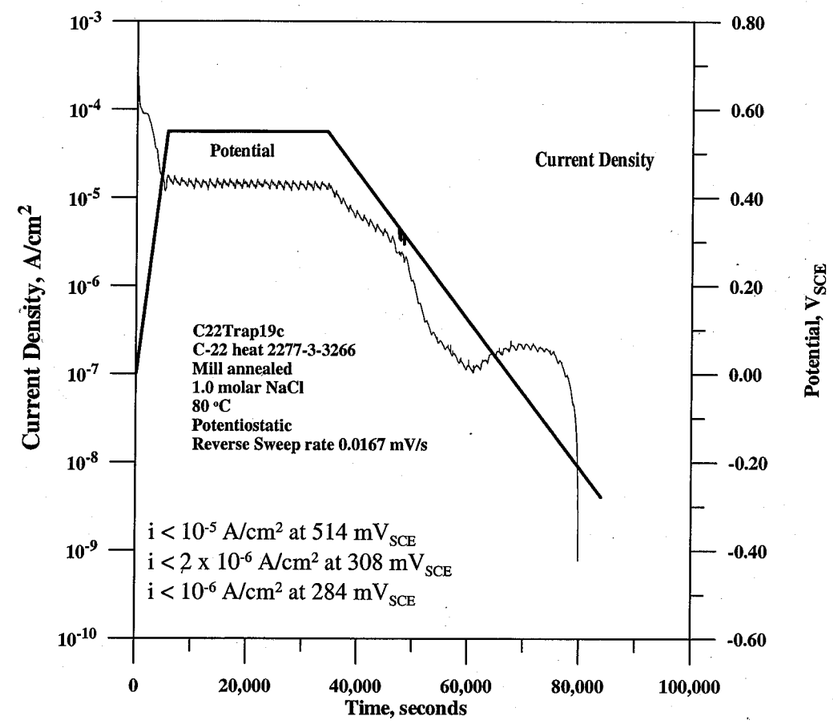


To Page No.

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/17/05

From Page No.____

POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 40.98996g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 40.989823g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 1M NaCl
116.87g NaCl Lot: 042966
+DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~4/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 6.210 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.402 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 80° C **Measured with Hg Thermometer** **SN:** E98-191
Cal: 01/07/05 **Due:** 07/07/05

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-51 **SN:** 7282317

Gas: 99.999% Nitrogen Gas

Ecorr: -.273 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: +.115 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 19d

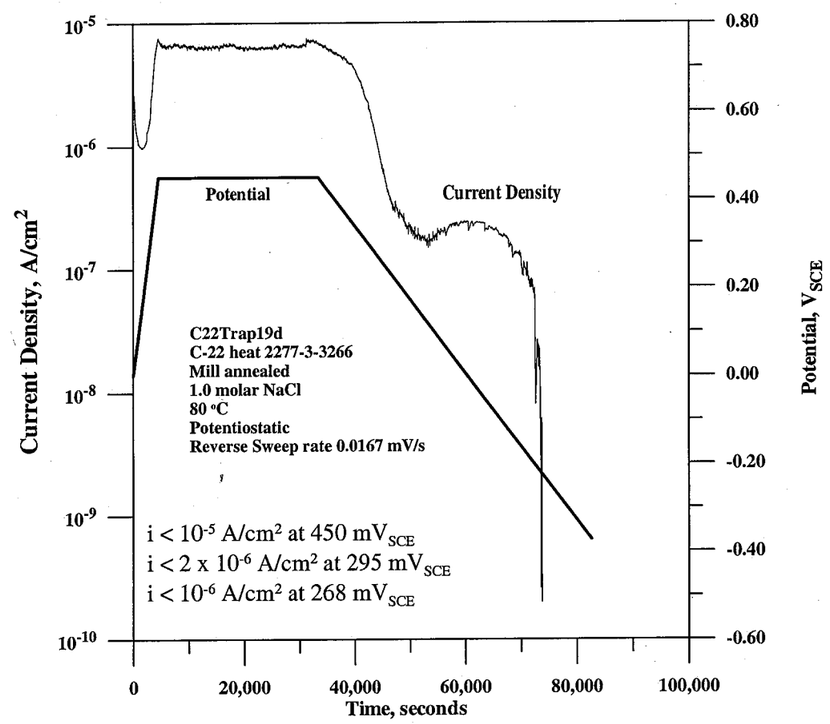
Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Slight gold tint staining.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/22/05

From Page No.____



To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/22/05

From Page No.____

POTENTIAL SCAN AND HOLD

Objective: Same as page 1.

Alloy / Heat No. : C-22 Heat# 2277-3-3266

Specimen Preparation: Specimen machined to dimensions specified in CNWRA Drawing. Specimen surfaces polished to 600 Grit finish using SiC paper. Specimen cleaned in acetone and rinsed in DI water. PTFE crevice forming washers attached to specimen using insulated C-276 hardware. Hardware Torgue to 50 in-oz.

Torque Screwdriver: Snap-on USA **SN:** 1001200319 **Cal:** 9/3/04 **Due:** 3/3/05

Initial Weight: 41.12335g **Model:** Sartorius Genius **SN:** 12809099
Final Weight: 41.12370g **Cal:** 11/10/04 **Due:** 5/10/05

Solution: 4M NaCl
467.52g NaCl Lot: 042966
+ DI to 2L

Reagents measured with **Model:** OHAUS **SN:** 2883
Cal: ~~7/15/04~~ 1/14/05 SBY 3/25/05 **Due:** ~~1/15/05~~ 7/14/05 SBY 3/25/05

Initial pH: 8.416 **Model:** Orion EA 940 **SN:** 2330
Final pH: 7.988 **Cal:** 7/21/04 **Due:** 7/21/05
pH Probe: #13-620-296 **SN:** 4079126

Test Temperature: 60° C **Measured with Hg Thermometer** **SN:** 323007
Cal: 10/14/04 **Due:** 10/14/2005

Counter Electrode: Platinum Flag

Reference Electrode: Fisher 13-620-52 **SN:** 4028036

Gas: 99.999% Nitrogen Gas

Ecorr: -.326 V_{SCE} **Model:** Keithley 614 **SN:** 467374
Ept: -.323 V_{SCE} **Cal:** 12/2/04 **Due:** 12/2/2005

Potentiostat: Solartron 1480 **SN:** 00240551

DATA FILE: C-22 Trap 10c

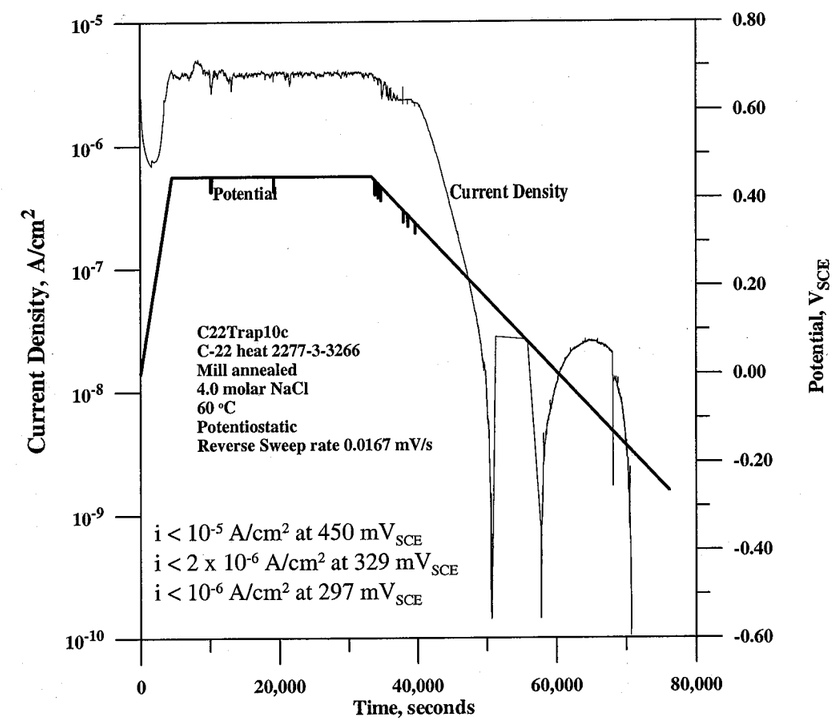
Number of Crevice Corrosion Sites: 0 /24 (24 max.)

No crevice corrosion.
Slight gold tint staining.
* Repolish for further testing.

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/23/05

From Page No.____



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Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by Steve Young	2/23/05

Project No._____
Book No._____ TITLE_____

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Continued Testing
IN Notebook #697

I have reviewed this scientific notebook and find it in compliance with QAP-001. There is sufficient information regarding procedures used for conducting tests, acquiring and analyzing data so that another qualified individual could repeat the activity.

Vijay Jain 4/14/05

To Page No._____

Witnessed & Understood by me,	Date	Invented by	Date
		Recorded by	2/24/05

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 669

Document Date:	03/31/2005
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" □ Sensitive □"Non-Sensitive - Copyright" □ Sensitive - Copyright
Date Generated:	04/10/2005
Operating System: (including version number)	Windows NT
Application Used: (including version number)	Excel 97
Media Type: (CDs, 3 1/2, 5 1/4 disks, etc.)	1 - CD
File Types: (.exe, .bat, .zip, etc.)	xls, dat, cor, dat, grf
Remarks: (computer runs, etc.)	Media contains the electronic data files.