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Scientific Notebook No. 578: Department of Energy (DOE) Alloy 22 Repassivation Tests -Continuation of Scientific Notebook No. 540 (08/08/2002 through 04/03/2003)

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## LABORATORY NOTEBOOK

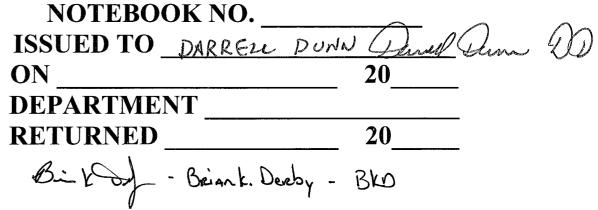
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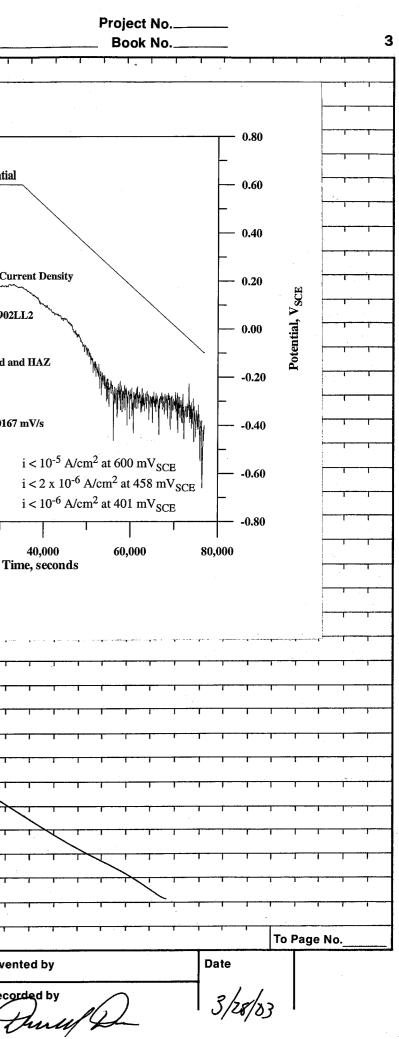


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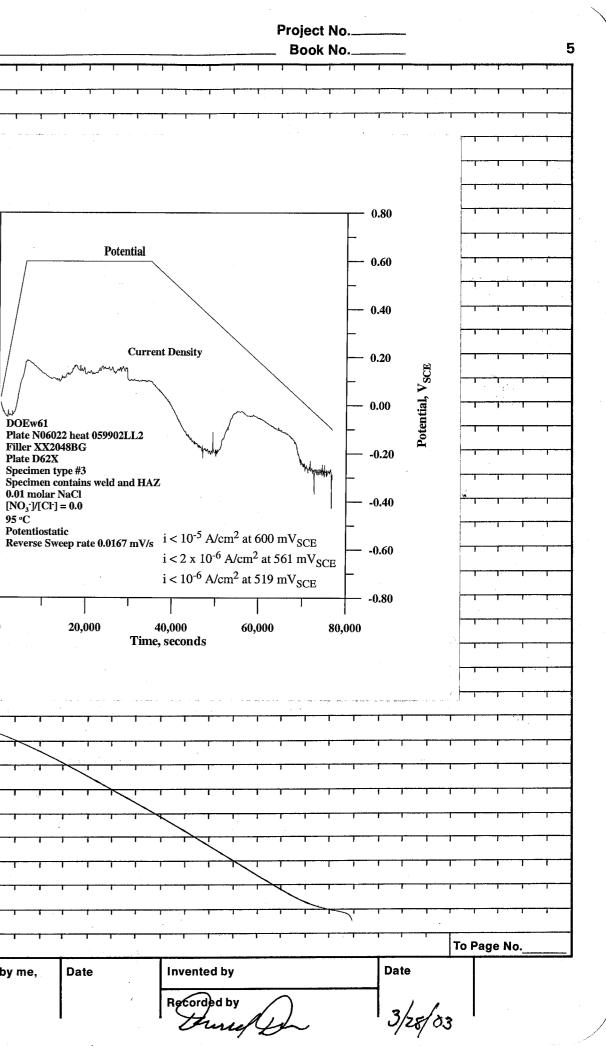
Project No... Book No. From Page No. Continues Testing from Notebook Initial Scientific Notebook Entry for Department of Energy Alloy 22 Localized Corrosion Resistance Tests Title: DOE Alloy 22 Repassivation Tests. Tests Preformed by: Darrell S. Dunn, Div 20; Brian Derby, Div. 18 **Objectives:** Determine the effect of fabrication processes on the localized corrosion susceptibility of Alloy 22. Equipment: Laboratory oven for exposure of test specimens at 600 to 1125 °C. Thermocouple and thermocouple meter. Keithley 614/617. Solartron 1287 Potentiostat and CorrView Software or equivalent, Electrochemical test cell. Materials: Base alloy: Alloy N06022 Alleghany Ludlum heat 059902LL2 welded (GTAW) using Inco Alloys 622 heat XX2048BG filler. Other materials and heats to be added and identified prior to testing. Specimen specifications: Specimens will be equivalent to 20.01402.571.006 rev. 1 unless otherwise specified. Location of specimens with respect to weld will be identified. Measurement Parameters: Temperature and time of exposure, Potential and Current of specimen during test. Required level of accuracy: Temperature of thermal exposure  $\pm$  10 °C Temperature during corrosion tests  $\pm 2$  °C, Time of exposure  $\pm 1$  minute, Potentials  $\pm 1$  mV, Current  $\pm 0.1$  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. To Page No. Witnessed & Understood by me, Date Invented by Date Recorded by

Project No.\_ 2 Book No.\_ TITLE From Page No. Potenti REPASSINA Alloy C-22 Ob Jer DOZ Alloy Allea N06022-Specimen s m 05990211 fillen-XX 204856 Specime- Type 3 622 heat plo Material 600 Grit polishes Fini • Chri Attaches キ Pas A+ 50 In-07 Usia 6104 Was 34.31025 Stan 34.30972 Enc Sol 0.001 M Nuc 0.119 No.CI Lot# 027878 + DI wola To 2000 2000 Fishen OH Stor 5.832 Hecunct 950 SNE # ρH Eno 70 2291257 P 41108 F<u>lec</u> PT Fb. 10000 5~# Reterenc Fishe 13-620-52 6249092 498-170 H Tempera 98 Thermomi Econ SNT -337mu 614 1015/26 + 340 m <u>nue</u> Solot. 99.999 Desega 60 1/24 Examination: No Crevice Connosion feet Crevice Specimon WAShe Surfaces of mile stringing of facial Sper To Page No. DATS DOF-W60 Witnessed & Understood by me, Date Invented by Date **Recorded by** 3/27/03 Bi

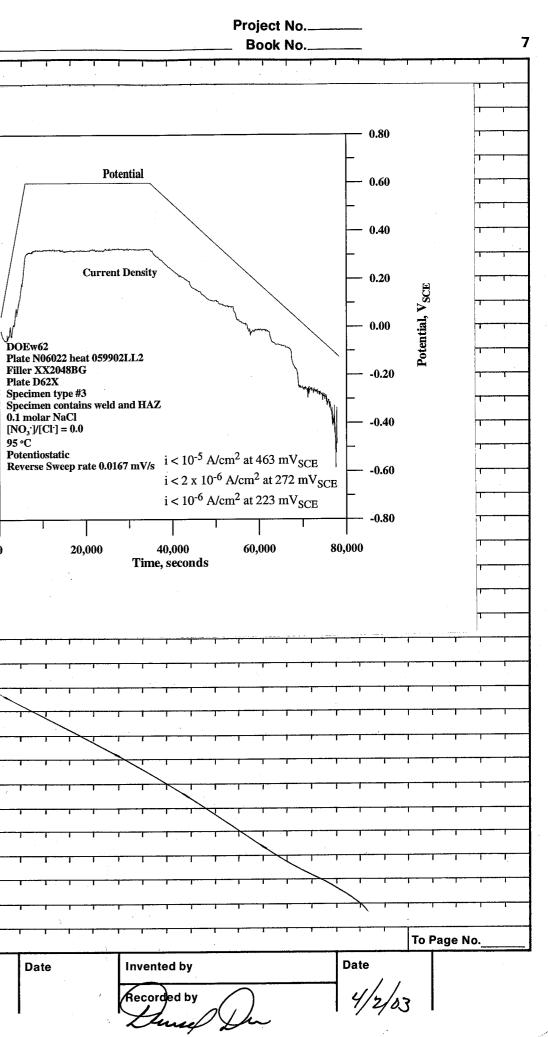
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Project No.\_ Book No.\_\_ TITLE TITLE. Alla Repassiva Þ From Page No. From Page No. C-2 # Objectiv See Pð Allow Alley Specimen DOF N06022 0599626 Al Sneuman 122 XX 2NIFBU pe 3 10<sup>-2</sup>  $\zeta_{\omega 2}$ Materia GRit 2 600 polishes Proto Car Atta 50 Potential vice LUAS T 10<sup>-3</sup> -<u>5</u>~# 3/6/02 139072 Ove 9 16102 10<sup>-4</sup> 33.96390 Genic Start 1 = SANTOR, OUS 1250 9099 A/cm<sup>2</sup> 33.96217 Eno ut 10<sup>-5</sup> rrent Density, Solution 0.01 m NuC 10<sup>-6</sup> Lot # 027878 N.Cl 170. DOEw61 Plate N06022 heat 059902LL2 Filler XX2048BG + 0+ 7.000 . 10-7 Plate D62X Specimen type #3 Specimen contains weld and HAZ HQ star 5.715 0.01 molar NaCl [NO<sub>3</sub><sup>-</sup>]/[Cl<sup>-</sup>] = 0.0 95 °C 950 m 10<sup>-8</sup> 241257 Potentiostatic 10<sup>-9</sup> <u>s</u>nt -# More G 16120 10-10  $\wedge$ DY Fla DVI 20,000 SN# Q. 13-620-52 Fishe 625-1439 Cal Thermon Tra 60.387 5/10/07 OUL 5/4/03 Ecom 64 - 311 mu SN 5 N704624 5/26/03 +87~ Ove 0 Sh 99.999 JAI DATE Specimen Examina Crevice Concosion Crevice worke stain m DATA DUE\_W61 To Page No. Date Invented by Date Witnessed & Understood by me, Witnessed & Understood by me, Date 3/07/03 **Recorded by** Å:



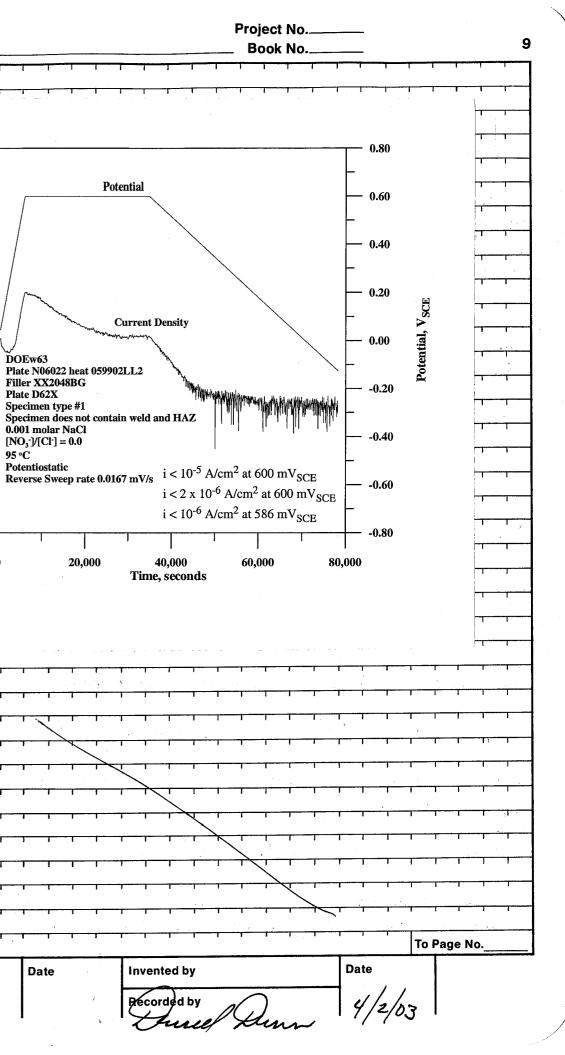
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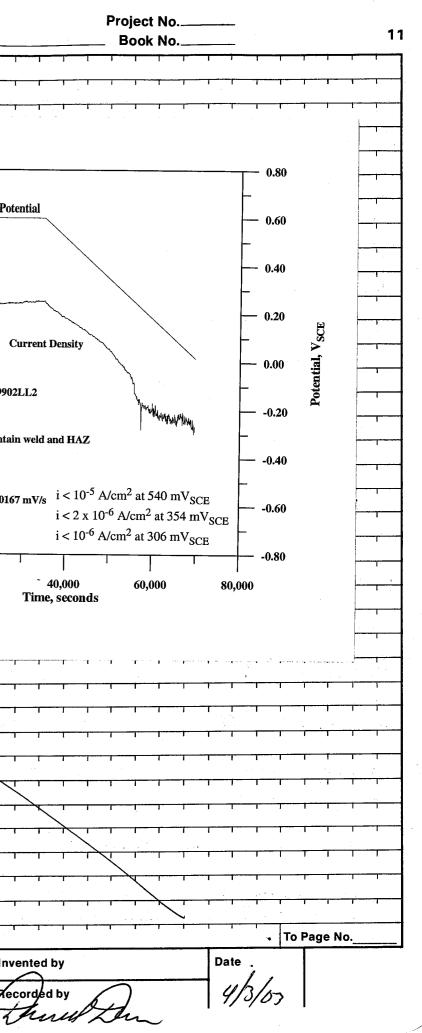
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Project No. 8 Book No.\_\_ TITLE TITLE. Repassivation Potes From Page No. Alloy C-22 From Page No. Ŧ obJec UO 10<sup>-2</sup> Alleyhany N06022-Alley Specimen DOE Heat 059902U . 10 10<sup>-3</sup> XX 204886 filler -Inco Allon Mig 622 Specimen Doesn? Materio Gart PTFF Certice Can 600 10<sup>-4</sup> Peto 6104 5N# 139072 washers Joi AS Current Density, A/cm<sup>2</sup> 10<sup>-5</sup> en# 12809099 Sta 34.17980 34. 179750 +: Ego 10<sup>-6</sup> DOEw63 Solution Plate N06022 heat 059902LL2 Filler XX2048BG 0.001 M NuC 10-7 Lof # 027578 D. 119. NUCL Plate D62X 79 + 2000 0 0.001 molar NaCl [NO<sub>3</sub><sup>-</sup>]/[Cl<sup>-</sup>] = 0.0 10<sup>-8</sup> 95 °C pHg Stan 3340 Fishen Potentiostatic 9.50 ମ୍ୟ SN 100 Reverse Sweep rate 0.0167 mV/s - 1 10-9 #-13-620-296 sut 'nΗ 2291257 P 10<sup>-10</sup> SNOT I 10120 Qo. 20,000 Coun Fla Reterence SNI F.she 13-620-52 6751420 1emperor 00 hundre Ke:th Econ 474m รณ์ 5 0764974 Ç0 1261 93 501 99. .999 Deserstes 0/24 Specim N. Framination 104 ALISIAN Surface Stainin m/2 DOF\_W63 To Page No. DAAA Witnessed & Understood by me, Date Invented by Date Witnessed & Understood by me, Date 4 Recorded by /65



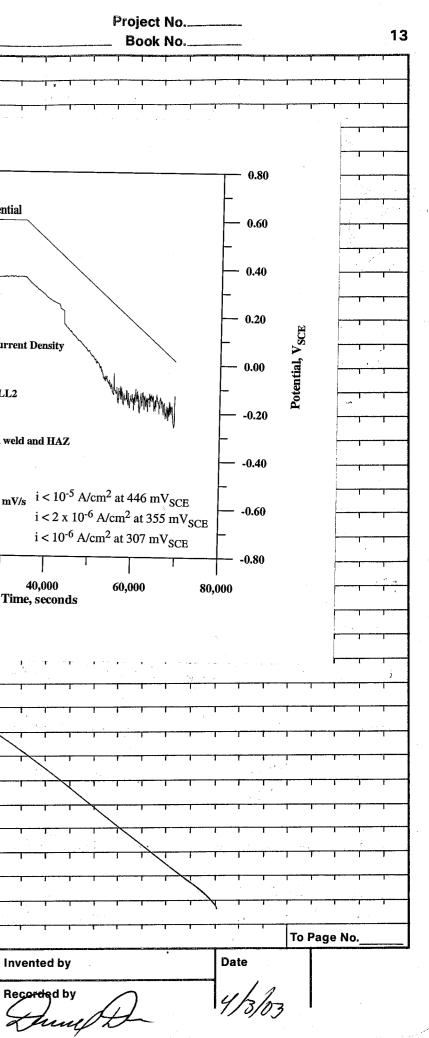
Project No.\_\_ 10 Book No.\_ TITLE From Page No. Potential Repassivation 40 Alloy 0-22 Ay FI ObJec SAME Allegh Allow DOE Specime No6022-Hest 059992662 An Specimer Row 2 Inco 622 head XK2048BG fillen -100 1 TOP - with Docen Finish 2 PTFF Materi Get polishes 600 inshers Attached SN# # 6104 Proto Carvie 139072 Due Ca 9/6/07 34.23934 stan Genivs SARtonious 12809099 SN 34.23847 Enc Kulo2 o. Din Nucl 1. 171 , Nocl 401 # 027878 + PI unter To 2000 ml 20000 SW 3340 pH start 6.168 Fishen 850 met 5x# 2291257 PI 'PH 6.86 . 820 Eno = # <u>27</u>, Ht, E6+ 6 morel 4100 Co PT Flo 50 # 02 49197 Retere -670-52 N# H98-170 Ca 950 5/10/02 DUL S Semocra Thermome 50 th Econ : keith le 614 5 -415m. 0704934 FAT 597 99.999 /0N Solit Deserati 1/24 feet of Examination : No Chevice Connoglan Carrice work Spermu milo stainin +:.+ ς, Secumen DOE- WEH To Page No. Data Witnessed & Understood by me, Date Invented by Date 4/3/03 Recorded by

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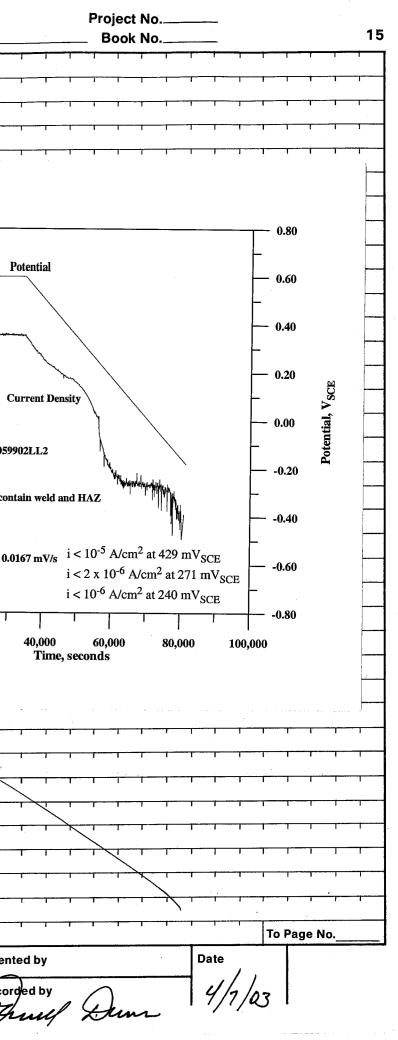
Project No. 12 Book No. TITLE From Page No. Repassivo Alloy C-22 '₽ See obsective: fr Alloy Alleyhan Specimon DOE N06022 -05990242 Inco Allor filler Lou Z 622 XX 204836 MID Decimin 2 PTFF Cintain Fin Dorsail m. 00 Gait polisheo Att. Aches st139017 Caevine Proto # 104 · ()col 3 Dise 0 103 34.28693 ston 2 Santonious 12509099 15/00 Die 5/15/03 34.27994 Eno 2 Solut: M Not 0.1 Naci 11.6840 627878 + PI 20000 5.894 מ 950 mete 3340 # 13-620-296 sn # 2291257 PL 480 Fishe Sw# 10/20 F Moor G Po 273 Cour Electabor Fla PT sn# Refin Fishen 13-620-52 6251434 sv # 00.387 55 5/ 10/02 QUE 5/10/03 cal - 494~ Eat -125m 6 99.999 % Sul esenatio 1/24 feet Examinati-Crevice Connosion Crevice Spein Staiplay on All surfaces of Specime Gob WAsher Data DOE W 65 To Page No. Witnessed & Understood by me, Date Invented by Date/ 4/3/03 Recorded by

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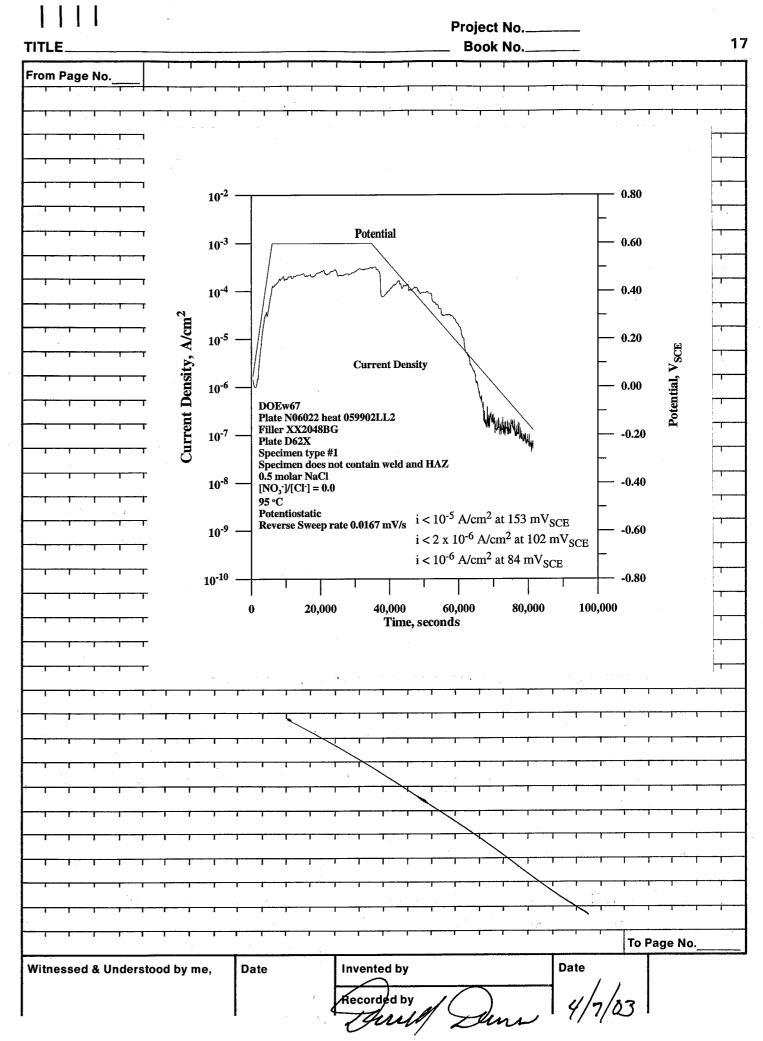


Project No.\_ 14 Book No.\_ TITLE From Page No. Potential A C-22 0ASSI ustion OPIEC DOE Allenharry Allor N)06022 <u>Specimen</u>. XX 204 8BG fillen heat 2 Bot 67.7 Inco Doc . PTFE 600 GRH Or = 610L oshers Attachen Crevi At 50 In-02 Usina 39072 Due 20 3 9 6/02 34.21146 Santoniu Genius 12809099 3 4- 21058 F 2 0.25 m NuC Ś 29.236, NuCl 60+# 927878 + DI water To 2000mls 950 meter 219 3340 .56 <u>چ</u>ر <del>م</del>ع 13-620-296 2291257 Pl probe sw#41108 # 273 G MOR PT Flac Electrone Courter Rete 13-620-52 SN SN # \*H94-170 Tempers -443 m Front 5/26/02 6764534 +39~ 5 26 03 0 99.999 5 Dralas Examination No Crevice Connosion Speum Colo + All Surfaces stainin Specime on 6 To Page No. DATA DOE-W66 Witnessed & Understood by me, Date Date Invented by **Recorded by** 414/03 1-10

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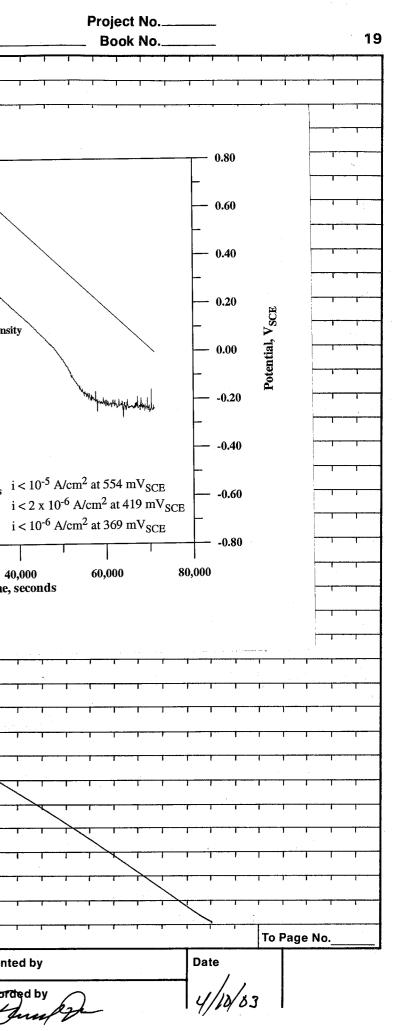


Project No.\_\_ 16 Book No. TITLE. From Page No. Potes Repassive tiup Alloy A # ObJect Specimen DOE Allo 051902112 NOLOZZ 622 heat Rou Allo filler Inco XX TAUVISG Specimon INDE JOR Moter Fini PTFF Doesn C Polisheo Prop Crevie 139072 9/6/0 DUC 34.28055 12809099 SAN Gen 510 15102 0. torias 22 85 34. 0.5 m Mrc Nucl 54.49 027878 + DI 2000 .079 950 340 े रु 27 Pla Ø H 0251434 -620-57 cm Derg 00-35-7 Dues hermon sit. -466 614 0704934 -200 99.595 /0 M Solat Amater feet Sycaime Crevio Examination Suptace Colo AIL To Page No. Darto DOF\_ W67 Witnessed & Understood by me, Date Invented by Date 4/4/03 **Recorded by** 

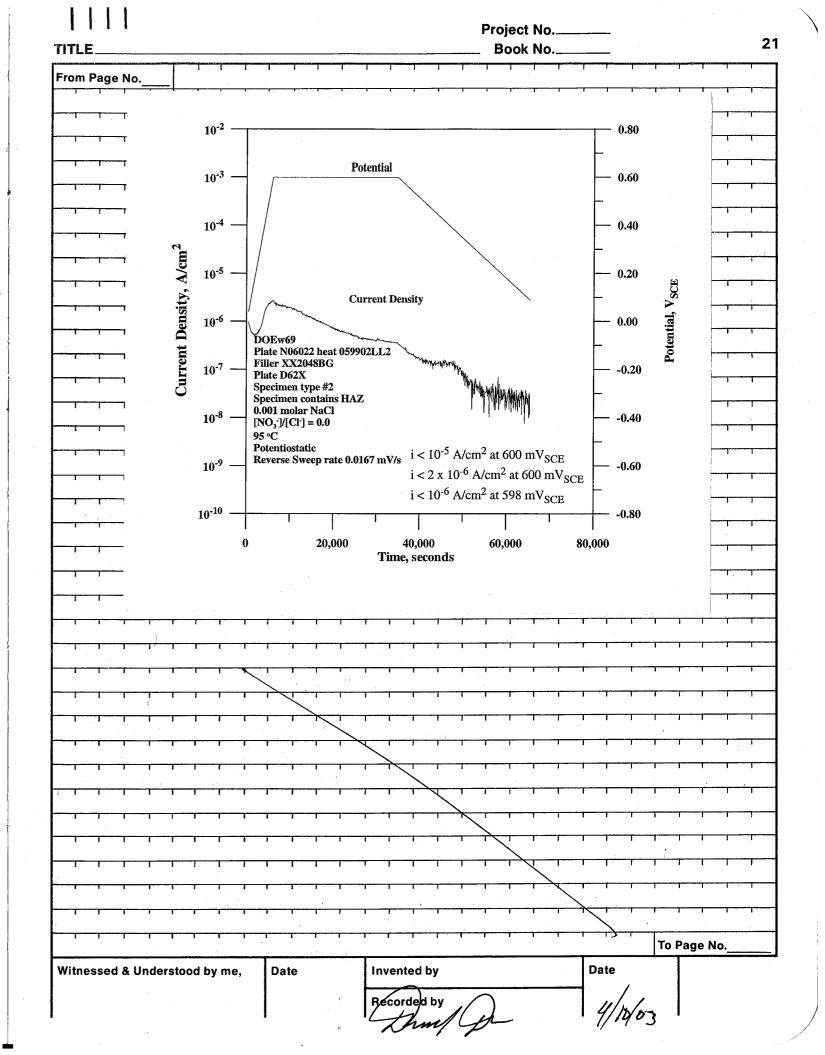


Project No.\_ 18 Book No.\_ TITLE. From Page No. Potes Alloy REDASSILA C-22 Ħ Obre Allew Alloy NO6022 -OS990ZLLT DOE <u>Specime</u>r hes XX 2048B6 fillen -Specimen 2 622 heat Inco -100 1 Doesr 600 Grit polishes Materia Finis PTFI Attachen At # 6104 Proto Caeulce Washers 50 In-02 Using 139677 Ove 9/6/03 Ca 3/1/03 Stort 34.15618 34.15 512 Eno nto Sal 0.01 m Nacl 11.695, Nacl Lot # 027878 + DI that 2000~ stort: 5.819 Fisher 950 motor SN# 3340 ρH 00 7.578 3-620-246 h PH Eno : 2251257 Drube ρ Ch sw#. moor 4110 6 Electaupe PT Fla Corr 13 -620 -52 Re 0249097 95 H98-170 lemo SN# 0704934 614 -371 m Econ +181~~ F 1 99.999 10 N 2/24 No Crevice Corrosio-Socum Examination ! CREDict fo faces Staining A Specia Osta DUE\_UB To Page No. Invented by Date / Witnessed & Understood by me, Date Recorded by 4/ 2/03

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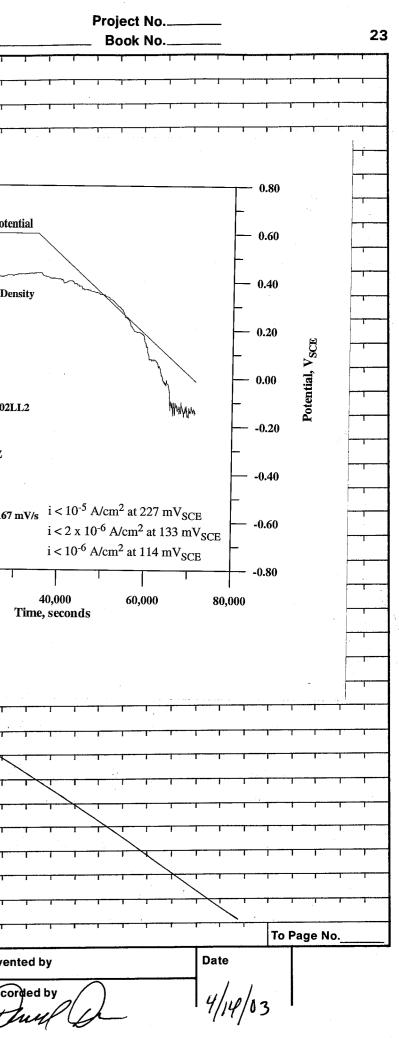


Project No. 20 Book No. TITLE From Page No. Potestia; Ø to Alloy C-22 Lepassivation Po#1 See nb Jec Alle DOE Specime Allox N06022-059902117 vol 220 XX 204836 £11. Jaco OTP Docin Gn 600 Caen AH D 56677 CA  $\mathbf{\Omega}$ 34.24414 12 809090 Sta the der 34. 24 394 F Sol 0.001 M NuC Lot # 027878 Nucl 0.125,9-+ 07 water to 2000m OH Fisher Stan 5. 79 : 950 7/02 Q11 7.542 5N# -620-29 22912578 Eno -6 Mon Fla DT F R 13 025143 620. 95 00-387 Cal 5/10/02 OUL 0/03 -492 1 10 -137 -0 99.999 N feet L washe Examination No Chevice Corrosion 124 Crevice Snecin Stai Milo DDE-W69 To Page No. Witnessed & Understood by me, Date Date Invented by 4/1/03 Recorded by ٩.



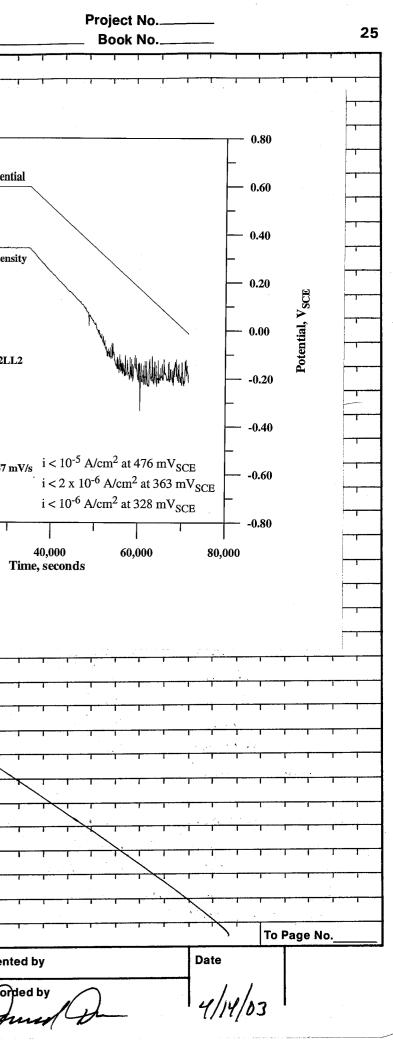
Project No..... 22 Book No.... TITLE From Page No. Repassi Allox (.22 # SAM ObJec Allegy <u>Specim</u> DOE 059902662 Allor NOLOZZ-Heat Inco Allor fille-622 heat XX 704866 Mateque Doca Gait Finish-600 Polishes Cae. Attaches Proto 6104 5N# Ashens Usin 13907 00 Due 9 34.06341 Geniu 34.6378 F c R Sol NhC 0.25 M 29.228 9 Mill Cot # 027878 2000 ~ 1 + DI woter oH Slan 5.754 . 950 Eno = 8.075 ρH 5~ # 4/105 # 273 Mone ρ٦ F R 0249092 205 95°C 5/10/02 DUE SI H98-170 Thermone lola lempinotu 5NT 0704934 -475 -1.14 Econ -123 m 99.999 Eramination: Crevice Corrosion Specime /24 Surfaces of Specia DALA DOE-W70 To Page No. Witnessed & Understood by me, Date Date Invented by Recorded by 4/9/03

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Project No... 24 Book No.\_ TITLE From Page No. Potestia Repossiuption Alloy 0-22 See Ħ ObJe. p. Specimen DOE Allor N06022 -Alleu udium Heat 059902663 Heat XX 2048BG filler Type 2 Row 4 Botto 550 Allow Inco Specime Contain Web Moterial Docs~? 600 Grit polishes F. PTFF Attoches Crevice In.02 Proto # washer At 50 Usin 104 139072 Cal Due 9/6/0 6/03 34.30989 Geniys SANTONIOUS 15/0: 12809099 34-28094 Eno ء ار 5/15/0 5.1  $\bigcirc$ Nac M 6t#027878 11.690 . Nocl 02 2000 m water OH 6-079 51 950 ne 7 N SN# 2291257 P 7.246 540 620-291 Onobe Shi# Mar # G Electrope PT Fla Kef 13-620-52 0751439 5Nº#00-387 CA 5/10/1 5/10/0 Sm# 0704934 614 Kith 503 m F - 153 00 DUC 50/0 99.999 Examination: No Caesue Connor Specimin All Surfaces Gob that Staining DADA DOF-W71 To Page No. Witnessed & Understood by me, Date Invented by Date Recorded by

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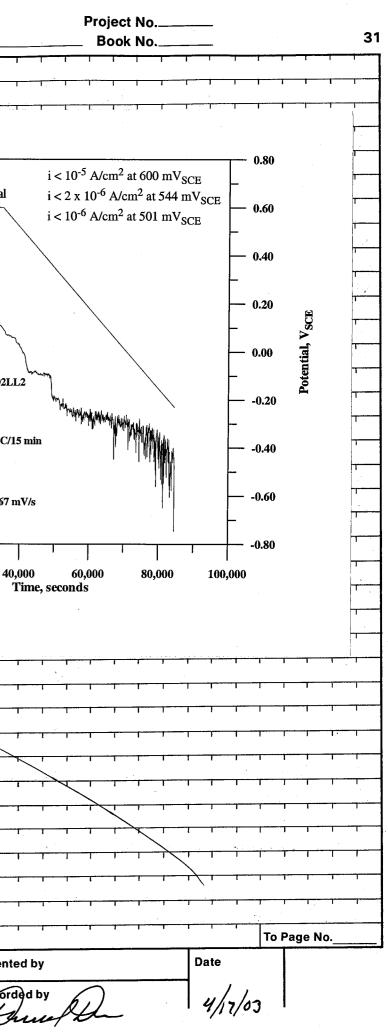
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Project No. 28 Book No.\_\_\_\_\_ TITLE\_ From Page No. Thermal Treatment of specimens SPECIMENS: CUT FROM PLATE D62X AND CONTAIN WEID METAL SPECIMENS ARE APPROXIMATELY 20,4 × 9.4 × 5.7 mm STARRETT 734M SN 02437171 <u>CA</u> 2/2/03 100-3-20 4/11/03 DUG 2/1/04 5.1 DETAILS OF WELD LOCATED IN NOTEBOOK SOS 20. MMM BASE METAL HEAT OS9902LLZ XX2648BG FILLER METAL 77 aveni 1300°C OUGN SETPOINT 1299 % OMEGA HHZZ SN TS4140 TEMP CHECK CAL 10/29/02 DUE 4/29/03 WITH TYPE K THERMOCOUPLE SN 332 6/4/03 1/14/03 1/1/03 CAL DUK DU Ululoz 1250°C OUGN SET POINT 1249 . QMEGA HHZZ SN TS4140 TGMP CNGCK TYPE K SN 332 om DD OUGN SET POTNT 4/11/03 1200 . OMEGA HH22 SN TS4140 1200 "2 TEMP CNECK TYPE 50 332 K SPECIMEN SOULTEDN ANNEAL TIME AND TEMP 1300 °C 15 min WATER QUENCH EUR. 1250°C FOR 15 min WATER QUENCH FUR IS Min 1200 °C WATER QUENCH To Page No. Witnessed & Understood by me, Date Invented by Date Recorded by 4/11/03

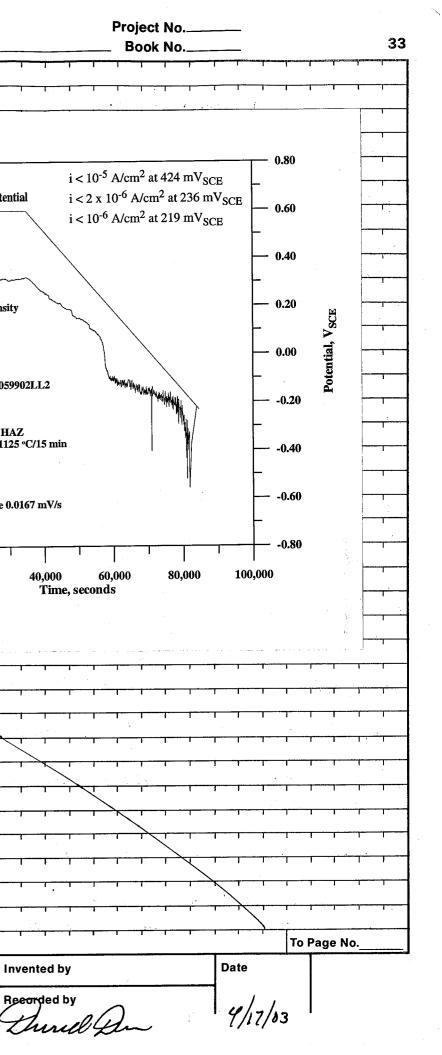
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**Project No...** 30 Book No.\_ TITLE From Page No. Repassing All C-22 **n**) DOE Allow NO6022-Alle Specimer Ludin DESSAZL hest fille. - Specime Inco Aller 627 XX 2048BG lou 2 TOP Contains 600 GR.t Materic Pales 2 PTFF Crevice Atta ± 6104 SN# 139072 3/6/13 Due Part Sh To-Oz Usion 00 Solution \* Specing Anerleo See 33.84807 Sta Geniu Satorious 2809099 D Eno 33. 84719 2 fc loz 0.001 m Nac Noc Lot # 627878 0.1174 + PI  $\tilde{\lambda}_{n}$ 2000m OH start= 5.787 Fisher Accument 950 mete ρH Éno; 8.649 s~+41108 Noral \$273 EG+G PT Flay Co E) ectrope = Reter 5N# 0249092 13-620-52 SN# 498-170 <u>Tempené</u> a -507~ +165 ~ Denenot 50 11.919 KN Crevice Comple Caevise Examination Specime 24 Vosher milo staining untaces Specimen Data To Page No. OOE\_W72 Witnessed & Understood by me, Invented by Date, Date 4/14/03 Recorded by

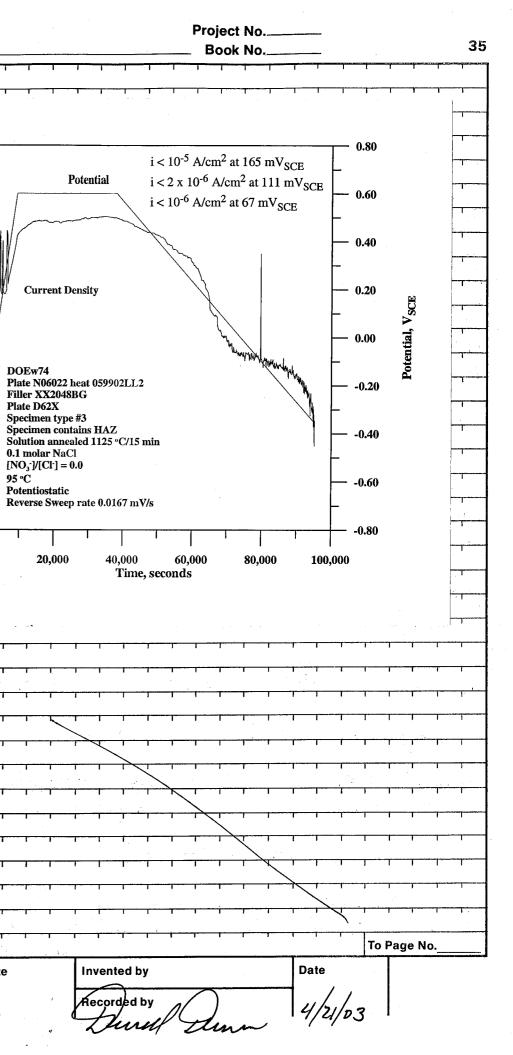
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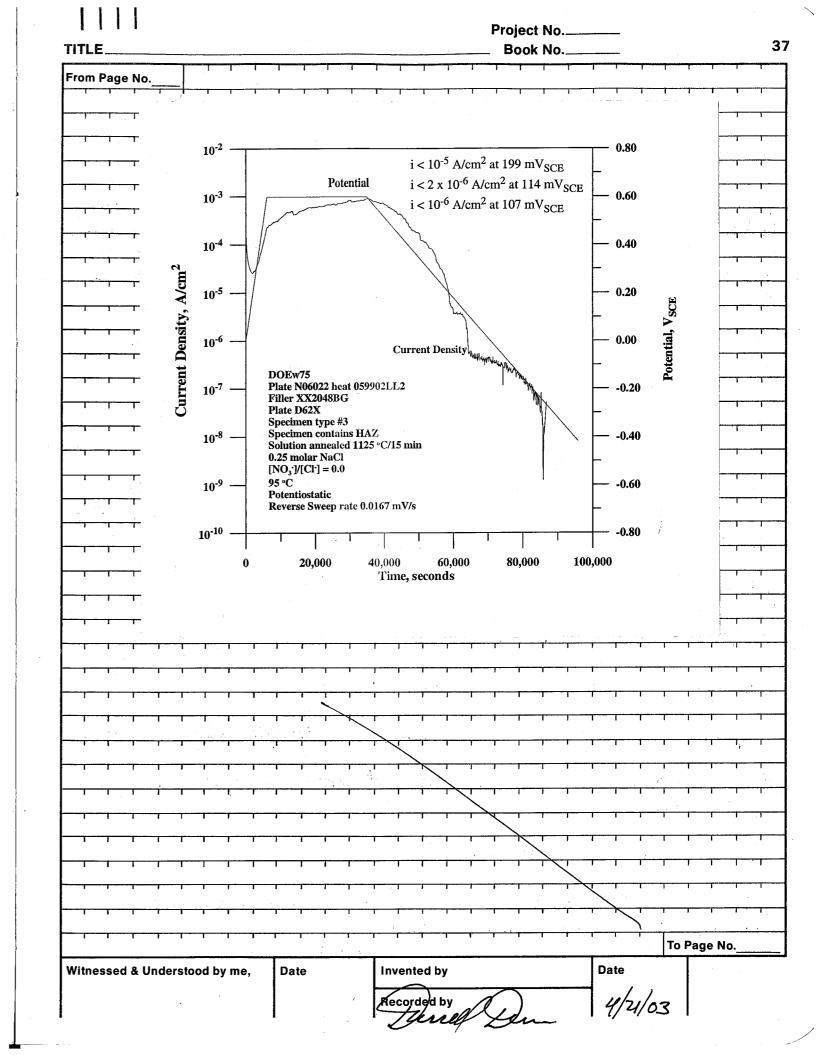
Project No.\_\_\_\_ 32 TITLE. Book No.\_ TITLE From Page No. From Page No. Potent C-22 Allor Repassiva ot ≁ object 10<sup>-2</sup> Potential Specimen DOE Alloy NO6022 -10<sup>-3</sup> Inco Aller Speumen Bat ZOUYSG R PTFF 0 H 2 Crevice washer 600 Geit 10<sup>-4</sup> Sit At Proto 6104 S -17 13-172 04 0... t n A/cm<sup>2</sup> Anestes \* Specimo # See 10<sup>-5</sup> **Current Density** Density, 33.99578 start Santonious Gerius 10<sup>-6</sup> 33. 98930 Eno DOEw73 Plate N06022 heat 059902LL2 Filler XX2048BG Current 10<sup>-7</sup> Plate D62X Specimen type #3 Specimen contains HAZ Sold: 0-01 M NuCl 1. 12 NaCI 6+ # 027878 Solution annealed 1125 °C/15 min 0.01 molar NaCl [NO<sub>3</sub><sup>-</sup>]/[Cl<sup>-</sup>] = 0.0 10<sup>-8</sup> DI + 2000m ster 95 °C Potentiostatic 10<sup>-9</sup> Reverse Sweep rate 0.0167 mV/s ٥ŀ 728 950 formet cut 2291257 P # 13-620-296 woo 10-10 273 5N# 20,000 0 Ħ 6 64 Mode Σl PT Fla Ret SNE 620-52 0251439 20 t 93 00-387 5 Pue 60 Derg 1erman Erun - 508 764934 Diserates 99.999 Caquice Cornoslo-1/24 Francing f. Speu All surfaces of specime Golo staini 00 Data To Page No. DOF-W73 Witnessed & Understood by me, Witnessed & Understood by me, Date Date Date Invented by 4 Recorded by 03



Project No. 34 Book No. TITLE. TITLE. From Page No. From Page No. REPASSIUAtion Potentia Alloy C-22 10-2 # objectiv 10<sup>-3</sup> Alle. Specimen DOF Alloy NU6022 -0599024 Botton InCO Alloy heat Mary 86 Row 1.22 11.2 Specimen 10<sup>-4</sup> C. 600 Gz: £ ₽TFF Crevice Current Density, A/cm<sup>2</sup> Pag Attachen 1 At-50 Ja-Or ( ); 104 139072  $\mathbf{c}$ 6//> 10<sup>-5</sup> **Current Density** Solution \* Specimen 10<sup>-6</sup> 33-95648 Star 33. 90280 Eno ł = 10-7 -Plate D62X G.I M Nac Sol 10-8 -11.694 6+ + 027878 Nacl + DI  $[NO_3^{-}]/[C1^{-}] = 0.0$ 2000-10<sup>-9</sup> -95 °C 6.348 Fisher 957) ณ์ ام 3340 10-10 Sad A t 8 098 620-290 2291257 20,000 = cr#41/08 6 Moor PT Fla Retere (3-620-52 07490 Tem Deno thermom E Sm -552 F +160m 99.999 Descra **a**'0 Examination Socimon Caevice Corrosion feet 124 Sucfaces Stalaiz Golo Specia DOLA DOE-W74 To Page No. Witnessed & Understood by me, Date Date Invented by Witnessed & Understood by me, Date 4/18/07 Recorded by Di

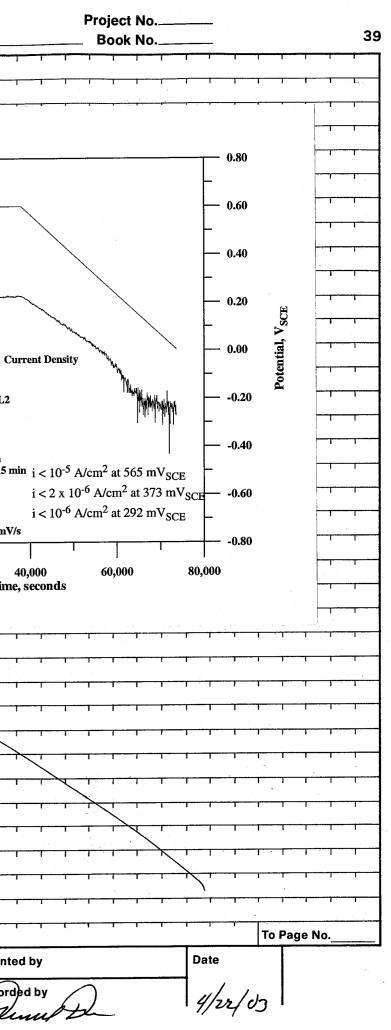


Project No.\_ 36 Book No.\_ TITLE From Page No. Potential REPASSIVA 0-22 Allox # object SAMO Specimen Alloy Alle. DOF N06022 -050902 Allon 622 Inco XX 204866 Specime Materio Contains Linto Gnit 600 Attach Proto 7.07 # 6104 At-50 Incares \* See -# Salutio Specime 34.01910. Sta SANTONIOUS 12809099 Genius Eno 33.89036 nt? 5012 0.25 M Nacl 29.269, Nucl 40+ 4027878 DI To 2000 m Fisher OĤ 328 Star # 950 δH 126 8 91257 6 ZO - 29 6 6 4 MY YO SN 0510) FL ' le 13-620 <7 0251439 00-387 Nermon - 528 SN#0704934 614 +2 50 Crevice Washing Specipe Examinat fee Compion 24 Stainin 112 DOE. WY To Page No. Data Witnessed & Understood by me, Date Date Invented by Recorded by 18/03 D-



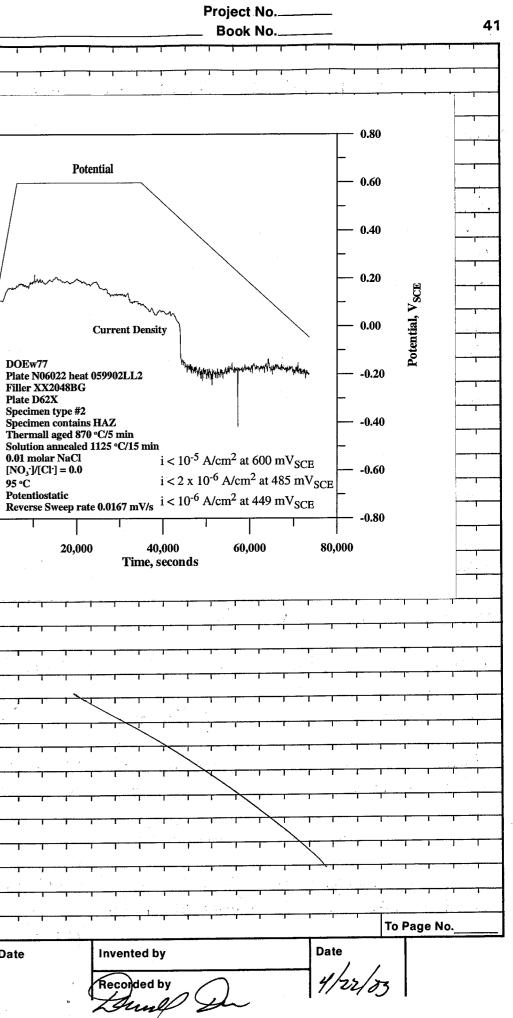
Project No.\_ 38 Book No. TITLE From Page No. Repassivation Poten Alloy C-22 Same # objective: Specime Alley DOE Inco Alloy 622 N06022-Alley 05990712 heat XX 204856 Mater 600 GR OTEE Attac 7-0 polisher Pro Using 6104 5N# 139072 LAyes @ 870°L 34.00892 12509099 540 11/15/02 Geni DUE 5/15/02 34.00728 Enp ut = 5dd O.OOI M Nucl 0.124. Nucl 61# 027878 + DI To 2000 m ъH Star 950 neter SW# 2291257 PL οM 13 -620 - 296 Eno 77 SN# 41108 pote 5G mode PT 3 s"# Rei 13-620-52 Fis 0249092 #H98-170 6 Thermometre Temper Econ 0704934 - 541~ 614 Fot : +118~ 99.995 /6 Sol 5 perim Caevice Contorio 124 5 2 Exanina I No Specime Golo Aves of DAT DOE W76 To Page No. Witnessed & Understood by me, Date Date Invented by 4/21/03 Recorded by

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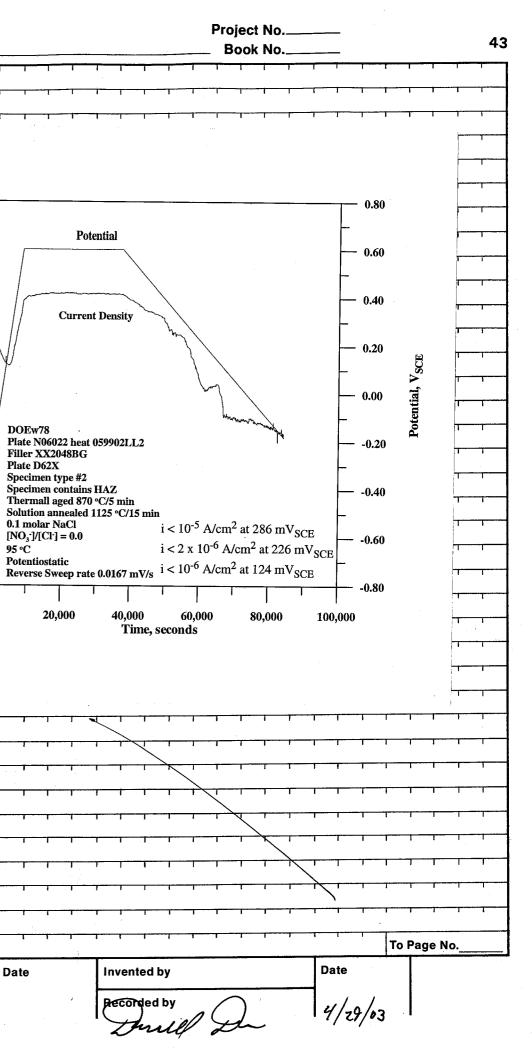


Project No. 40 Book No. TITLE From Page No. Re passivation Potentia Alloy 55-2 #1 Sec object <u>Py</u> NObozz - Alleyhany DOE Allow Specimer: 559902662 · Inco Alloy 622 Roul Conten heat XX 2048BG fillen -Specimen Type Doorn Mosters P Attaches At 600 GR PTFE CALVICE 50 T. Or uashens 139072 SNIT Pasto # (104 10 7 DUE 9 Thermall Section /6/177 for Annialeo 33.87151 Stort 5~ # 12809099 33.86964 En Soluti O.OI M Nucl 1. 176 Nacl 6+# 027878 DI water To ZOUDAL ۵M SN#3340 9 81 5 -AA 950 mit **?** PH #13-620-296 22912578 SW# 10120 ₽ E 570 poten MODE PT Cour FA 5NT Reteren 13-620-52 0251439 <u>s</u>N# 95 Thermor 00-387 Tempenort Pue /10/02 - 539 Ecus Keith 1.14 6704524 + 18 F. + 5 Deservites v, 59.999  $\mathcal{N}$ 501 1/24 Feet of Crevice Washen Spacing Examina Carula Consolon of speci Golo + Sunfaces To Page No. DOF-W77 5 Witnessed & Understood by me, Date Invented by Date/ Recorded by 421/05

## TITLE. From Page No. 10<sup>-2</sup> Potential 10<sup>-3</sup> -10<sup>-4</sup> A/cm<sup>2</sup> 10<sup>-5</sup> Density, 10<sup>-6</sup> **Current Density** Current DOEw77 10-7 -Plate N06022 heat 059902LL2 Filler XX2048BG Plate D62X Specimen type #2 Specimen contains HAZ Thermall aged 870 °C/5 min 10<sup>-8</sup> -Solution annealed 1125 °C/15 min 0.01 molar NaCl $[NO_3]/[Cl] = 0.0$ 10<sup>-9</sup> -95 °C 10<sup>-10</sup> 20,000 Invented by Witnessed & Understood by me, Date Recorded by



Project No. 42 Book No. TITLE TITLE. From Page No. From Page No. Repassivation Potential Allor C-22 # object 2Ame : DOE Alloy NO6022- Alleghany Inco Allor Heat 059902112 Specimon 10-2 . Udlun heat XX 2048BG fillen Specimen Roul Materia Fype 2 Bottom · Doesn? Contain Potential PTFE Attacheo 600 Gast F At 50 In- 0, 10<sup>-3</sup> Crevice washers Dh 6104 CA Specimo 139072 Thermally DU. 103 H e **10<sup>-4</sup> Current Density** Current Density, A/cm<sup>2</sup> Stan 33.78510 Sontorious Genius 10<sup>-5</sup> 33.76565 Eno 10<sup>-6</sup> Solution O.I M NaC Lot # DOEw78 11-6914 NACI 10<sup>-7</sup> Plate N06022 heat 059902LL2 Filler XX2048BG 627872 14 1 Plate D62X Specimen type #2 Specimen contains HAZ Thermall aged 870 °C/5 min Solution annealed 1125 °C/15 min 2000ml 10 LATE-10<sup>-8</sup> P 5.893 SN 950 2340 ۶ sw# 5N# 0.1 molar NaCl 22912578 01 13-620-296 10-9 - $[NO_3]/[Cl] = 0.0$ -071 95 °Č Potentiostatic 50 th EG+G ' # 10<sup>-10</sup> More 41108 26 20,000 0 Fla PT Court Electrore Reterioric F. 13-620-52 SN¥ 024902 5m# H98-170 TIMAZO hermon SN# 070 4934 Ecv. . 10 126 0 500 99.999 CREVice Consoster on Crevice 1/24 feet Specime Examination: All Surfaces of Specime Stain Golo -To Page No. DOF. W78 Oalo Witnessed & Understood by me, Date Date Invented by Witnessed & Understood by me, Date 03 Recorded by



Project No..... 44 Book No.\_\_\_ TITLE From Page No. т I have reviewed this scientific notebook and find it in compliance with QAP-001. т There is sufficient information regarding procedures used for conducting tests, acquiring and analyzing data so that another qualified individual could repeat the activity. <u>zin</u> 6/6/05 -۰<sup>۲</sup> 1 i. ı, 1 1 1 F To Page No. Witnessed & Understood by me, Date Date Invented by **Recorded by** 

## ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 578

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