工 作 令
AIRCRAFT FACTORY WORK ORDER

注意：最後頁爲 - 入庫/銷令憑單

工單號碼: 20736043
SOR NO.

EC. NO. 87EC0148-FAI
QDR. NO.
OTHER NO.

RAW-MATERIAL RECORD FOR ISSUE
商規(COML. SPEC.) 軍規(MIL. SPEC.)
直徑 厚度 壁厚 寬度 長度 供製 晶粒 形
DIAM / THICK / WALL TH. / W. / L. / YIELD / GRAIN DIR. / FM.
材料備註(MATERIAL REMARK)
零件材料尺寸備考(P/M/S)
代用料(Y) 授權文件(Authorized Document) 工單狀態(STATUS)

件號: 21-AMS-000.00.00
PART NO.

名稱: RAM RADIATOR ASSEMBLY
DEC.

製程類別(ROUTING TYPE): BAB

件號全名:
INIT. PART

列印人員: 曾素芬
RELEASE MEM.

排版件: N

計劃代碼: T-0-B97-R-5101
WBS

2.5.23 25-27 34-37 26 40-42
3-7

SWBS: XX.X- 裝配順序:
LEVEL

1 N

發工數量: 1
QTY.

REL

參考機號: S001
REF.

檢驗:
INSP'T

AIDC 605214 C

急缺件未入庫記:
SHORTAGE PART NON-STOCK RECORD
日期 領用工單 數量 機號 簽章
DATE /SOR NO. /QTY. /AIDC EFF. /SIG.

******* 執行首件檢驗(FAI) *******
COMPLETE

REASON:首件生產(First Production)

外蒙皮

序 號: N
CONTROL ITEM NO.

附記: 執行全程FAI檢驗
REMARK

製程分類:
Routing Class

QDR/ICUS 號碼:
QDR/ICUS NO. Q.D.R. BPH0107

複材成化群組類別(C.C.G.):無(NO)

21-AMS-000.00.00

儲位(BIN LOC.):

APPC：未設定零件

20736043

儲存類型(Storage type)

外蒙皮件

集體製程動線分類(Cell):NO
自動表處動線(ACP):無(NO)

********** 完工銷令單送品工課簽收 **********
********** TRANSFER TO ACF QA AFTER WORK ORDER CLOSED **********

AMS02

件號(P/N): 21-AMS-000.00.00
Plan Rev.: 2008/03/24-87EC0332

日期(DATE): 2008/3/26

工作中心 TASK	操作步序 SEQ	操作內容 OPERATION	規範/標準製程編號 SPEC./P.S. NO.	使用工具 USE OF TOOLS	完成日期/工作者 CLOSE DATE /OPERATOR	合格數量 QTY
		NO MISSING PREFIT INSPECTION				
53454	0070	註:僅左內,左外,右內, 右外蒙皮(共4EA) 需執行 有色化學膜處理(浸泡法)MIL-C-5541,CL 3 ※執行本步序請掛籤標示 TAGGING FOR IDENTIFICATION 1.除油(Degrease):選用(a)或(b) (Select (a) or (b)) (a)蒸汽除油(Vapor Degrease): 溶劑(Sol.):三氯乙烯 (Trichloroethylene) 溫度(Temp): N/A °F(185~195°F) 時間(Time):至零件表面蒸氣不再凝結 (Until Condensation Of The Vapour On The Parts Stops) (b)水性除油(Aqueous Degreasing): Brulin 815GD: 10~14%(vol.) 溫度(Temp.): 140 °F(140-150°F) 時間(Time): 10 mins(10-30 mins) 熱水漂洗(Hot Water Rinse): 溫度(Temp.): 120 °F(100~130°F) 時間(Time): 5 mins (5mins MIN) 2.熱鹼清洗(HOT ALKALINE CLEANING): 溶液(SOL.):TURCO 4215S(6~8 oz/gal) 溫度(TEMP.): 140 °F(135～145°F) 時間(TIME): 15 mins(10~15mins) 3.熱水漂洗 (HOT WATER RINSE THOROUGHLY) 溶液(SOL.):純水(DEIONIZED WATER) 溫度(TEMP.):110~130°F 時間(TIME):至少5分鐘(5 mins MIN.)	MIL-C-5541		04/18/08 何政芙 896176A	16

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工作中心 TASK	操作步序 SEQ	操作內容 OPERATION	規範/標準製程編號 SPEC./P.S. NO.	使用工具 USE OF TOOLS	完成日期/工作者 CLOSE DATE /OPERATOR	合格數量 QTY
		4.冷水噴洗(COLD WATER SPRAY):				
		溶液(SOL.):純水(DEIONIZED WATER)				
		溫度(TEMP.):室溫(R.T)				
		時間(TIME):≧1分鐘(MINS.).				
		5.裂水測試(WATER BREAK-FREE)				
		水膜保持:30 秒(SEC)(30 sec.)				
		6.去氧化層(DEOXIDIZING):				
		溶液(SOL.):				
		(a)Turco Smut Go#4:4.5~5.5 oz/gal				
		硫酸(H2SO4):5-10 VOL% 或				
		(b)Amchem 6/Sulfuric Acid:				
		Cr+6:4.5~10.5 g/l				
		硫酸(H2SO4):75~105 g/l				
		Copper:0.2 g/l MAX.				
		Al:17.2 g/l MAX.				
		蝕銑率(Etch Rate):0.15~0.40				
		絲/面/小時(mils/surface/hr)				
		溫度(TEMP.):R.T.				
		時間(TIME):15 mins(3~20 mins)				
		記錄溶液編號(SOL NO.):a (a or b)				
		7.冷水漂洗				
		(COLD WATER RINSE THOROUGLY):				
		溶液(SOL.):純水(DEIONIZED WATER)				
		溫度(TEMP.):室溫(R.T)				
		時間(TIME):≧3分鐘(MINS.).				
		8.冷水噴洗(Cold water spray rinse):				
		視需要(As Required)				
		溶液(SOL.):純水(DEIONIZED WATER)				
		溫度(TEMP.):室溫(R.T)				
		時間(TIME):≧1分鐘(MINS.).				
		9.裂水測試(WATER BREAK-FREE)				
		水膜保持:30 秒(SEC)(30 sec.)				
		10.MC化學膜處理(CHEM FILM)				
		溶液(SOL.)：ALODINE 1200S,				
		1.0-3.0 oz/gal (7.5-22.5 g/l).				

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工作程序單(OPERATION SHEET MASTER)

件號(P/N): 21-AMS-000.00.00
Plan Rev.: 2008/03/24-87EC0332

日期(DATE): 2008/3/26

工作中心 TASK	操作步序 SEQ	操作內容 OPERATION	規範/標準製程編號 SPEC./P.S. NO.	使用工具 USE OF TOOLS	完成日期/工作者 CLOSE DATE /OPERATOR	合格數量 QTY
		PH:1.3 ~ 1.8. 溫度(TEMP.): R.T °F(室溫)(RT.) 時間(TIME): 2 分鐘(MINS.)(1~3分鐘) 11.冷水漂洗 (COLD WATER RINSING THOROUGHLY) 溶液(SOL.):純水(DEIONIZED WATER) 固含量(SOLID CONTENT)≦350 ppm . 溫度(TEMP.):室溫(R.T) 時間(TIME):≧3分鐘(MINS.). 12.漂洗(Rinse):選用(a)或(b) (Select (a) or (b)) (a)冷水噴洗(Cold Water Spray): 溶液(SOL.):純水(DEIONIZED WATER) 溫度(TEMP.):R.T. 時間(TIME): 1 mins(1 min MIN.) (b).熱水漂洗(HOT WATER RINSE): 溶液(SOL.):純水(DEIONIZED WATER) 溫度(TEMP.): 140 °F(140°F MAX.) 時間(TIME): 30 secs(30 secs MAX.) 13.乾燥(DRY): 溫度(Temp.): 120 °F(130°F MAX.) 時間(TIME): 20 mins(20 mins MIN.) 記錄完成化學膜時間 : 04 月 18 日 14 時 30 分 (M) (D) (H) (M) (RECORD THE CHEM. FILM DATE) NOTE:FOR INNER SKIN LH/RH AND OUTER SKIN LH/RH (TOTAL 4 EA)ONLY CHEM. FILM TREATMENT (IMMERSION) PER MIL-C-5541, CL. 3				
07335	0080	化學膜處理檢驗 依MIL-C-5541 CLASS 3	MIL-C-5541		04 18-08	1E

AIDC 610138 A

20736043

專案(Product):AMS02
選定機號(Selected Type Eff):S001~

件號(P/N): 21-AMS-000.00.00
Plan Rev.: 2008/03/24-87EC0332

日期(DATE): 2008/3/26

工作中心 TASK	操作步序 SEQ	操作內容 OPERATION	規範/標準製程編號 SPEC./P.S. NO.	使用工具 USE OF TOOLS	完成日期/工作者 CLOSE DATE /OPERATOR	合格數量 QTY
		＊目視檢驗化學膜表面無可見瑕疵,如不連續,表面呈粉末狀,鬆脫,刮傷,裂隙及其他缺陷或損傷等 INSPECTION FOR CHEMICAL CONVERSION PER MIL-C-5541 CLASS 3. ＊APPEARANCE INSPECT:THE CHEMICAL CONVERSION COATING SHALL BE CONTINUOUS IN APPEARANCE AND VISIBLY DISCERNIBLE IN DAYLIGHT. IT SHALL BE FREE FROM AREAS OF POWDERY OR LOOSE COATING, VOIDS, SCRATCHES, FLAWS, AND OTHER DEFECTS OR DAMAGES.				
53452	0090	左,右2內蒙皮外表面(非膠合面)EB區貼遮封膠帶 MASK EB AREA WITH MASKING TAPE FOR OUTER SURFACE(NON-BONDING SURFACE) OF 2 INNER SKINS (LH & RH)		21-AMS-000.00.01PST, 21-AMS-000.00.02PST	04/18/'08 廖振宇 892500A	1
07335	0095	檢驗EB遮封區符合左,右內蒙皮B/P 1之4頁需求 B/P NO.:21-AMS-000.00.01 及 21-AMS-000.00.02 INSPECT EB AREAS MEETING REQUIREMENT OF INNER SKIN LH/RH B/P,SHEET 1 OF 4 B/P NO.:21-AMS-000.00.01 AND 21-AMS-000.00.02			04/18/'08 AIDC 605214 C	1
53452	0100	註:本步序陽極化完成後非膠合面(即化學膜處理之表面)之遮封膠帶保留(勿移除)直至	MIL-A-8625		04/24/'08 張嘉任 897255A	1

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工作中心 TASK	操作步序 SEQ	操 作 內 容 OPERATION	規範/標準製程編號 SPEC./P.S. NO.	使用工具 USE OF TOOLS	完成日期/工作者 CLOSE DATE /OPERATOR	合格數量 QTY
		噴完底膠,底膠烘烤前再移除				
		40-50V 鉻酸陽極化(不封孔)-膠合件				
		(鋁合金子件及鋁試片膠合面執行)				
		MIL-A-8625 Type Ⅰ,Class 1				
		※執行本步序請掛籤標示				
		TAGGING FOR IDENTIFICATION				
		1)蒸汽除油(Vapor Degrease):				
		溶劑(Sol.):三氯乙烯				
		(Trichloroethylene)				
		溫度(Temp): 188 °F(185~195°F)				
		時間(Time):至零件表面蒸氣不再凝結				
		(Until Condensation Of The Vapour				
		On The Parts Stops)				
		2)鹼洗(Alkaline Clean):				
		溶劑(Sol.):				
		TURCO 4215S: 6~8 oz/pal				
		溫度(Temp.): 140 °F(135~145°F)				
		時間(Time): 15 mins(10~15 mins)				
		3)熱水漂洗(Hot Water Rinse)				
		溫度(Temp.): 120 °F(110~130°F)				
		時間(Time): 5 mins(5mins MIN)				
		4)冷水噴洗(Cold Water Spray)				
		溫度(Temp.):R.T.				
		時間(Time): 1 mins (1mins MIN)				
		5)裂水試驗(Water Break Free Check)				
		水膜保持: 30 secs(30 secs MIN)				
		6)熱酸洗(Hot Pickling):				
		溶液(Sol.):				
		H2SO4: 276~313g/l				
		Na2CrO7: 59~90g/l				
		Aluminum :1.5g/l(MIN)				
		Copper:150mg/l(MIN)				
		浸蝕率(Etch Rate):				
		0.24mils/surface/hr.(MIN)				
		溫度(Temp): 166 °F(165～169°F)				

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件號(P/N): 21-AMS-000.00.00
Plan Rev.: 2008/03/24-87EC0332

日期(DATE): 2008/3/26

工作中心 TASK	操作步序 SEQ	操作內容 OPERATION	規範/標準製程編號 SPEC./P.S. NO.	使用工具 USE OF TOOLS	完成日期/工作者 CLOSE DATE /OPERATOR	合格數量 QTY
		時間(Time): 15 mins(15～20mins)				
		7)冷水漂洗(Cold Water Rinse)				
		溫度(Temp.): R.T				
		時間(Time): 3 mins(3mins MIN)				
		8)冷水噴洗(Cold Water Spray)				
		溫度(Temp.):R.T.				
		時間(Time): ___ mins(1 min MIN)				
		9)裂水試驗(Water Break Free Check)				
		水膜保持: 30 secs(30 secs MIN)				
		10)陽極化處理(Chromic Acid Anodize)				
		溶液(Sol.):				
		Total Chromic Acid: 45～100g/l				
		Free Chromic Acid: 45～60g/l				
		Aluminum5.0g/l(MAX.)				
		氯化物含量(Chlorides):				
		0.2 g/l MAX as NaCl				
		硫酸含量(Sulfurates):				
		0.5 g/l MAX as SO4				
		溫度(Temp): 104 °F				
		(104±1.8°F;40±1℃)				
		操作 電壓(Voltage Control):				
		40V~50V±2%V				
		a.升壓 0~40伏特(Volts):				
		: 10 分鐘(In 10 mins)				
		b.保持40伏特(Volts Remaining)				
		: 25 分鐘(For 25mins)				
		c.升壓40~50伏特(Volts)				
		: 5 分鐘(In 5 mins)				
		d.保持50伏特(Volts Remaining)				
		: 5 分鐘(For 5 mins)				
		11)冷水漂洗(Cold Water Rinse)				
		溫度(Temp.):R.T.				
		時間(Time): 5~10 mins				
		12)冷水噴洗(Cold Water Spray)				
		溫度(Temp.): R.T.				

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工作中心 TASK	操作步序 SEQ	操作內容 OPERATION	規範/標準製程編號 SPEC./P.S. NO.	使用工具 USE OF TOOLS	完成日期/工作者 CLOSE DATE /OPERATOR	合格數量 QTY
		時間(Time): 1 min MIN 13)乾燥(Dry): .溫度(Temp.): 122 °F(122°F MAX.) .時間(Time): 60 mins(20mins MIN) 14)記錄陽極化完成時間 (RECORD THE ANODIZE FINISH TIME) : 04月(M) 28日(D) 4時(H) 0分(M) 註: 1.中性牛皮紙包裝 PACK WITH NETRAL KRAFT PAPER. 2.陽極化處理後之零件請於1小時內進入環控區 (Note:It Shall be Transported to Environmental Control Zone Within 1Hrs After CAA) 3. ※注意：陽極化處理後,必須於8小時內噴膠. (※Warning:The Period Between Anodize And Primer Applied Shall be Within 8 Hrs) NOTE:KEEP(DO NOT REMOVE)THE MASKING TAPE OF NON-BONDING FACE(ALODINED FACE)AFTER ANODIZING UNTIL PRIMED AND BEFORE OVEN DRYING 40-50V CHROMIC ACID ANODIZING FOR ADHESIVE BONDING PART -(NON SEALING) PER MIL-A-8625 TYPE Ⅰ,CLASS 1 (FOR AL.DETAILS AND AL.TEST COUPON BONDING SURFACE)				
07335	0110	40-50V 鉻酸陽極化-檢驗(含試片) 依MIL-A-8625 Type Ⅰ,Class 1需求 1.陽極化層外觀應連續,平滑,均勻,	MIL-A-8625		04/24/08 AIDC 605214 C 1	

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工作程序單(OPERATION SHEET MASTER)

件號(P/N): 21-AMS-000.00.00
Plan Rev.: 2008/03/24-87EC0332

日期(DATE): 2008/3/26

工作中心 TASK	操作步序 SEQ	操作內容 OPERATION	規範/標準製程編號 SPEC./P.S. NO.	使用工具 USE OF TOOLS	完成日期/工作者 CLOSE DATE /OPERATOR	合格數量 QTY
		有附著性,且無粉粒區。 2.夾定點或操作損傷之區域: 大於1/4inch直徑或同等區域, 需補化學膜。 40-50V CHROMIC ACID ANODIZING FOR ADHESIVE BONDING PART -(NON SEALING) INSPECTION PER MIL-A-8625 TYPE I, CLASS 1. (INCLUDING TEST COUPON)				
53500	0120	膠合環控條件 如複材工場環控區現行環控條件 ENVIRONMENT CONTROL CONDITION AS CLEAN ROOM OF COMPOSITE SHOP		21-AMS-000.00.00BOF	4/24/08 郭瑞宗 611353A	1
53502	0130	註: 噴完底膠後於底膠烘烤前剝除非膠合面之遮封膠帶 底膠噴塗(含鋁子件及鋁試片) 記錄環控區接收時間: 04 月(M) 24 日(D) 08 時(H) 30 分(M) (TIME OF RECEIVED BY ENVIRONMENT CONTROL AREA) 底膠名稱(ADHESIVE PRIMER NAME EC 3924B) 記錄(RECORD): 廠家(PRIMER VENDOR): 3M 批號(PRIMER BATCH NO.): 07253KG 接收批號(RECEIVAL LOT NO.): SM-0804-0480 底膠壽限(EXPIRATION DATE): 2008 年(YEAR) 09 月(MONTH) 26 日(DAY) 靜置時間(RESIDENT TIME): 開始時間(START CURE TIME): 04 月(MONTH) 24 日(DAY) 09 時(HRS) 00 分(MINS)			04/24/08 [illegible] 897158C	1

20736043

Nadcap

In accordance with SAE Aerospace Standard AS7003, to the revision in effect at the time of the audit, this certificate is granted and awarded by the authority of the Nadcap Management Council to:

Aerospace Industrial Development Corp

111 Lane 68 Fu-Hsing N Rd
Taichung, Taiwan 407

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturer's List (QML), to the revision in effect at the time of the audit for:

Chemical Processing

Expiration Date: January 31, 2010
Certificate No. 121154
Issued: July 15, 2008

William G. Wagner, Managing Director

Performance Review Institute (PRI) 161 Thorn Hill Road Warrendale, PA 15086-7527

Nadcap
Administered by PRI

SCOPE OF ACCREDITATION

Chemical Processing

Accreditation Date: July 15, 2008
Expiration Date: January 31, 2010

Audit# 121154
Certificate# 121154

Aerospace Industrial Development Corp
111 Lane 68 Fu-Hsing N Rd
Taichung, Taiwan 407

Long-Anne Juan - Q A Engineer

In recognition of the successful completion of the PRI evaluation process, accreditation is granted to this facility to perform the following:

AC7108 Rev C - Nadcap Audit Criteria for Chemical Processing
Anodizing- MIL-A-8625
Anodizing-AMS 2470
Anodizing-AMS 2471
Anodizing-Other
Brush Plating-MIL-STD-865
Brush Plating-Other
Cadmium Plating – AMS-QQ-P-416
Cadmium Plating-Other
Chemical Cleaning-Acid Cleaning (See Preliminary Questionnaire)
Chemical Cleaning-Alkaline Cleaning (See Preliminary Questionnaire)
Chemical Cleaning-Cleaning for Adhesive Bonding
Chemical Cleaning-Emulsion Cleaning
Chemical Cleaning-Titanium Cleaning-Acid (See Preliminary Questionnaire)
Chemical Cleaning-Titanium Cleaning-Alkaline
Chemical Milling-Other
Chromium Plating-Other
Conversion/Phosphate Coatings-AMS 2473
Conversion/Phosphate Coatings-MIL-C-5541
Conversion/Phosphate Coatings-Other
Stripping-Other
Surface Treatment/Passivation-Other
Surface Treatment/Passivation-QQ-P-35

AC7108/1 Rev A - Nadcap Audit Criteria for Painting & Dry Film Coatings (1)
Paint/Dry Film Coatings-Other

AC7108/2 Rev A - Nadcap Audit Criteria for Etch Processes (Blue Etch Anodize, Local, Macrostructure, Nital, Pre-Penetrant, Temper)
Etching – Other
Local (Swab) Etch
Nital Etch
Pre-Penetrant Etch

AC7108/3 - Nadcap Audit Criteria for Surface Preparation Prior to Metal Bond
FPL Etch
Metal Bond Anodize Processes