上品綜合工業股份有限公司
ALLIED SUPREME CORP.

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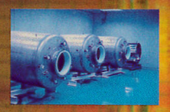
QUALITY ASSURED COMPANY
ISO 9002:1994

TEFPASS®

PTFE / TFM / PFA / FEP / ECTFE / ETFE / PVDF Sheet Lining For Semiconductor Industry



ALLIED SUPREME CORP.

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前言

因應半導體工業所需的氟素樹脂產品，我們自行完成技術開發並在2000年興建完成的彰濱新廠內，我們自己開發製作氟素樹脂內襯板材與焊接材料，規劃完成的無塵室分別自Class100,000、Class10,000和Class1,000，做爲半導體EL桶槽Teflon sheet lining標準施工環境，加入新廠內自行生產製作的PFA tube、PFA lined pipe and fittings、TEFPASS® Teflon® flexible hose和TEFPASS® 排氣耐蝕風管，無論在高純度化學品供酸系統管材、桶槽與槽車、廢酸排放系統，甚至於半導體製程反應所產生的腐蝕性氣體排放管路，上品公司都能夠提供半導體工業一系列有效高純度要求、耐蝕高品質與高信賴度的解決方案。

我們的目標除了以滿足半導體工業高純度板片內襯要求，並延伸到生化，並兼顧石化、傳統化學工業的需要，繼續秉持與實現我們「創新、品質、誠信、服務」的經營理念。

Preface

In connection with enormous demands of fluorocarbon products from semi-conductor industry, Allied Supreme Corp takes this honor and opportunity to develop our own superior quality of fluorocarbon glass fabric back sheet, welding materials to satisfy such a market in great demand.

To comply with such a highly standard process, we built one new plant in Changhwa in year of 2000. We can provide extremely pure standard products in our clean rooms from class 100,000, class 10,000 to class 1000 for EL grade Teflon sheet lining process. Moreover, we develop serial products such as PFA tube, PFA lined pipe and fittings, TEFPASS® Teflon flexible hose and TEFPASS® ductwork and high purity chemical delivering system, EL lined tank, ISO container and waste drain recovering system or waste gas exhaust system. Allied Supreme Corp. is able to offer a series of total solution for our clients.

In brief, specialized technique can provide high purity demand, strict corrosion-resistance quality and extreme reliability for semi-conductors industry. We also gradually extend our business pharmaceutical to biochemical fields. While, still offering traditional chemical and petrochemical industries with good service. Continuously, we persist in our managing philosophy with "Innovation, Quality, Sincerity and Service" to our entire clients.

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Processing Environment and Facilities

施工環境與設備

我們使用各種氟素樹脂板材，於三種不同等級的無塵室環境內進行板片內襯施工，有了高標準無塵室的施工環境，並加上內襯產品與施工的嚴密品質管制，我們能有效減少桶槽到客戶廠內清洗時間與次數，降低客戶成本與維持高純度化學品的品質。

Processing Environment and Facilities

We apply different kinds of fluorocarbon sheet materials, with three grades of clean room to meet different process in EL grade sheet lining fabrication. With high standard clean rooms in addition to our strict quality control, we are able to shorten flush time to share cost and maintain the high purity level of chemicals for clients.

影響EL Grade Sheet Lining品質三個要素：

1.原料本身
(1)物理特性，如比重、延伸率、抗張拉力。
(2)原料含有的金屬離子。
(3)原料含有的微粒與不純物。

2.Sheet Lining施工環境控制
(1)施工環境內的金屬離子、微粒或不純物。
(2)內襯施工工具殘留的金屬離子、微粒或不純物。

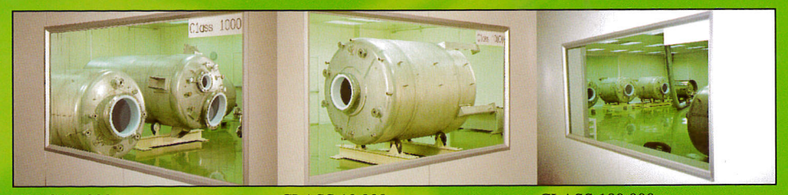
3.品質管制系統
(1)板材與桶壁的接著強度控制。
(2)板材與板材之間的熔接強度控制。
(3)整個內襯施工系統垂直與水平控制。

Three Factors to Influence the Quality of GL Grade Sheet Lining

1. Raw material
   (1) Physical properties. Such as specific gravity, elongation, tensile strength.
   (2) Metal ions from raw material.
   (3) Particle and impurity from raw material.
2. The condition of operating environment
   (1) Metal ions, particle and impurity from operating environment.
   (2) Metal ions, particle and impurity from tooling.
3. Quality assurance system
   (1) Reliability of bonding strength.
   (2) Reliability of welding strength.
   (3) Management of whole processing system.

無塵室 Clean Room

JIS (B9920)	FED (209D. 209E)	CLEAN AREA	PROCESS
6	CLASS 1,000	164M²	WELDING
7	CLASS 10,000	170M²	BONDING
8	CLASS 100,000	200M²+419M²	Q.C., CLEANING, PACKAGING PFA TUBE EXTRUSION



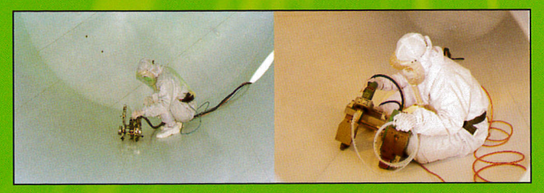
CLASS 1,000 CLASS 10,000 CLASS 100,000

自動板片內襯熔接設備

自動熔接機能有效消除人工在板片熔接中的不穩定因素，提高熔接效率和穩定度，且有較優良的外觀。

Automatic Welding Machine

By using automatic welding machine is able to eliminate unstable factors while doing manual welding. Welding efficiency and stability can be enhanced with excellent welding appearance.



設備 Facilities

名稱 Item		數量 Q'ty
15 MΩ純水產生器	High purity water generator	1
鍋爐	Boiler	1
氟素樹脂板材自動焊接機	Automatic welding machine	3
手動焊接機	Manual welding machine	20
針孔測試器	Pinhole tester	5
絕緣阻抗測試機	Megger testing machine	2
無油空壓機	Oil free compressor	2
膜厚測試儀	Film thickness tester	1
抗張拉力試驗機	Tensile strength tester	1
比重測試機	Specific gravity tester	1

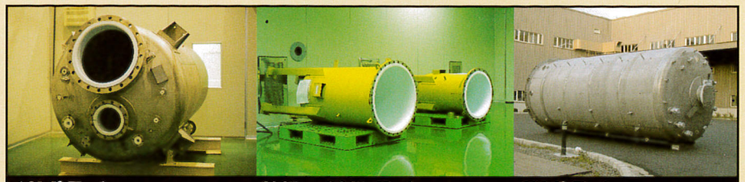
Applications

應用

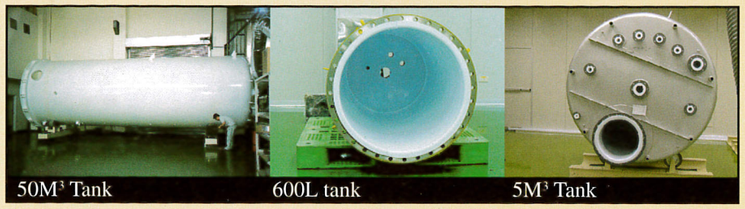
我們的內襯產品廣泛地應用於半導體設備、生化科技、製藥和精密化學工業等高純度要求的桶槽、槽車和所有與藥液接觸的容器，以及客製化的熱交換器、溢流槽、治具等。

Applications

Our EL grade sheet lining products are widely applied to semiconductor, biochemical, pharmaceutical and fine chemical industries for high purity demand tanks, ISO containers and vessels. We also comply with customer special requests such as heat exchangers, overflow tanks and custom-made tooling.


12M³ Tank　600L、300L Tank　50M³ Tank

12M³ Tank　50M³ Tank　500L Tank　6M³ Tank


50M³ Tank　600L tank　5M³ Tank

12M³ Tank　5M³ Tank　2M³ tank

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ISO Container/Container Tank

6M³ ISO Container　1M³ Container Tank　20M³ ISO Container

12M³ ISO Container　1M³ Container Tank　1M³ Container Tank

TEFPASS SHPT PFA hose

應用　Application

1M³ Container Tank　20M³ ISO Container　TEFPASS-G Gasket

PFA lined pipe and fittings

Petrochemical and Chemical Application

石化與化學工業應用 Petrochemical and Chemical Application

Column Tower 50M³ Tank

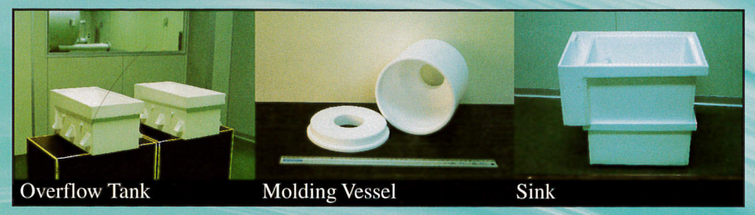
Tank 6M³ Tank Tank

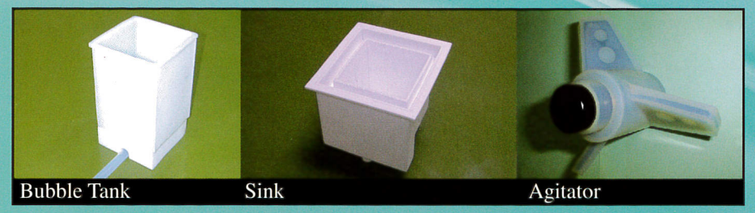
Tank Column Tank

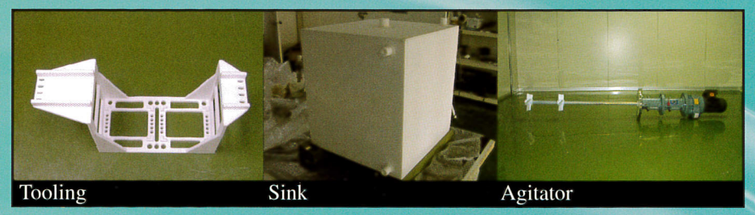
Lined FRP Tanks

FRP Columm 2M³ FRP Tank 20M³ FRP Tank

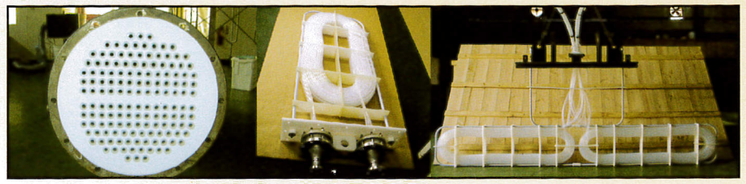
溢流槽/角槽與其他特殊應用產品
Overflow Tank/Sink and Special Tooling


Overflow Tank Molding Vessel Sink


Bubble Tank Sink Agitator


Tooling Sink Agitator

熱交換器 Heat Exchanger



氟素樹脂內襯材料比較表 Comparison Chart of Fluorocarbon Materials

	Property	UNIT	ASTM	PTFE	TFM	FEP	PFA	ETFE	PVDF	ECTFE	PCTFE
Physical	Melting point	℃	-	327	327	260	310	270	156~178	220~245	203
	Specific gravity	-	D792	2.14~2.20	2.16~2.19	2.12~2.17	2.12~2.17	1.70	1.75~1.78	1.68~1.69	2.1~2.2
Mechanical	Tensile strength	Kgf/cm^2	D638	280~350	250~350	220~320	250~350	460	350~440	490	315~420
	Elongation at break	%	D638	200~400	250~450	250~330	300	100~400	80~300	200~300	80~250
	Compression strength	kgf/cm^2	D695	120	160	155	170	500	680~980	-	320~520
	Impulse strength	kgfcm/cm	D256A	16.3	-	-	-	-	16.3~38.1	-	13.6~14.7
	Rocks well hardness	-	D785	-	-	-	-	R50	R77~83	R93~95	R75~95
	Shore hardness	-	D2440	D50~55	D58	D55	D60	D75	D75~77	D55	D75~80
	Bending elasticity	-	D790	5.6	-	6.6	6.7~7.0	14	20.4~25.3	6.7~7.0	12.7~18.3
	Tensile elasticity	$10^3kgf/cm$	D638	4.1~5.6	-	3.5	-	8.4	13.4~15	16.8	10.5~21
	Abrasive coefficient	-	$7kgf/cm^2$ 3m/min	0.10	0.18	0.3	0.2	0.4	0.39	-	0.37
Thermal ability	Thermal conductivity	$10^{-4}cal/cm^2sec/℃$	C117	6.0	6.0	6.0	6.0	5.7	2.4~3.0	3.8	4.7~5.3
	Specific heat	Cal/℃/g	-	0.25	0.25	0.28	0.25	0.46~0.47	0.33	-	0.22
	Linear expansion coefficient	10^{-4}/℃	D696	10	12	8.3~10.5	12	5.9	7~14	8	4.5~7.0
	Deformation under load	-	-	-	-	-	-	-	-	-	-
	$18.5kgf/cm^2$	℃	D648	55	-	50	47	4	87~115	77	-
	$4.6kgf/cm^2$	℃	D648	121	-	72	74	104	149	116	126
	Max. temperature (Continuously)	℃	-	260	260	200	260	150~180	150	165~180	177~200

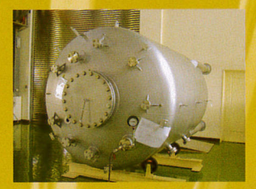
品質檢驗項目 Quality Check Items

1. 外觀檢查(Visual Check)
2. 內襯貼合檢查(Bonding Test)
3. 針孔檢查(Pin Hole Test)
4. 氣壓試驗(密閉性試驗)(Air Pressure Test)
5. *絕緣阻抗試驗(Megger Test---Option)
6. *微顆粒檢測(Particle Counter Test---Option)

(*: 爲客户可增選的檢驗項目Optional items)

針孔試驗 (Spark Test)

內襯表面清潔 (IPA and DI Water Cleaning)



氣壓試驗 (Air Pressure Test)

氣壓試驗 (Air Pressure Test)

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