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公司簡介 | Company Profile

豐鼎主要以設計製造大型空冷器(ACC、AFC)、鰭管式、殼管式、氣對氣 等各式熱交換器為主;其設備廣泛的使用於各式發電廠、垃圾焚化廠、造 船廠、工程公司、電子業、機械製造廠、煉油化工、紡織染整、環保工 業、食品製藥等,包括冷卻、冷凝、加熱、蒸發以及廢熱回收等行業。

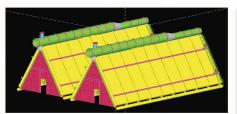
本公司具有獨立設計及計算規劃能力,為了不斷提升設計研發能力,與 美、德等先進公司技術合作,並著重於客製化設計滿足客戶多樣化需求。 除了熱交換器的設計與製造外,亦提供相關的一系列配套服務,例如熱能 設計、強度設計、安裝指導及監造、運行試驗、備品供應及代理各類設備 及技術應用等。

Fong Ding mainly designs and manufactures the large type air coolers (Ex: ACC, AFC), fin-tube type, shell & tube type, gas to gas type and all kind of heat exchangers and are widely used in various industry like power plant, waste incineration plant, shipyards, engineering companies, electronics, machinery manufacturing, refining and chemicals, textile dyeing and finishing, environmental protection, food and pharmaceutical ··· etc., also including cooling, condensation, heating, evaporation and waste heat recovery industries.

Our company has the ability of independent design and calculation & planning and we cooperate with USA, Germany, etc. advanced companies in order to upgrade the ability of designing for researching and developing. We focus on customized design to satisfy customers in the various requested demand.

In addition to the design and manufacture of heat exchanger, we also provide a series of supporting service such as thermal design, strength design, installation and guidance, supervision, operation test, supply of spare parts and agency of various equipment and technical applications,

設計能力 The ability of design



▲ 3D立體配置圖 Three-dimensions plot plan

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▲ 熱能計算書 Thermal energy calculate sheet



▲ 強度計算書 Strength calculate sheet



CFD analysis

Business Scope

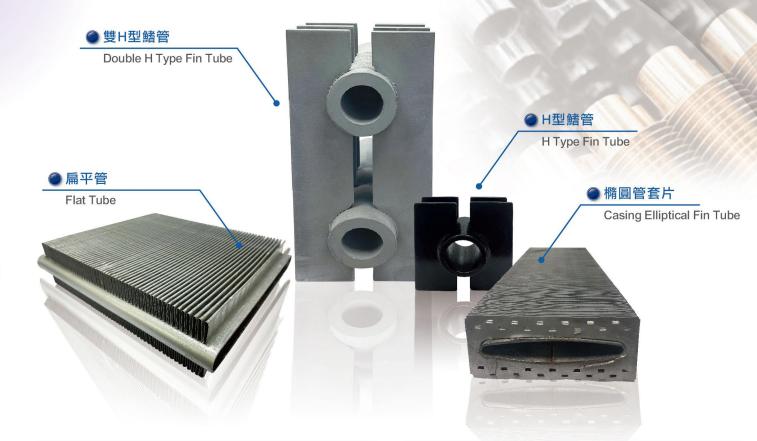
- ■
- 熱交換器 **Heat Exchanger** (鰭管式&殼管式) [Fin Tube Heat Exchanger & Shell and Tube Heat Exchanger]
- 焚化廠及發電廠用大型空冷器 Air Cooled Condenser and Air Fan Cooler for Incineration and Power Plant [Design, Manufacture and Installation] (設計、製造、按裝)
- 氣對氣熱交換器 Gas to Gas Heat Exchanger
- 電加熱器 Electric Heater
- 有機溶劑回收工程 Organic Solvent Dehydration
- 能源(廢熱)回收工程 Energy Reclaim Engineering
- 石化設備製造及按裝 Manufacture & Installation Petro-chemical Equipment
- **Engineering Design, Manufacture, Installation & Maintain** ● 專門設計、承製、按裝及維修各種熱交換器















空氣冷卻器 Air Cooler

- 利用氣體與管側流體進行熱交換,來達到所需求的溫度。
- ② 依型式可區分為沖片式、捲片式。
- 愈 熱交換器是一種使得兩種或多種製程流體之間能夠進行熱交換的傳熱設備, 普遍廣泛使用於工業及商業應用。
- The principle is used gas and the fluid of tube side to exchange each other in order to achieve the required temperature.
- 2 It can be divided two types which plate type and fin tube type.
- Heat exchanger is a heat transfer device that used two or more process fluids to exchange and usually used in industrial and business.



▲ 空氣加熱器 (捲片式)



▲ 空氣加熱器 (捲片式) Air Heater (Fin Tube Type)



▲ 空氣加熱器 (沖片式) Air Heater (Plate Type)



▲ S型空氣加熱器 (捲片式) S Type Air Heater (Fin Tube Type)

利用管側流體將鰭片側空氣降溫,來達到所需求的溫度與溼度。

- 型式:沖片式/捲片式。
- ② 材質選用
 - 傳熱管:銅 / 不銹鋼 / 碳鋼

 - 外框:碳鋼/鍍鋅/不銹鋼。
- ③ 適用產業:電子、石化、塑膠等各大相關產業。

The principle is used the fluid of tube side to let the air of fin side to reduce temperature and to reach the required temperature and humidity.

- Type: Plate/ Fin tube type.
- Material as below,
 - Tube: Copper / Stainless steel / Carbon steel
 - Fin : Alum. with coating / Alum. / Copper / Copper with Tin / Stainless steel
 - Casing: Carbon steel / Galvanized zinc / Stainless steel
- Applicable industries: Electronic, Petrochemical, Plastic and others related industries.



▲ 空氣冷卻器 (沖片式) Air Cooler (Plate Type)



▲ 空氣冷卻器 (沖片式) Air Cooler (Plate Type)



▲ 空氣冷卻器 (沖片式) Air Cooler (Plate Type)



▲ 空氣冷卻器 (沖片式) Air Cooler (Plate Type)

利用風扇將氣體與管側流體進行熱交換, 來達到所需求的溫度。

- ① 型式:沖片式
- ② 材質選用
- 傳熱管:不銹鋼/銅/銅合金/碳鋼。
- 鰭片:不銹鋼/銅/銅鍍錫/鋁片/藍波片
- 外框:鍍鋅/不銹鋼。 • 鋼構:碳鋼 熱浸鋅。 • 風罩:碳鋼 熱浸鋅。
- 扇葉: 不銹鋼 / 鋁合金。
- ③ 適用產業:石化、發電、製造等各 大相關產業。

The principle is used the fan to exchange the gas and the fluid of tube side and to reach the required temperature.

- Type: Plate.
- Material as below,
 - Tube : Stainless steel / Copper / Copper Alloy / Carbon steel
 - Fin : Stainless steel / Copper / Copper with Tin / Alum./ Alum. with coating
 - Casing: Galvanized zinc / Stainless steel
 - Steel Support : Carbon steel + Hot Dip Galvanized
 - Fan Cover : Carbon steel + Hot Dip Galvanized
 - Fan: Stainless steel / Alum. Alloy
- Applicable industries : Petrochemical, Power generation, Manufacturing and other related industries.







蒸發器 **Evaporator**

根據被冷卻介質的種類不同,蒸發器可分 為兩大類

- 冷卻液體(冷媒)的蒸發器
- ② 冷卻空氣的蒸發器 可依不同的功能用途來選擇其適用的 蒸發器。
- ③ 材質選用:
- 傳熱管: 不銹鋼 / 銅。
- 鰭片: 藍波(鋁) / 鋁 / 銅 / 銅鍍錫 / 不銹鋼

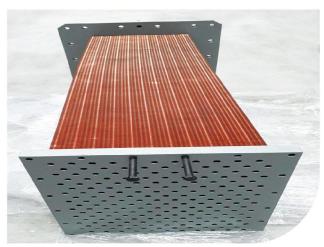
Evaporator depeds on the type of cooled medium and it can be divided into two types:

- Evaporator for cooling liquid (Refrigerant).
- Evaporator for cooling air. The suitable evaporator can be selected according to different functions.
- 3 Material as below,
- Tube: Stainless steel / Copper
- Fin: Alum. with coating / Alum. / Copper / Copper with Tin / Stainless steel





▲ 空壓機用冷卻器 Air Compressor Cooler



▲ 鼓風機&空壓機用冷卻器 (沖片式) Blower Cooler & Air Compressor Cooler (Plate Type)



▲ 空壓機用冷卻器 Air Compressor Cooler



▲ 鼓風機用冷卻器 (沖片式) Blower Cooler (Plate Type)

真空爐&退火爐用熱交換器 | Heat Exchanger For Vacuum Furnace & Annealing Furnace



▲ 真空爐用熱交換器 Heat Exchanger For Vacuum Furnace



▲ 退火爐用熱交換器 Heat Exchanger For Annealing Furnace



▲ 真空爐用環狀熱交換器 Ring Type Heat Exchanger For Vacuum Furnace

油冷卻器 Oil Cooler



▲ 殼管式熱交換器 Shell and Tube Heat Exchanger



▲ 殼管式熱交換器 Shell and Tube Heat Exchanger



▲ 套管式熱交換器 Heat Exchanger For Double Pipe

Tube Bundle





熱交換器換管 | Heat Exchanger Re-tubing



▲ 換管前 Before Re-tubing



▲ 換管後 After Re-tubing

此為規格品之冷卻器,依傳熱面積及流量來挑選合適的型號;同時此產品也接受訂製品。

1 材質選用

• Tube:銅/不銹鋼。

• 殼體及內部構件: 碳鋼 / 不銹鋼。

適用產業:製造及其他等各大相關產業。

This is the standard product of cooler and you can accord to the heat-transfer area and flow to select the suitable model number and also this cooler can be designed by the customer' requirements

Material as below,

• Tube: Copper / Stainless steel

• Shell and internal components: Carbon Steel / Stainless steel

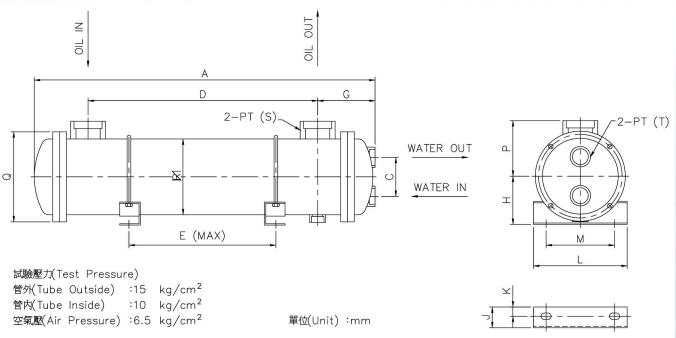
Applicable industries: Manufacturing and others related industries.







油冷卻器 Oil Cooler



PT (T)	A D C D C D WATER OUT WATER IN E (MAX) M M
	試驗壓力(Test Pressure) 管外(Tube Outside) :15 kg/cm² 管内(Tube Inside) :10 kg/cm² 空氣壓(Air Pressure) :6.5 kg/cm² 單位(Unit) :mm
散熱	

	型式編號 Type	А	С	D	E	G	н	J	К	L	M	N	Р	Q	R	S (PT)	T (PT)	最大 流量 Max Fluid L/min	散熱 面積 Transfer Area m²
	FD-303	299		147	117		79	35	15	128	75	11*20	75	120				100	0.3
	FD-304	370		219	189											1			0.4
	FD-305	468	48	291	261	95									89		3/4		0.5
	FD-307	608	40	435	465	95													0.7
	FD-309	758		578	548														0.9
	FD-311	898		722	692														1.1
	FD-411	620		425	384		88	35	15	150	105	11*20	93	140	114	1-1/4	3/4	200	1.1
	FD-415	770		568	528														1.5
	FD-418	910	70	712	672	100													1.8
0 0	FD-421	1055		856	816														2.1
0	FD-424	1220		1020	980														2.4
0	FD-522	785		558	528		95					14*22	2 108	170	139			300	2.2
0	FD-527	925		702	672	115		45	20	175	122					1-1/2			2.7
	FD-531	1070	85	846	816												3/4		3.1
	FD-535	1235		1010	980														3.5
	FD-544	1455		1228	1196														4.4

型式編號 Type	А	С	D	E	G	н	J	K	L	M	N	Р	Q	R	S (PT)	T (PT)	流量 Max Fluid L/min	面積 Transfer Area m²
FD-649	1078		836	752	125			20	204	149	14*22	121	196	165	2	1	400	4.9
FD-657	1242	0.5	1000	920		105	45											5.7
FD-668	1462	85	1218	1138														6.8
FD-682	1742		1500	1420														8.2
FD-8107	1140		825	760	130	215	40	20	200	155	14	145	270	216	2	1-1/2	600	10.7
FD-8125	1305	110	1090	1025														12.5
FD-8149	1520	110	1210	1130														14.9
FD-8180	1805		1490	1420														18.0
FD-10169	1100		800	725														16.9
FD-10185	1210		910	835		222	38	15	175	152	14	4 223	170	267	10KV 2-1/2 法蘭 Flange	2	800	18.5
FD-10197	1300	173	980	905	150													19.7
FD-10235	1500		1200	1125														23.5
FD-10285	1775		1500	1425														28.5

型式編號説明:FD代表高效率滾牙油壓冷卻器,左邊開頭3,4,5,6,8,10代表冷卻器胴體直徑,同時也代表 冷卻器使用的最大流量,計算方式為將這個數字減掉2以後乘於100L/min,其餘數字取一位小數點就是它的散 熱面積,如FD-411

指滾牙式油壓冷卻器最大流量200L/min散熱面積1.1 m2。

Type No. Remark: FD represents Efficient Low Fin Oil Cooler, Ex: FD-8107, FD= Efficient Low Fin Oil Cooler, 8=Oil Cooler' sOutside Diameter, 107=Transfer Area (10.7 m2).

附表B(Attachment B)

附表A(Attachment A)





利用大型風扇將氣體與管側流體進行熱交換, 使管側流體冷凝到所需求的溫度。

- 1 材質選用
 - 傳熱管:碳鋼/碳鋼複合板/碳鋼+熱浸鍍鋅 /不銹鋼。
 - 鰭片:碳鋼/鋁/不銹鋼/碳鋼+熱浸鍍鋅。
 - 外框:碳鋼 / 熱浸鍍鋅 / 不銹鋼。
- ② 適用產業:石化、發電廠、垃圾焚化廠等各大 相關產業。

The principle is used the large fan to exchange heat for the gas and the fluid of tube side and make the fluid of tube side condense to reach the required temperature.

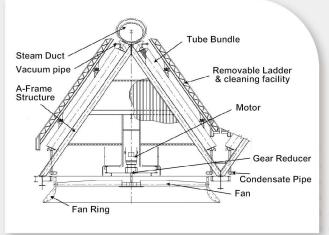
- Material as below,
 - Tube : Carbon steel / C.S.+ Al.with Clad Plate / C.S.+ Hot Dip Galvanized zinc / Stainless steel
 - Fin: Carbon steel / Alum./ Stainless steel / C.S.+ Hot Dip Galvanized zinc
 - Casing: Carbon steel / Hot Dip Galvanized zinc / Stainless steel
- Applicable industries: Petrochemical, Power Generation Plant, Waste Incineration Plant and others related industries.



▲ 大型空氣冷凝器 Air Cooled Condenser



▲ 大型空氣冷凝器工程(ACC) Air Cooled Condenser Engineering



▲ ACC設備組合圖 **ACC Combination Drawing**



▲ 大型空氣冷凝器工程(ACC) Air Cooled Condenser Engineering





利用大型風扇將氣體與管側流體進行熱交換, 使管側流體冷卻到所需求的溫度。

● 材質選用

• 傳熱管:碳鋼 / 不銹鋼 / 銅。 鰭片:碳鋼/不銹鋼/鋁/銅。 • 外框:碳鋼/鍍鋅/不銹鋼。

② 適用產業:電子、紡織、石化、塑膠等各大

相關產業。



The principle is used the large fan to exchange heat for the gas and the fluid of tube side and make the fluid of tube side cool to reach the required temperature.

Material as below,

• Tube: Carbon steel / Stainless steel / Copper

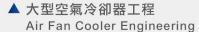
• Fin: Carbon steel / Stainless steel / Alum. / Copper

• Casing: Carbon steel / Galvanized zinc / Stainless steel

Applicable industries : Electronic, Textile, Petrochemical, Plastic and others related industries.





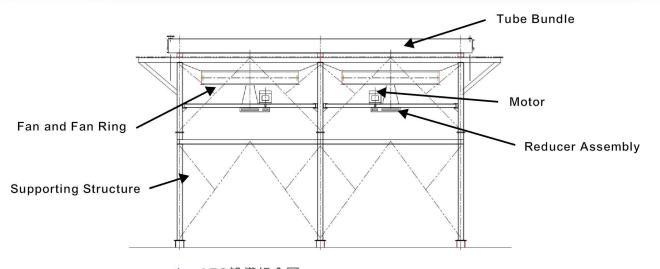




▲ 大型空氣冷卻器 Air Fan Cooler



▲ 大型空氣冷卻器 Air Fan Cooler



▲ AFC設備組合圖 AFC Combination Drawing

氣對氣熱交換器

Gas to Gas Heat Exchanger

- 在氣對氣熱交換器領域,氣對氣板式熱交換器是由 熱管式、鰭管式和殼管式熱交換器的升級換代產品。
- 熱流體最高工作溫度可達 950℃。
- 重量輕、佔地面積小,換熱面積可達到 40m2/m3。
- 採用雙向波紋板片,傳熱係數高。
- 彈性結構,解決了高溫熱膨脹問題。
- 設備全焊接,無洩露。
- 換熱片全模壓,模組化設計,可多元組合。
- In the field of gas to gas heat exchanger, gas to gas plate exchanger is the upgraded and updated product of heat pipe, fin tube and tabulation heat exchangers.
- Maximum operating temperature of thermal fluid can reach up to 950°C.
- With light weight and small floor area, the heat exchanger area can reach 40m2/m3.
- Equipped with bidirectional corrugated sheets and high of heat transfer film coefficient.
- Elastic welding structure solves the problem of damage caused be thermal expansion.
- With all welding structure, the equipment solves the problem of sealing gasket leakage.
- With heat exchanging sheet full mould pressing and modular design can ensure flexible combination in multi-elements.

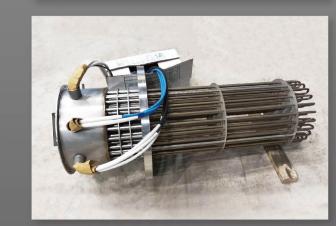














Electric Heater

- 因現場無加熱源或其他限制,所以使用 電熱器加熱。
- 以電熱管來加熱氣體或液體使其達到所 需求的溫度。
- - 電熱管:不銹鋼 (有縫管/無縫管)/鈦。
 - 殼體:碳鋼/鍍鋅/不銹鋼。
- 2 適用產業:電子、製造、環境衛生等各 大相關產業
- Because there is no heating source or other limits on the site so that you need to use the electric heater for heating.
- Use an electric heating tube to heat the gas or liquid to reach the required temperature.
- Material as below,
 - Tube : Stainless steel (seam tube or seamless tube) / Titanium
 - Casing: Carbon steel/ Galvanized zinc/ Stainless steel
- Applicable industries : Electronic, Manufacturing, Environmental Sanitation and others related industries.

工程實績 | Project Performance



工程名稱

Project Name

ACC汰舊換新工程

The Replacement of ACC Fin Tube Bundles





工程名稱

Project Name

AFC汰舊換新工程

The Replacement of AFC Fin Tube Bundles





Project Name

廢熱熱水鍋爐及節熱器 製作及安裝

Manufacturing and Installation of Waste and Hot Water Boiler and Economizer



工程名稱

Project Name

V型冷卻器含現場配管配電工程

V type Air Cooler including Installation with Piping and Power Distribution Engineering



工程名稱

Project Name

燃油加熱器汰舊換新工程

The Replacement of Fuel Oil Heater



工程名稱

Project Name

低壓側空氣預熱器 製作及安裝工程

Air Preheater of Low Pressure Side Manufacturing and Installation Engineering

未來展望 Future Prospect

展望未來一

本公司將持續「研發高效能熱交換器」並堅持「優良品質」、「合理價格及交期」、「創新研發」及「專業的服務」等核心價值及客戶導向之經營理念,提供顧客高品質及高效率的產品,並積極拓展海外客戶,使產品及服務能銷售至世界各地。

Looking forward to the future-

Fong Ding will continue to "research and develop high-performance of heat exchangers" with adhere to the core values with customer-oriented business philosophy of "excellent quality", "reasonable prices and delivery", "innovation, research and develop" and "professional service" to provide customers with the high-quality and high-efficiency products and actively expand overseas customers so that products and services can be sold all the world



