

● 熱媒油加熱系統

THE HEAT TRANSFER OIL HEATING SYSTEM

熱媒鍋爐是採用強制循環的高溫低壓加熱系統，利用柴油、天然氣、瓦斯、電熱或生質燃料做為熱能來加熱液態的熱媒油。熱媒油在高溫下依然有良好的抗氧化、抗裂解及不易產生沉澱物等特性，使用年限長。

經由循環幫浦將熱媒油送至熱交換器，供給熱量後再回到鍋爐加溫。利用熱媒油高比熱、高熱傳導係數及傳熱平均特性，能有效節省能源。與蒸氣相比，熱媒油系統最高可提供300℃的油炸環境，而且免除使用高壓蒸氣的危險與不便。

The heat transfer oil boiler adopts the high temperature, low pressure heating system with forced circulation, and uses diesel, natural gas, gas, electricity or biofuel as energy to heat the liquid heat transfer oil. Heat transfer oil has good anti-oxidation and anti-cracking properties and precipitation rarely occurs at high temperatures; it also has a long service life.

The circulation pump delivers the heat transfer oil to the heat exchanger for heat supply and then sends it back to the boiler for heating. With characteristics of high specific heat, high thermal conductivity and uniform heat transfer, the heat transfer oil can effectively save energy. Compared to a steam system, the heat transfer oil system can not only provide a frying temperature of up to 300 °C, but also avoid the dangers and inconvenience of using high-pressure steam.

設計特點

- ◆ 立型(節省空間)及臥型(維修檢測便利)燃燒室設計，熱吸收效率高。
- ◆ 熱媒油流速、流量經過精密計算，不會過熱裂解。
- ◆ 爐內盤管多管併進受熱均勻，增加傳熱面積與效率。
- ◆ 特殊熱效率設計，充分吸收燃燒輻射熱、對流熱，廢氣溫度低。
- ◆ 具備出油溫控、回油超溫、排氣溫度、流量差壓異常、熱媒油不足等安全警報，以及自動停機的保護裝置。

Design Features

- ◆ For the combustion chamber, vertical (saving space) and horizontal (convenient for maintenance and inspection) designs are available, with high heat absorption efficiency.
- ◆ The velocity and flow of heat transfer oil are precisely.
- ◆ Furnace coils are heated evenly by multiple tubes which increase both heat transfer area and efficiency.
- ◆ The special thermal efficiency design can effectively absorb combustion radiation and convective heat resulting in low temperature exhaust gas.
- ◆ The boiler is equipped with safety alarms for oil output temperature, oil return overheating, exhaust gas temperature, abnormal differential flow pressure, and insufficient heat transfer oil level controls, and with automatic shutdown protection.

熱媒油加熱能源消耗表

Heating Energy Consumption Table for Heat Transfer Oil

熱量 (10 ⁴ Kcal/hr)	20	30	40	50	60	80	100	125	150	175
燃料消耗量										
柴油 Diesel (L/hr)	28	42	56	70	84	112	140	175	210	245
天然氣 LNG (M ³ /hr)	25.5	38.5	51	64	77	102	127	160	192	224
瓦斯 LPG (Kg/hr)	19	28.5	38	47.5	57	76	95	119	142	166
電能 Electric (Kw/hr)	232	349	465	582	698	931	1164	1455	1746	2037
循環幫浦馬力 Circle Pump (HP)	5	7.5	10	10	15	20	25	30	30	40

★ 註：生質燃料之消耗量因燃料種類不同而有所差異，故不附於此表。

★ Note: The consumption of biofuels differs according to fuel type, and therefore it is not listed in this table.

