



# **CHIEFAN MARINE**

INTEGRITY PROFESSIONAL INNOVATION EFFICIENCY



# A bout us

We Chiefan marine is a company specialized in air cooler ,Heat Exchangers, AC condenser , Evaporator crane oil cooler design and manufacturing , as well as boiler repairing.

Our factory is well equipped with latest technologies, with auto machines, enabling us to produce the best quality products by our qualified techniques having best knowledge & experience in this line

Moreover, we would like to point out that we are very conscious on quality supply, delivery schedule & always take greatest efforts to supply the quality goods on time .

Our range of products includes all types of marine ME/AE air cooler ,heat exchanger (Plate type & Shell-Tube type ),Calorifier, AC Condenser, Evaporator, AC Heater ,Crane oil cooler, Filter manufacture, Main & Aux marine boiler repairing . Specially our heat

exchanger construction and boiler repair and have been approved by LR, GL, NK, BV, DNV, etc

Our product air cooler , heat exchanger are manufactured from Quality Raw Materials, and we have most experience and professional team for boiler repairs ,all of this have bring us a good name in the entire market in china and abroad.

We are very much confident that we are able to meet with any of your requirements of our products to your entire satisfaction as far as quality, delivery schedule & prices are concerned.





# Air Coolers

## Applied To Following Engine Type:

- ◆ MAN
- ◆ B & W
- ◆ SULZER
- ◆ YANMAR
- ◆ MITSUBISHI
- ◆ WARTSILA
- ◆ AKASAKA
- ◆ FIAT
- ◆ BLACKSTONE
- ◆ MAK
- ◆ PIELSTICK
- ◆ DEUTZ
- ◆ S.K.L
- ◆ CREPELLE
- ◆ M.W.M
- ◆ ALPHA
- ◆ CATERPILLAR
- ◆ DAIHATSU
- ◆ NOHAB POLAR



### Material:

Tube Sheet: Naval Brass

Tube: Al-Cu, Cu-Ni

Fin: Copper

## Metal-Plastic Complex Cover and Pipe

Stabile plastic lining would prevent corrosion greatly.  
Extend lifetime and reduce cost of maintenance.



lining material: PE/PP/PVC  
lining thickness: 3~10mm  
working temperature: -40°C~-120°C  
working pressure: 0~1.6MPa



Fresh water generator



ATM condenser



L.O. cooler



F.O. heater



Heater bundle



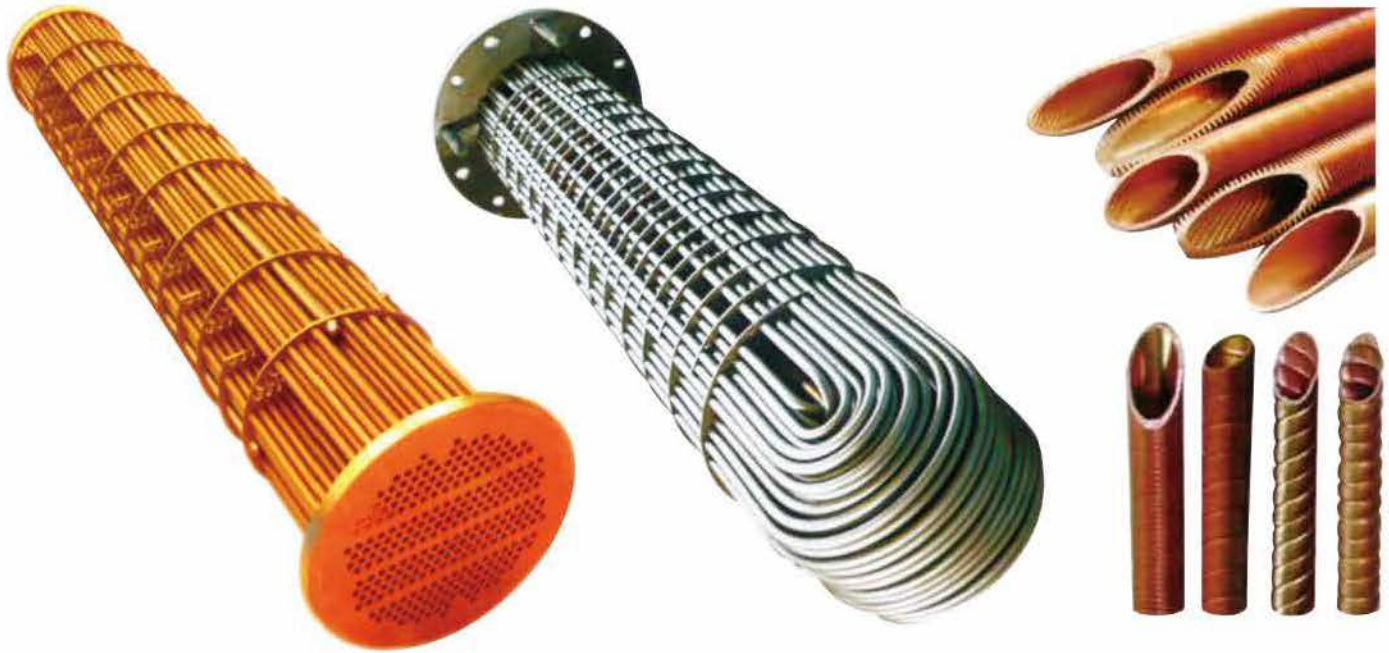
Cargo heater assembly

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Shell-tube heat exchanger has more advantage in cost & maintenance. It is especially applied to high thermal capacity medium such as liquid & steam.

Typical applications as follows:

- ◆ Vacuum Condenser
- ◆ ATM Condenser
- ◆ AC Condenser
- ◆ L.O. Cooler
- ◆ L.O. Heater
- ◆ F.O. Heater
- ◆ F.W. cooler
- ◆ Fresh water generator

- Design according to thermodynamic parameters and fixed dimensions.
- Manufacture based on advanced technology and normative procedure.
- Arrange on board survey in case of missing technical file.
- Provide following professional services:

- ◆ Detect leakage and mending or plugging.
- ◆ Removal and installation.
- ◆ Chemical and ultrasonic cleaning.
- ◆ Retubing Partly Or Fully
- ◆ Mending Shell

### Crane Oil cooler

### Radiator



# Plate Type Heat Exchanger

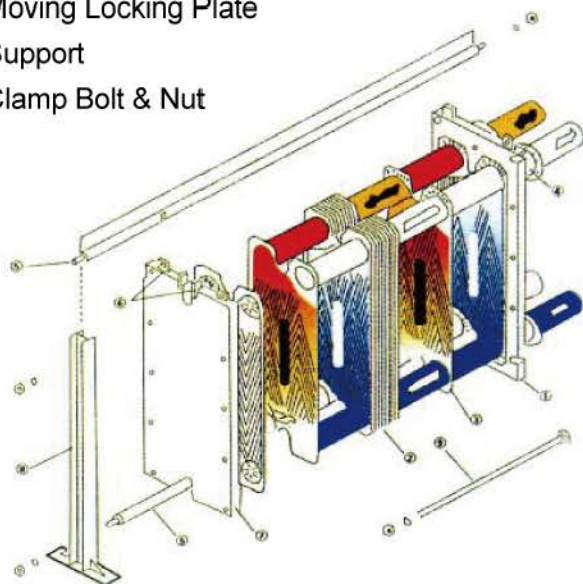
Function Classification: Plate Type Cooler / Plate Type Heater.

Plate Type Cooler is used in cooling of lubricating oil/fresh water / acid or alkali medium of dynamic equipment;

Plate Type Heater is used in heating of fresh water / oil / drinking water.

## Plate Type Heat Exchanger Structure Drawing

- 1 ) Dead Locking Plate
- 2 ) Plate
- 3 ) Gasket
- 4 ) Connecting Pipe / Flange
- 5 ) Up-down-leader
- 6 ) Rolling-device
- 7 ) Moving Locking Plate
- 8 ) Support
- 9 ) Clamp Bolt & Nut



## Plate Type Heat Exchanger Advantage

- **Compact size**  
The plate-type heat exchanger occupy much less space for maintenance and repairing , even with very limited space volume of frame but provide large heating area, the capacity volume is only 30% and occupied only 1/5 – 1/10 floor area compare tube-shell heat exchanger
- **Light weight**  
The weight can be reduced as much as 50% due to small frame and volume



- **High heat transmission**  
Due of high torrential flow of the fluid inside, the heat transmission coefficient if 3 to 5 times high than tube type heat exchanger
- **Easy for dismantling**  
There is no welding upon the plate-type heat exchanger, so it is easy to disassemble in case of cleaning or replacing require , and easy for increasing or decreasing the plates , all the means that is has high flexibility
- **Low scaling possibility**  
The higher smoothness of the plate and the torrential flow of fluid inside the passage way result in thinner layer of scale so that the heat resisting coefficient is only 1/5 in compare to tube-type heat exchanger.
- **Avoid of mixing of the two media**  
In case of leakage of the fluid from the sealing gasket, the fluid can only came out from the overflow hole without being mixed
- **High rate of heat recovery**  
As a result of high rate of heat transmission by way of the backflow mode, the heat difference of the end is as little as 1 degree so that the rate of heat recovery is as high as 95%
- **Minimum hold up of liquid**  
Its hold up of 80% less that of the tube type heat exchanger



# Electrical Heater / Calorifier / Air Bottle



F.O. electrical heater



Calorifier



Pressure Water Tank

### Technical Data:

Heating capacity: 5~150KW  
 Working pressure: 0~16bar  
 Working temperature: 30°C~150°C  
 Surface loads:  
 Air: 1.0~2.0 W/cm<sup>2</sup>  
 Water: 3.0~8.0 W/cm<sup>2</sup>  
 Oil: 0.5~1.5 W/cm<sup>2</sup>



Vertical Air Bottle



Horizontal Air Bottle

- Safe electric heating element.
- Credible control unit and sensor.
- High precision control system.
- Multiple safety protection.
- Flexible design for customization.
- Applied to heat air, water, oil.



Electrical Heater Element



# Boiler Components Construction



Pin-Fin Tube



Pin-Fin Tube



Spiral Finned Tube



H-Fin Tube



Bended tube



Neck tube



Serpentine tube



Spiral tube



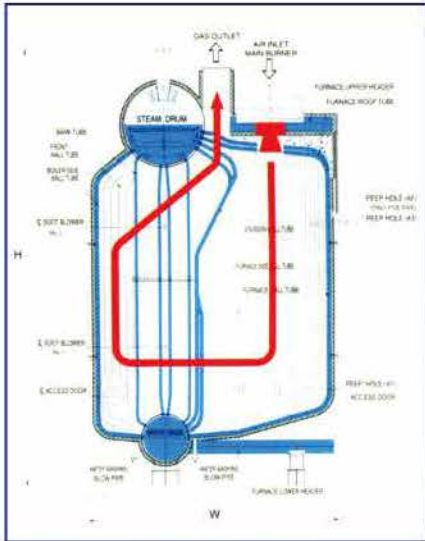
Coiled tube

We can manufacture various boiler components according to your requirement.  
Our workers are certified by appointed classification society or third party.





# Marine Boiler Repairs



- Full equipments for fabricating all types of boiler & EGE tubes.
- Boiler inspections: damage reports, cost estimate, full boiler surveys.
- 24 hours emergency repair services, supervisors and repair team available.
- Highly skilled, experienced team and certified welders available.
- Work procedure comply with all classification societies rules.



## Marine Boiler Repairs For Following Boiler Makers

- ◆ Aalborg
- ◆ Kangrim
- ◆ Osaka
- ◆ Kawasaki
- ◆ Sunrod
- ◆ Miura
- ◆ Green
- ◆ Mitsubishi



## Air-conditioner and Refrigerator



Refrigerator



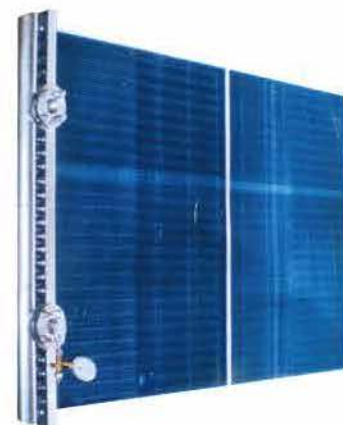
A/C Condenser



AC Compressor



AC Evaporator



AC Heater



**24 hours emergency or general service available .**

- Professionally inspect system and advise.
- Manufacture or repair condenser and evaporator.
- Renew or overhaul compressor, expansion valve, filter, draught fan, motor, etc.
- Connect circuit, detect leakage, then vacuumize.
- Retrieve and fill refrigerant medium.
- Inspect control system and renew elements.
- Debug full system to good condition.



# Marine valve / Air vent / Filter/ Expansion joint



Marine Valve



Air Vent

Water Filter

Oil Filter



Expansion Joint

Motor Rewinding



Impeller Balance



- ME/AE Air Coolers
- Shell-tube Type Heat Exchanger
- Plate Type Heat Exchanger
- AC Condenser/AC Evaporator/AC Heater
- Crane Oil Cooler/ Radiator
- Pressure Water Tank/ Calorifier /Air Bottle
- Main & Auxiliary Boilers Repair
- Marine Automatic Equipment Repair And Service
- Marine Valve/ Filter / Air Vent / Expansion Joint Supply



## CHIEFAN MARINE

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