



UNGGUL
PRAKARSA
PRISMA



Laser Welded Finned Tube

Heat exchanger



Laser Welded Finned Tube



Copper+304 SUS

| | |
|---------------|---------|
| The base Tube | 14*1 mm |
| Piece of High | 6 mm |
| Thickness | 0.4 mm |
| Distance | 2.0 mm |

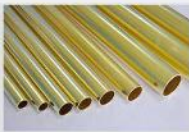
316L+316L

| | |
|---------------|-----------|
| The base Tube | 14*1.2 mm |
| Piece of High | 7 mm |
| Thickness | 0.5 mm |
| Distance | 2.5 mm |



Titanium+Titanium

| | |
|---------------|-----------|
| The base Tube | 25*1.5 mm |
| Piece of High | 10 mm |
| Thickness | 0.4 mm |
| Distance | 2.5 mm |



High frequency finned tube



TUBES

- Copper, Stainless steel, Aluminum, Hot deep carbon steel, Titanium, Cupronickel
- 7 mm, 5/16", 3/8", 12 mm, 1/2", 5/8", 20 mm, 25 mm
- Smooth, Smooth thick-walled, Grooved, Super grooved (deeper grooves)
- Connection to several circuits available

FINS

- Aluminum / Copper / Stainless steel / Hot deep Carbon Steel
Titanium / Cupronickel

CASING MATERIAL

- Thick. 1 – 3 mm
- Galvanized steel / Aluminum / Stainless steel / Copper / Brass

CASING STYLE

- End plates with or without collets
- various design of side plates
- Fan plates (Galvanized steel and Aluminum up to 1, 5 mm)
with pressed collar for fan (16 possible diameters)

Laser Welded Finned Coil



Copper Tube



- All Kinds of Copper Tube
- High Efficiency Finned Tubes
- Low Finned Tubes
- Integral High Finned Tubes
- Inner Grooved Tube





Product Range

1. Our company have 10 sets of laser welding machines, annual production capacity up to 500,000 meters.
2. The base tube is with diameter more than 10mm and wall thickness more than 0.8mm, and the fin thickness is 0.5mm.
3. Test equipment reaches 30MPa test pressure.
4. Material: SUS304/304L/316L/316Li/2205/Carbon steel/Copper/Titanium

| Tube material | Tube OD | Fin pitch | Fin height*thickness |
|--|------------|------------------|----------------------|
| SUS304/304L/ 316L/2205/ Carbon Steel/ Copper/ Titanium | Φ 10*1-2 | 1.8-5.0 | (0.5-0.6) * (5-6) |
| | Φ 12*1-3 | 1.8-5.0 | (0.5-0.6) * (5-6) |
| | Φ 14*1-4 | 1.8-5.0 | (0.5-0.8) * (5-7) |
| | Φ 16*1-4 | 1.8-6.0 | (0.5-0.8) * (5-8) |
| | Φ 18*1-4 | 1.8-6.0 | (0.4-0.8) * (5-9) |
| | Φ 20*1-5 | 1.8-7.0 | (0.4-0.8) * (5-10) |
| | Φ 22*1-5 | 1.8-7.0 | (0.4-0.8) * (5-11) |
| | Φ 25*1.5-5 | 1.8-10.0 | (0.4-0.8) * (5-12.5) |
| | Φ 27*2-5 | 1.8-10.0 | (0.4-0.8) * (5-13.5) |
| | Φ 28*2-5 | 1.8-10.0 | (0.4-0.8) * (5-14) |
| | Φ 30*2-8 | 1.8-12.0 | (0.4-0.8) * (5-15) |
| | Φ 32*2-8 | 1.8-12.0 | (0.4-0.8) * (5-16) |
| | Φ 34*2-8 | 1.8-12.0 | (0.4-0.8) * (5-17) |
| | Φ 36*2-8 | 1.8-12.0 | (0.4-0.8) * (5-18) |
| | Φ 38*2-8 | 1.8-12.0 | (0.4-0.8) * (5-19) |
| | Φ 40*2-8 | 1.8-12.0 | (0.4-0.8) * (5-20) |
| | Φ 42*2-8 | 1.8-14.0 | (0.4-0.8) * (5-21) |
| | Φ 45*2-8 | 1.8-14.0 | (0.4-0.8) * (5-22.5) |
| | Φ 48*2-8 | 1.8-14.0 | (0.4-0.8) * (5-24) |
| | Φ 50*2-8 | 1.8-14.0 | (0.4-0.8) * (5-25) |
| Φ 76*4-10 | 3.0-15.0 | (0.8-2) * (5-25) | |
| Φ 114*4-10 | 3.0-15.0 | (0.8-2) * (5-40) | |
| Φ 159*4-10 | 3.0-15.0 | (0.8-2) * (5-40) | |

High frequency finned tube

Fin Type: High frequency finned tube

Tube Material: Carbon steel, stainless steel, copper, aluminum

Fin Material: Copper, aluminum

Fin Tube Length: No Limit

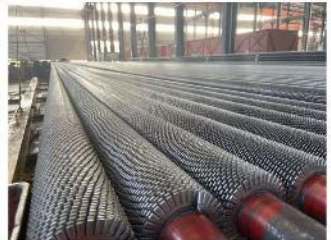
Product description: High-frequency finned tube works with high-frequency power source as a heat source, the steel strip, steel pipe heating at the same time, so that they melt into one. It has the characteristics of high heat transfer and heat dissipation efficiency, large heat transfer area, long service life, wide adaptability to temperature and high pressure.

The basic principle of finned tube is to take the seamless steel tube on the outer packing band with a certain distance (strip perpendicular to the outer surface of the tube) and high-frequency current welding as the heat source. By using the skin effect and electrical effect of high-frequency current, the local heating tube, the steel strip and the contact surface area to be welded can be plastically welded. At the same time, the forging force of finned tube is applied to the metal oxide and the plastic form of the contact outside of the excess melt, so as to realize the combination of solid atoms between the steel tube and the finned material

High frequency finned tubes features

The high-frequency welding finned tube uses the skin effect and proximity effect of the high-frequency current to heat the steel strip and the outer surface of the steel tube while the steel strip is wound around the steel tube until it is in a plastic state or melted. Under a certain pressure of winding the steel strip Finish welding. This high-frequency welding is actually a solid phase welding. Compared with inlay, brazing (or overall hot-dip galvanizing) and other methods, it is more advanced in terms of product quality (high fin welding rate, up to 95%), productivity and automation .

- (1) High production efficiency, continuous winding production;
- (2) Low cost, it depends on the characteristics of high-frequency welding itself — skin effect heating workpiece surface, to achieve the purpose of welding, welding process does not need to add any filler metal materials;
- (3) Since the high-frequency current only passes on the shallow surface of the steel tube, the welding heat affected zone is small, so the additional wall thickness caused by this need not be considered in the design calculation; No heat treatment is required after the workpiece is welded.
- (4) Solid welding, in the equipment configuration reasonable, process parameters perfect under the circumstances, can achieve between the fin and steel pipe welding firm, can withstand frequent open, shutdown caused by the thermal shock wave.



Water heating coil

Fin Type: Coil

Tube Material: Copper, stainless steel

Fin Material: Aluminum, Copper, Brass, Steel, Stainless

Product description:

Water heating coils are one of the simplest parts to an HVAC unit, but it can be important to know the parts so you know what type of connections and where they need to be located. Similar to chilled water coils, if and when a coil is to leak it usually happens in the copper u-bends.

But with hot high pressured water, it will first leak at the weakest place which can be on a return bend or in the middle of the coil. When patching a leak in the middle of the coil it will significantly destroy that area causing the coil to lose a great deal of efficiency.

Water heating coil description

Water heating coils are a type of heat exchanger often called hydronic coils that use hot water from a boiler to heat or remove moisture from the air. The air moves through the fins of the coil which is hot from water flowing through the tubes. This is a type of heat exchanger mostly used in commercial and industrial air handler units, roof top units as well as ductwork installations downstream.

In parts of the country and world, you may be more familiar with radiant heat or baseboard heat. Those particular units do not have air moving through them but simply radiates the air near the units. Hot water coils on the other hand are used in forced air systems and booster coils or reheat coils are used in ductwork downstream to reheat the air that has cooled off.

Water heating coil manufacturing process

Fin—Expansion—Casing—Brazing or welding—Testing—Crating

The cold machining process of fins provides excellent mechanical resistance, fins are strong and have strong resistance to atmospheric corrosion, etc. The pressure required to extrude the fin from the aluminum sleeve creates an excellent "pressure bond" between the two materials.

In addition, the aluminum finned material completely surrounds the metal of the tube, so there is no risk of electrical corrosion at the fin root (between the tube and the fin). All of these advantages ensure the most stable performance over time of all other fin types.

Water heating coil applications

Booster heat, reheat, waste heat reclamation, pre-heat, fluid process heat and more.





FINNED TUBES
We Transfer Energy

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