



United Copper Industries

UNITED COPPER INDUSTRIES

CONTACT US :



+91-9619994756



www.unitedcopperindustries.com



sales@unitedcopperindustries.com



OFFICE :

47, Balkrishna Niwas, Shop No 20, 3rd Panjrapole Lane,
Gulalwadi, Mumbai - 400004, Maharashtra, India



FACTORY :

Shed No - A-2/64, GIDC, Killa Pardi, Valsad, Gujrat - 396125



United Copper Industries

United Copper Industries is a leading manufacturer specializing in the production of copper-nickel finned tubes that adhere to the highest industry standards, specifically SB-111. Our product range includes plain cupro-nickel tubes with UNS numbers 71500, 71000, 70600, and 70400, ensuring top-notch quality and reliability.

The finning process we employ strictly complies with SB-359 guidelines, guaranteeing precision and excellence in every finned tube we produce. Our bare tubes are crafted from premium materials such as Cupro Nickel, Copper, and Admiralty Brass, with aluminum and copper serving as the fin materials.

Explore our diverse product line, featuring 90/10 copper-nickel finned tubes and 70/30 copper-nickel finned tubes, both available with plain ends, tailored to meet your exact specifications. These tubes are designed to provide enhanced surface area, significantly amplifying heat exchange capacity compared to conventional plain tubes. United Copper Industries' copper-nickel finned tubes boast a larger heat transfer surface area, offering potential savings in terms of fill volumes and materials.

Our tubes find application in various industries, including air conditioning and refrigeration, gas and oil coolers in plant and machinery engineering, and intermediate vapor superheaters in process engineering. We take pride in our ability to customize copper-nickel finned tubes to your precise sizes, dimensions, and lengths.

With over two decades of expertise in copper-nickel finned tube manufacturing, United Copper Industries stands as a reliable partner committed to delivering products with extremely close tolerance for surface finish, hardness, roundness, and straightness. Trust us to provide high-quality, tailor-made solutions that meet your unique requirements.

Contact United Copper Industries today and leverage our 20 years of experience in copper-nickel finned tube manufacturing. We are dedicated to meeting your specific needs with precision and excellence.



United Copper Industries

Copper-nickel finned tubes come in various designs to cater to specific applications and heat transfer requirements. Here are some common designs:

Longitudinally Copper-nickel Finned Tubes:

Application: Best suited for situations where fluid flows on the outside surface of the tube parallel to its length.

Fins: Fins can have a cross-sectional surface that is either tapered or flat, maximizing their efficiency.

Transverse Cupronickel Finned Tubes:

Application: Commonly used in turbulent or gas flow applications, as well as in cross-flow heat and tube exchangers.

Fins: Feature hollow metallic discs with equal spacing along the tube's length.

Extruded Cupronickel Finned Tubes:

Optimum Temperature: Typically operates at a temperature of 285 degrees Celsius.

Advantage: Known for offering excellent mechanical resistance to heat exchangers.

"L" Cupronickel Finned Tubes:

Operating Temperature: Functions effectively within a temperature range of 150°C.

Note: This type may have comparatively lower mechanical resistance.

Other Designs:

"LL" Cupronickel Finned Tube: Specific design with unique characteristics.

"KL" Cupronickel Finned Tube: Tailored for specific applications or performance requirements.

"G" Cupronickel Finned Tube: Features and characteristics designed for specific use cases.

These various designs allow for customization based on the specific needs of heat exchanger

applications, considering factors such as fluid flow, temperature requirements, and mechanical

resistance. Each design has its advantages and is selected based on the intended use and

operating conditions. It's essential to choose the right design to optimize the performance and

efficiency of the heat exchanger system.



United Copper Industries

What are the Benefits of Copper Nickel Finned Tubes?

Enhanced Heat Transfer: The finned structure of these tubes significantly increases the surface area available for heat exchange. This improves heat transfer efficiency, making copper-nickel finned tubes ideal for applications where efficient heat dissipation or absorption is crucial.

Corrosion Resistance: Copper-nickel alloys, commonly used in these tubes, exhibit excellent corrosion resistance. This makes the finned tubes durable and well-suited for applications in harsh environments, such as marine and industrial settings where exposure to corrosive elements is a concern.

Adaptability to Various Environments: Copper-nickel finned tubes can withstand exposure to seawater, making them particularly useful in marine applications. Their resistance to corrosion and biofouling is advantageous in offshore and coastal environments.

Compatibility with Multiple Fluids: These tubes are compatible with various fluids, including seawater and brackish water. This versatility makes them suitable for applications in desalination plants, shipbuilding, and other industries where exposure to different types of fluids is common.

Longevity and Low Maintenance: The corrosion-resistant properties of copper-nickel alloys contribute to the longevity of finned tubes, reducing the need for frequent maintenance. This characteristic is especially beneficial in applications where accessibility for maintenance is challenging.

Customization: Copper-nickel finned tubes can be customized to meet specific size, dimension, and length requirements. This flexibility allows for tailoring the tubes to the unique needs of different applications, enhancing their versatility.

Savings in Materials and Fill Volumes: The increased heat exchange capacity of finned tubes may result in more efficient thermal performance, potentially leading to savings in fill volumes and materials. This can be advantageous in various industrial processes and systems.



United Copper Industries

What are the Specifications for Copper Nickel Finned Tubes?

- Copper Nickel 90/10 outside diameter up to 1/4 to 2", as per customer requirements.
- Fin per Inch - up to 10 to 20 fins per inch, as per customer requirements.
- Tube wall thickness up to 1.0mm to 2.0mm, as per customer requirements.
- Tube lengths up to 1000mm to 6000mm, per customer requirements.
- Finning material – Aluminum 1060F, Copper C1100, and stainless steel, as per customer requirements.
- Fin OD - 16mm to 50mm as per customer requirements.
- Fin thickness - 0.45mm to 0.85mm, as per customer requirements.

TUBE MATERIAL: C70600 COPPER NICKEL (CuNi) 90/10 SEAMLESS

FIN TYPE AND MATERIAL: ALUMINUM SPIRAL, EXTRUDED HY TYPE
PER ASTM B221M ALLOY 1060F, PREFERED.

TUBE SIZE: 12.7 MM

TUBE THICKNESS: 1.5 MM

TUBE LENGTH: 1540 MM

UNFINED LENGTH:30 MM BOTH ENDS

FIN LENGTH:1480 MM

TUBE THICKNESS: 0.45 MM +/- 0.05 MM

TOLERANCE.FIN DIAMETER: 29 MM +/- 1MM

FINS/INCH: 10 FINS/INCH

TUBE MATERIAL: C70600 COPPER NICKEL (CuNi) 90/10 SEAMLESS
FIN TYPE AND MATERIAL: ALUMINUM SPIRAL, EXTRUDED HY TYPE PER
ASTM B221M ALLOY 1060F, PREFERED.

TUBE SIZE: 25.4 MM

TUBE THICKNESS: 2 MM

TUBE LENGTH: 2150 MM

UNFINED LENGTH: 70 MM BOTH ENDS

FIN LENGTH: 2010 MM

TUBE THICKNESS: 0.45 MM +/- 0.05 MM

TOLERANCE.FIN DIAMETER: 43 MM +/- 1MM

FINS/INCH: 10 FINS/INCH

TUBE MATERIAL: C70600 COPPER NICKEL (CuNi) 90/10 SEAMLESS
FIN TYPE AND MATERIAL: ALUMINUM SPIRAL, EXTRUDED HY TYPE PER
ASTM B221M ALLOY
1060F, PREFERED.

TUBE SIZE: 19 MM

TUBE THICKNESS: 1.5 MM

TUBE LENGTH: 2200 MM

UNFINED LENGTH :77 MM BOTH ENDS

FIN LENGTH :2046 MM

FIN THICKNESS: 0.45 MM +/- 0.05 MM TOLERANCE.

FIN DIAMETER: 39 MM +/- 1MM

FINS/INCH: 10 FINS/INCH



United Copper Industries

Which Factors Affect the Effectiveness of Copper Nickel Finned Tubes? The

factors that affect the effectiveness of a copper-nickel finned tube are:

- Cross-sectional Arrangement of the Fins

This arrangement can either be inclined radial pin fins, pin fin, and staggered pin fins. The staggered pin fin arrangement has a high heat performance compared to incline pin fin

- Pin Dimensions

The dimensions of a given cupronickel finned tube can either be square, circular, elliptic, or lancet. Annular fins have a higher heat performance than the other aspects. Other dimensions that affect the effectiveness include the length, diameter, void fraction, and aspect ratio.

- Number of Fins The more the number of fins in each cupronickel finned tube, the higher the effectiveness.

- Type of Fins Surface Finish

The type of surface finish of your copper-nickel finned tube affects its performance. For instance, a smooth finish has a lower thermal performance compared to other types of surface finishes.

- Nature of Fluid Flowing Through

Pressurized fluid flow increases the effectiveness of copper-nickel finned tubes compared to the slow-flowing fluid. This is due to the buoyancy effect present in a slow-flowing fluid, which results in hot air flowing over the finned tube components. Also, the type of fluid state affects effectiveness. That is if the fluid is in a gaseous or liquid state.



United Copper Industries

How do you Measure Fin Tube Radiation in Copper Nickel Finned Tubes?

- Optimal measurement of fine tube radiation in cupronickel finned tubes is achieved through the utilization of infrared thermo-vision equipment.
- This equipment precisely captures heat distribution patterns across the tubes, providing accurate data for analysis.

How Long can Copper Nickel Finned Tubes Last?

- The typical lifespan of copper-nickel finned tubes is around ten years, but various factors can influence their durability.
- Factors such as usage frequency and the operating environment significantly impact the longevity of cupronickel finned tubes, with frequent use leading to a quicker reduction in their lifespan.

How does Low Finned Copper Nickel Tubes compare to High Finned Copper Nickel Tube?

- Low finned cupronickel tubes have fewer fins on their surface compared to high finned copper-nickel tubes.
- High finned copper-nickel tubes have larger fins compared to low finned copper-nickel tubes.
- The efficiency of high finned copper-nickel tubes is higher than that of low finned copper-nickel tubes.
- United Copper Industries is committed to providing high-quality copper-nickel finned tubes for heat exchanger systems.
- The company offers both standard and custom finned copper-nickel tubes to meet diverse customer needs.
- Whether you require standard specifications or customized solutions, United Copper Industries is dedicated to assisting you.



United Copper Industries

Copper Nickel Finned Tube

United Copper Industries is the No.1 Copper Nickel Finned Tube

- ♦ 1. Specializes in compact-size manufacturing.
- ♦ 2. Space-saving design to optimize utilization.
- ♦ 3. Significant reduction in fouling compared to conventional alternatives.
- ♦ 4. Exhibits high responsiveness to cleaning-in-place (CIP) procedures.

Copper Nickel 90/10 Fin Tube

They are available in different sizes as per client's specifications.



Copper Nickel 7/30 Fin Tube

As a leading copper-nickel 7-/30 fin tube for more than 20 years, you are assured for the highest quality products.



90/10 Copper Nickel Cooling Tube

For your 90/10 copper-nickel cooling tube needs, you can count on United Copper Industries. We can custom-made 90/10 copper-nickel cooling tube according to your specific requirements.



Copper Nickel 90/10 fin tube

They are available in different sizes as per client's specifications.



90/10 Copper Nickel Capillary Tube

If you are looking for the highest quality 90/10 copper-nickel capillary tube, United Copper Industries is the right place for you. We have been manufacturing copper-nickel products for more than 20 years.



90/10 Copper Nickel tubing for fuel

Get benefit to our 20 years plus copper-nickel tube manufacturing experience.





United Copper Industries

90/10 Copper Nickel Seamless Tubing

United Copper Industries is 90/10 copper-nickel seamless tubing is available in various types in stock. You can avail this at very affordable prices.



90/10 Copper Nickel Welded Tubing

United Copper Industries is trusted manufacturer and supplier for all 90/10 copper-nickel welded tubing you need.



3/8 90/10 Copper Nickel tubing

We are expert in designing, machining, and fabricating your copper-nickel tubing according to your specific requirements.



Custom Shape Copper Nickel 90/10 tube

As a leading manufacturer United Copper Industries is can expertly customize your ideal copper-nickel 90/10 tube based on your specific requirements.



Send Your Inquiry on United Copper Industries CuNi Tube Now.

- **100% Meet the Standard**
- **Fast Delivery**
- **Third Party Inspection Available**

GET IN TOUCH

CONTACT US :



09619994756



www.unitedcopperindustries.com



sales@www.unitedcopperindustries.com



OFFICE :

*47, Balkrishna Niwas, Shop No 20, 3rd Panjrapole Lane,
Gulalwadi, Mumbai - 400004, Maharashtra, India*



FACTORY :

Shed No - A-2/64, GIDC, Killa Pardi, Valsad, Gujrat - 396125