



Helical solid finned tubes

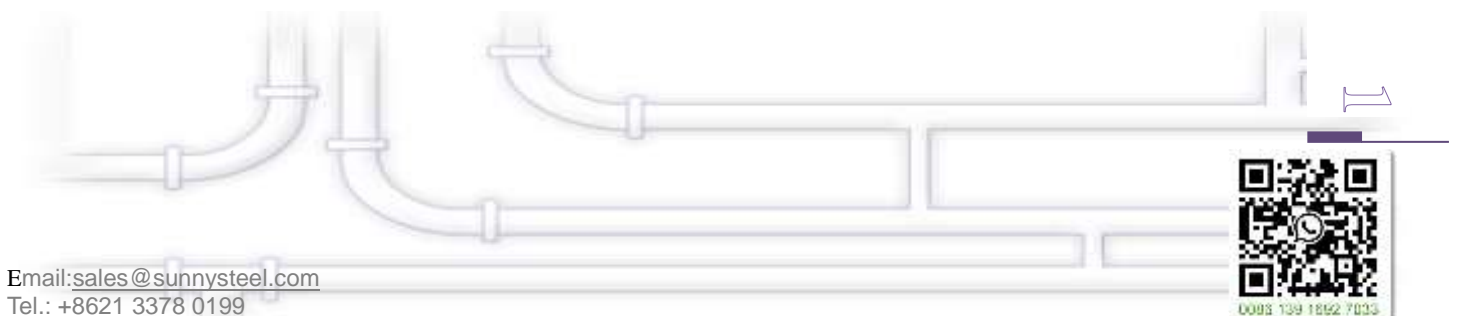
Helical solid finned tubes are a type of heat exchanger tube that has a helical-shaped fin wrapped around the outer surface of the tube in a spiral fashion.



Helical solid finned tubes are very used in petrochemical field and industrial boilers to heat (heaters) or cool (coolers) or to recuperate heat from industrial fumes. Our finned pipe has a fin strip wrapped and continuously welded onto the outside surface of the tube by means of MIG welding technique. This process gives a very high heating transfer coefficient, about 4-5 times higher than other conventional types of finning, because of the continuity between tube and fin strip materials. If you add the possibility to weld each other very different materials, you can consider an optimum product adaptable to numerous uses and different environments. We are always available to try new technical solutions on Clients requests. For possible combinations of materials and dimensions you can find below some information about the most used configurations.

Helical solid finned tubes are designed to enhance the overall heat transfer performance of the heat exchanger by increasing the surface area available for heat transfer. The helical shape of the fin creates a turbulent flow pattern in the fluid flowing over the finned surface, which improves the heat transfer coefficient between the fluid and the tube surface.

Helical solid finned tubes are commonly used in air-cooled heat exchangers, where air flows over the outer finned surface to dissipate heat. They are also used in some liquid-cooled heat exchangers, such as shell and tube heat exchangers, to enhance heat transfer performance.



Technical Product Sheet

Tube/Pipe size: 16 mm to 273 mm (10") and more on request

Tube/Pipe Material:

Carbon Steel (A106, A333, A179, A210, P5, P11, P22)

Stainless Steel (304, 316, Duplex, Super Duplex)

Nickel Alloys (Monel 400, Inconel 625)



Fin Material:

Carbon Steel (A106, A333, A179, A210, P5, P11, P22)

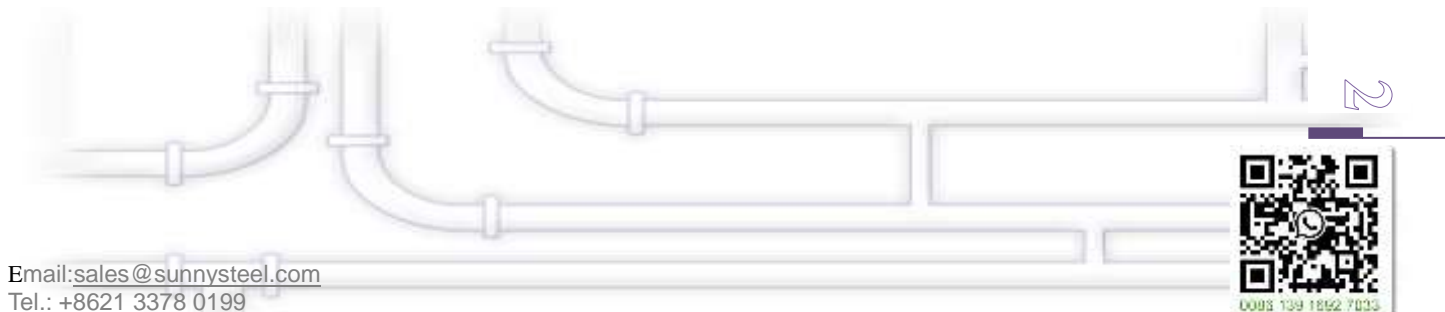
Stainless Steel (304, 316, Duplex, Super Duplex)

Nickel Alloys (Monel 400, Inconel 625)

Fin Height: 10 mm to 25 mm and more on request

Fin Thickness: 1,2 to 1,5 mm

Number of Fins: from 80 fins/meter to 230 fins/meter



Features of Helical solid finned tubes

- They can be manufactured in various sizes, fin configurations, and metal combinations to meet specific heat transfer needs.
- They increase the surface area available for heat transfer, which improves the overall heat transfer performance of the system.
- The helical shape of the fins creates turbulence in the fluid, enhancing the heat transfer coefficient between the fluid and tube surface.
- They are commonly used in air-cooled and liquid-cooled heat exchangers, as well as in various industrial processes where efficient heat transfer is essential to the operation of the system.

Usage of Helical solid finned tubes

Helical solid finned tubes are primarily used in heat transfer applications where the transfer of heat from one medium to another is required. They are commonly used in air-cooled heat exchangers, such as radiators and air coolers, as well as liquid-cooled heat exchangers, such as shell-and-tube heat exchangers.

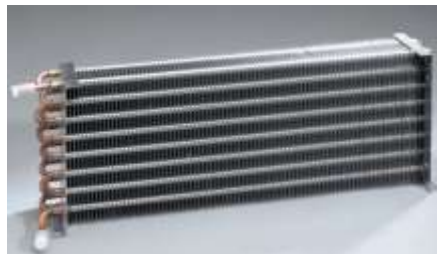
Some specific applications of helical solid finned tubes include:

1. Power generation: Helical solid finned tubes are used in power plants to enhance the efficiency of air-cooled heat exchangers, such as those used in cooling towers.



2. HVAC industry: Helical solid finned tubes are used in air conditioning and refrigeration systems to improve system efficiency and reduce energy costs.
3. Chemical processing: Helical solid finned tubes are used in chemical processing plants for heat transfer between fluids, such as in evaporators and condensers.
4. Petrochemical industry: Helical solid finned tubes are used in refineries and petrochemical plants for heat transfer in distillation columns, reactors, and heat exchangers.

Overall, the usage of helical solid finned tubes is quite versatile, and they are commonly used in many industrial processes where efficient heat transfer is essential to the operation of the system.



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