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18年国内领先的翅片管专业制造商
Leading professional finned tube manufacture in China for 18 years

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CANGZHOU DATANG STEEL PIPE CO., LTD 沧州市大唐管业有限公司



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CATALOGUE 目录

沧州市大唐管业有限公司, 主要生产翅片管和换热设备。工厂坐落于管道之乡-沧州盐山, 是一家集研发、生产、销售于一体的企业。公司成立于2007年, 并通过了ISO9001国际质量体系认证。

现有优势生产线是高频焊翅片管、激光焊翅片管和钢铝挤压翅片管, 规格从10毫米到273毫米大口径, 最长可加工30米。工厂配套加工有折弯、镀锌、防腐等, 服务已超一万家国内外企业。同时, 我们还加工空冷器、省煤器、散热器、管壳式换热器等, 我们有专业的技术人员, 可以根据您的工况免费提供热力计算和方案设计。所有产品出厂前都通过了翅片焊接强度拉力试验和水压试验, 以确保质量。

产品广泛应用于石油化工、工业余热回收、天然气、电力、冶金、养殖烘干、温室大棚等换热和制冷领域。

大唐管业深耕翅片管与换热器领域18年, 长期以来坚持诚信、务实、专业、敬业、包容, 共赢的企业文化, 以匠心锻造热能传递的“高效引擎”! 大唐诚邀广大新老客户前来洽谈咨询, 期待与您的真诚合作!

Specializing in Fin Tubes and Heat Exchange Solutions

Based in Yanshan, Cangzhou—the “Hometown of Pipeline Industry”—we integrate R&D, production, and sales of fin tubes and heat exchange equipment. Established in 2007 and ISO 9001-certified, we deliver precision-engineered thermal solutions.

Core Expertise

Our advanced production lines specialize in high-frequency welded, laser-welded, and steel-aluminum extruded fin tubes, with diameters from 10mm to 273mm and lengths up to 30 meters. Serving over 10,000 domestic and international clients, we also design customized heat exchangers, supported by complimentary thermal calculations and engineering solutions tailored to your operational needs.

Quality Assurance

All products undergo rigorous fin weld tensile tests and hydrostatic pressure tests to ensure unmatched reliability.

18 Years of Excellence

Rooted in a culture of integrity, pragmatism, professionalism, and win-win collaboration, we dedicate ourselves to crafting “high-efficiency engines” for thermal energy transfer.

ADVANCED EQUIPMENT

先进装备

大唐引进行业中领先的生产设备和最优秀的管理技术人才，配备完善的质量管理体系，并致力于不断地提高技术水平，确保满足客户的需求，实现互利共赢，共同发展的目标。

从渤海之滨到全球工业版图，我们用每一根翅片管的高效传热、每一台换热器的稳定运行，助力中国智造节能降碳，让工业热能“零浪费”！

Advanced Capabilities, Sustainable Growth

Equipped with industry-leading production facilities, top-tier management and technical talent, and a robust quality management system, Datang is committed to continuous technological advancement. We strive to exceed client expectations, fostering mutual benefits and shared growth through tailored solutions.



翅片管系列 | Fin tube series

高频焊翅片管

High-Frequency Welded Finned Tube

高频焊翅片管是一种通过高频电流焊接工艺将金属翅片固定在基管表面的高效换热元件。其核心原理是利用高频电流产生的集肤效应和邻近效应, 使翅片与基管接触面瞬间熔化并形成冶金结合, 从而显著提升传热效率。

A high-frequency welded finned tube is a highly efficient heat transfer component formed by bonding metal fins to the surface of a base tube using high-frequency welding. The process leverages the skin effect and proximity effect generated by high-frequency current to melt the contact surfaces between the fin and the base tube, achieving a metallurgical bond that enhances heat transfer efficiency.



材质 / Materials

- 基管材质: 碳钢 (如 20# 钢)、不锈钢 (304/316L)、合金等。
- 翅片材质: 碳钢、不锈钢等, 通常与基管材质匹配以确保焊接兼容性。
- 特殊场景: 耐腐蚀环境可能采用镀锌或复合材质。
- Base Tube Materials: Carbon steel (e.g., Grade 20), stainless steel (304/316L), alloys.
- Fin Materials: carbon steel, or stainless steel, typically matched with the base tube for welding compatibility.
- Special Applications: Galvanized, or composite materials may be used for corrosion resistance.

特点与优势 / Features & Advantages

- 高效传热: 翅片大幅增加换热面积, 传热效率比光管高 3-10 倍。
- 结构紧凑: 在有限空间内实现高换热能力, 适用于密集设备布局。
- 焊接强度高: 冶金结合确保翅片与基管间无间隙, 抗振、抗热疲劳性能优异。
- 耐腐蚀性: 可通过材质选择或表面处理适应恶劣环境 (如烟气、化工介质)。
- 长寿命: 焊接工艺稳定, 使用寿命可达 10 年以上。
- High Heat Transfer Efficiency: Fins significantly increase the heat exchange area, achieving 3-10x higher efficiency than bare tubes.
- Compact Design: Delivers high heat exchange capacity in limited spaces, ideal for densely packed equipment.
- Strong Welding Bond: Metallurgical bonding eliminates gaps between fins and the base tube, offering excellent vibration and thermal fatigue resistance.
- Corrosion Resistance: Material selection or surface treatments adapt to harsh environments (e.g., flue gas, chemical media).
- Long Service Life: Stable welding process ensures a lifespan exceeding 10 years.



应用场景 / Applications

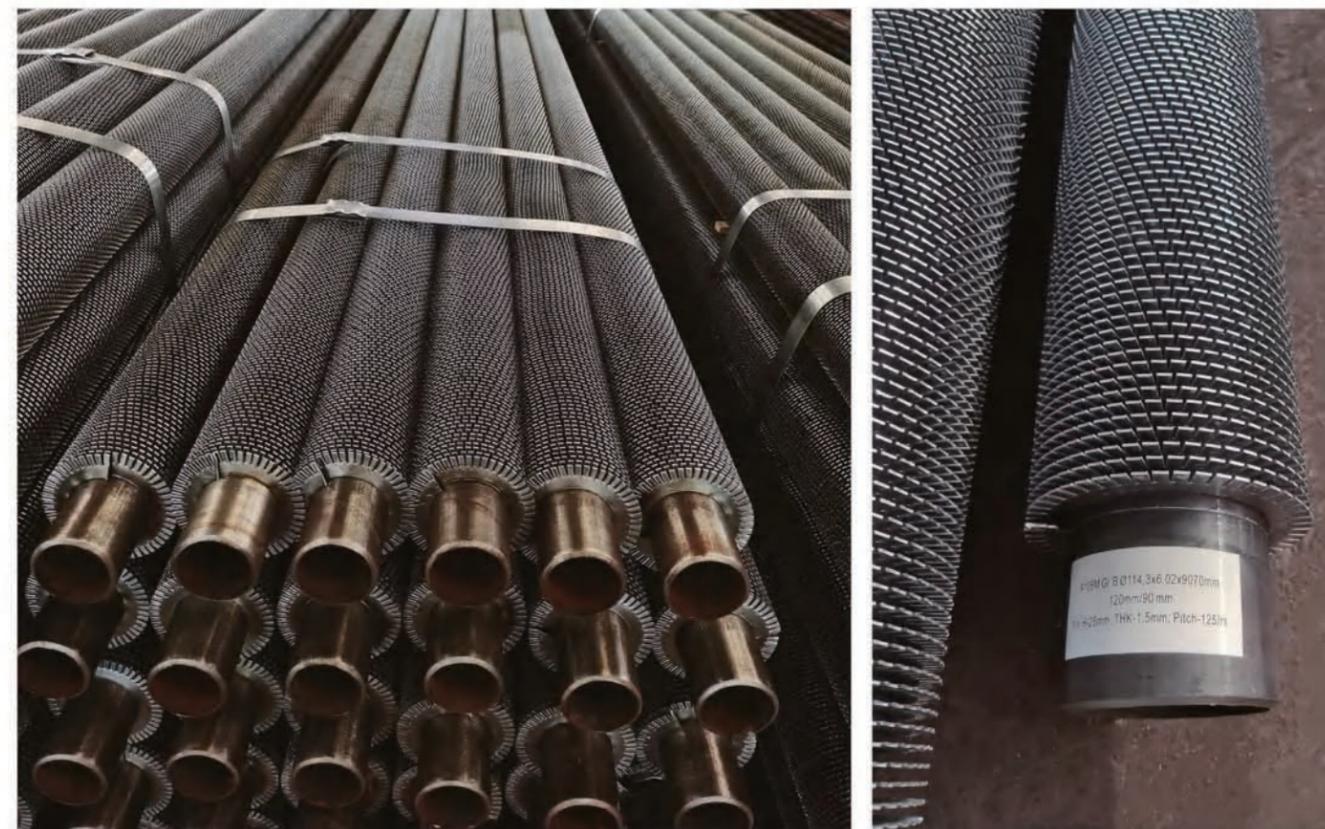
- 工业换热器: 石油化工、电力行业的余热回收、锅炉省煤器、空气预热器。
- 暖通空调 (HVAC): 冷热水机组、风机盘管、热泵系统。
- 环保设备: 烟气脱硫 (FGD)、工业废气冷却。
- 其他领域: 食品干燥、船舶发动机冷却、太阳能集热系统。
- Industrial Heat Exchangers: Waste heat recovery, boiler economizers, and air preheaters in petrochemical and power plants.
- HVAC Systems: Chillers, fan coil units, and heat pump systems.
- Environmental Equipment: Flue gas desulfurization (FGD), industrial exhaust cooling.
- Other Fields: Food drying, marine engine cooling, solar thermal systems.

镀锌翅片管 Galvanized Fin Tube

- 优异的耐腐蚀性：镀锌工艺在钢管表面形成致密的锌层，有效隔绝氧气和水分，防止基材氧化生锈，尤其适合潮湿、酸碱或盐雾环境。
 - 牺牲阳极作用：即使镀层局部破损，锌会优先腐蚀（牺牲阳极效应），保护基管不受进一步侵蚀，延长整体使用寿命。
 - 广泛适用性：适用于暖通空调、工业余热回收、干燥设备、化工、农业温室等多种场景。
- Excellent corrosion resistance: The galvanizing process forms a dense zinc layer on the surface of the steel pipe, effectively isolating oxygen and moisture, preventing substrate oxidation and rusting, especially suitable for humid, acidic, alkaline or salt spray environments.
- Sacrificial anode effect: Even if the coating is partially damaged, zinc will preferentially corrode (sacrificial anode effect), protecting the base pipe from further erosion and extending the overall service life.
- Wide applicability: Suitable for various scenarios such as HVAC, industrial waste heat recovery, drying equipment, chemical industry, agricultural greenhouses, etc.



开齿翅片管 Serrated finned tube



开齿设计：齿形切口（如波浪形、梯形）优化流体湍流度，进一步提升换热性能。

定制灵活性：可根据工况需求调整材质组合或表面涂层（防腐 / 疏水）。

Design: Tooth shaped notches (such as wavy or trapezoidal) optimize fluid turbulence and further enhance heat transfer performance.

Customization flexibility: The material combination or surface coating (anti-corrosion/hydrophobic) can be adjusted according to the working conditions.

激光焊翅片管 Laser welded fin tube



材质 / Materials

- 不锈钢 (如 304、316L、310S)：耐高温、耐腐蚀，适用于化工、核电等严苛环境。
 - 碳钢 / 低合金钢 (如 20#、Q345)：成本低，适用于一般工业换热设备。
 - 镍基合金 (如 Inconel 600、625)：抗极端高温和氧化，用于航空航天、核反应堆。
 - 钛 / 钛合金：轻量化且耐腐蚀，适合海洋、医疗及化工领域。
 - 铜 / 铜合金：高导热性，用于精密仪器或低温制冷系统。
- Stainless Steel (e.g., 304, 316L, 310S): High temperature and corrosion resistance.
- Carbon Steel/Low-Alloy Steel (e.g., 20#, Q345): Cost-effective for industrial heat exchangers.
- Nickel-Based Alloys (e.g., Inconel 600/625): Extreme temperature resistance for aerospace/nuclear applications.
- Titanium/Alloys: Lightweight and corrosion-resistant for marine/medical uses.
- Copper/Alloys: Superior thermal conductivity for precision cooling systems.

特点与优势 / Features & Advantages

- 高精度焊接：激光能量集中，焊缝窄且深，热影响区小，基管与翅片结合强度高。
 - 复杂结构适应性：可焊接异形翅片和超薄翅片 (≥ 0.1 mm)。
 - 表面光洁：无焊渣残留，流体阻力低，适合洁净或高纯度介质。
 - 耐极端工况：工作温度范围 -200°C 至 800°C ，承压能力可达 30 MPa。
- High-Precision Welding: Narrow, deep seams with minimal heat distortion.
- Complex Geometry: Compatible with spiral fins and ultra-thin fins (≥ 0.1 mm).
- Smooth Surface: No slag residue, ideal for clean or high-purity fluids.
- Extreme Tolerance: Operates from -200°C to 800°C , withstands up to 30 MPa pressure.



钢铝挤压翅片管 Extruded Finned Tube

- 挤压工艺原理：通过高温高压将铝坯料挤压至基管表面，形成无缝冶金结合，无需焊接或胶粘剂。

- Principle of Extrusion Process: Aluminum billets are extruded onto the surface of the base pipe through high temperature and high pressure, forming a seamless metallurgical bond without the need for welding or adhesives.

特点与优势 / Features & Advantages

- 轻量化：比全钢翅片管轻 30-50%。
- 宽温域适用：工作温度范围为 -50° C 至 350° C。
- 高效传热：铝的高导热性与翅片表面积协同提升换热效率。
- 成本优化：仅在关键部位使用高价金属（如不锈钢基管），降低综合成本。
- 低维护需求：抗积灰、耐腐蚀，减少停机维护频率。
- Lightweight: 30-50% lighter than all-steel finned tubes.
- Broad Temperature Range: Operates from -50° C to 350° C, suitable for most industrial environments.
- High Thermal Efficiency: Combines aluminum's conductivity with increased surface area for superior heat transfer.
- Cost-Effective: Uses expensive metals (e.g., stainless steel) only in critical areas, reducing overall costs.
- Low Maintenance: Resists fouling and corrosion, minimizing downtime for cleaning.



整体轧制翅片管 Integrally rolled fin tube (Low Fin/High Fin)

一体成型：无接触热阻，抗振性强，寿命长。

灵活定制 支持材质、尺寸及翅片参数定制，适配多样化需求。

Seamless Integrity: No contact resistance, with high vibration resistance and extended lifespan.

Customizable: Tailored in material, size, and fin parameters for diverse applications.



应用场景 / Applications

- 暖通空调：高效换热器、制冷系统。
- 船舶 / 新能源：海水淡化、热泵机组。
- 石化 / 电力：冷凝器、蒸发器、余热回收。
- HVAC: High-efficiency heat exchangers, refrigeration systems.
- Marine/New Energy: Desalination, heat pump units.
- Petrochemical/Power: Condensers, evaporators, waste heat recovery.



G 型镶嵌翅片管 Embedded fin tube

加工工艺: 翅片紧紧地嵌入在机械开槽的基管外表面。

基管材质: 碳钢、合金钢、不锈钢、双相钢、铜管;

翅片: 铝 1060、铝 1100、T2 紫铜; 使用场合: 空冷器、换热器、暖风器、省煤器

Processing technology: the fins are tightly embedded in the outer surface of the base tube with mechanical grooves;

Base pipe material: carbon steel, alloy steel, stainless steel, dual phase steel, copper pipe;

Fins: Aluminum 1060, aluminum 1100, T2 copper; Application: air cooler, heat exchanger, heater, economizer.



应用场景 / Applications

- 石油, 化工和石化工业;
- 天然气处理;
- 钢铁行业: 高炉和转炉系统;
- 发电: 蒸汽涡轮机排出的废气冷凝, 冷凝水接触循环冷却冷凝, 化石和核电厂;
- 空调 (氟里昂, 氨, 丙烷)
- 垃圾焚烧设备;
- 压缩机冷却器等。
- Petroleum, chemical and petrochemical industries;
- Natural gas treatment;
- Steel industry: blast furnace and converter system,
- Power generation: condensation of exhaust gas from steam turbine, condensation water contact cycle cooling condensation, fossil and nuclear power plants;
- Air conditioning (freon, ammonia, propane);
- Waste incineration equipment;
- Compressor cooler, etc

缠绕型翅片管 Spiral Wound Finned Tube

L 型翅片管 L-Foot Finned Tube

L 型翅片管压延形成的梯形截面与热流密度分布大小相合, 管片结合紧密, 热效率高, 杜绝了串片式翅片管因管片间隙无法消除所带来的接触热阻。
The trapezoidal section formed by rolling of L-shaped finned tube is consistent with the distribution of heatflow density, and the tubes are closely combined with high thermal efficiency, thus eliminating the contact thermal resistance caused by the gap between the fins.

工作温度: 230°C 特性: 采用缠绕工艺, 生产效率高, 片距均匀, 传热性好, 化比高, 基管可以得到保护不受空气侵蚀。

Working temperature: 230°C characteristics: winding process, high production efficiency, uniform spacing, good heat transfer, high fin ratio, the base pipe can be protected from air erosion.



应用场景 / Applications

暖通空调 (冷凝器、蒸发器)、一般工业余热回收。
HVAC systems (condensers, evaporators), industrial waste heat recovery.

LL 型翅片管 LL foot fin tube

LL 型缠绕式翅片管: 在 L 型的基础上, 片根部完全覆盖在基管的外表面, 能强化接触面, 增加换热效果。最高工作温度: 170°C。

LL type spiral wound finned tube: on the basis of L-type, the root of the fin is completely covered on the outer surface of the base tube, which can strengthen the contact surface and increase the heat transfer effect. Maximum working temperature: 170°C

特点与优势 / Features & Advantages

- 机械缠绕工艺确保翅片与基管紧密贴合。
- 耐温范围: 50°C 至 400°C (视材质而定)。
- Mechanically wound fins ensure strong adhesion.
- Temperature range: 50°C to 400°C (material dependent).

应用场景 / Applications

精密仪器冷却、紧凑型换热器 (如数据中心液冷系统)。
Precision cooling (e.g., data center liquid cooling), compact exchangers.



滚花 KL 型翅片管 KL foot fin tube

KL 型翅片管也称滚花翅片管, 是在绕翅片之前, 先在基管上滚花纹, 或者在绕片机上加装一个刀片, 在基管上滚花, 后面的刀片用于绕片, 滚花和绕片可以同时进行。最高使用温度 $\leq 250^{\circ}\text{C}$, 最高使用压力 $\leq 3.2\text{MPa}$ 。

- 1、传热性能高, 接触热阻小;
- 2、翅片与管子接触面积大, 贴合紧密、牢靠;
- 3、抗大气腐蚀性能好, 长期使用性能稳定。

KL type finned tube, also known as knurled fin tube, is to roll the pattern on the base tube before winding the fin, or install a blade on the winding machine to knuckle on the base tube and the back blade is used for winding, knurling and winding at the same time.

The maximum service temperature is $<250^{\circ}\text{C}$, and the maximum service pressure is $<3.2\text{Mpa}$.

Performance features:

1. High heat transfer performance and low contact thermal resistance;
2. The contact area between the fin and the tube is large, and the joint is tight and reliable;
3. It has good atmospheric corrosion resistance and stable long-term service performance.



应用场景 / Applications

石油化工 (烟气余热回收)、电力行业 (锅炉省煤器)、高含尘气体处理。

Petrochemical (flue gas heat recovery), power plants (boiler economizers), dusty gas processing.

折弯翅片管 Bent fin tube



- 高低弯翅片管独特优势: 增强湍流效应, 显著提升对流换热系数 (可提高 10%-30%); 减少积灰与堵塞; 优化压降与能耗; 轻量化设计, 成本优化, 寿命更长。

- 空间适应性强: 通过定制高低翅片分布, 可匹配复杂安装空间 (如弯管区域、设备边角), 减少换热器体积。



Unique Advantages of High-Low Bent Fin Tubes:
Enhanced turbulence effect, significantly improving convective heat transfer coefficient (by 10%-30%);
Reduced fouling and clogging;
Optimized pressure drop and energy consumption;
Lightweight design, cost efficiency, and extended lifespan.
Superior Space Adaptability: Customizable high-low fin distribution allows adaptation to complex installation spaces (e.g., pipe bends, equipment corners), reducing heat exchanger footprint.

换热器系列 | Heat exchanger series

空冷器

Air Cooled Heat Exchanger/Air Cooler

空冷器 (风冷式换热器) 通过翅片管和风机, 将工业流体 (如水、油、化学品等) 的热量传递至环境空气, 实现高效冷却。其无水运行特性兼具环保与节能优势, 广泛应用于缺水或高温场景。

An Air Cooler (Air-Cooled Heat Exchanger) is a highly efficient cooling device that transfers heat from industrial fluids (e.g., water, oil, or chemicals) to ambient air through finned tubes and fans. It eliminates water dependency, reduces environmental impact, and is widely adopted in water-scarce or high-temperature environments.

特点与优势 / Features & Advantages

- 绿色环保: 无需水资源, 杜绝废水排放。
- 经济高效: 运维成本远低于水冷系统。
- 强适应性: 极端温度与恶劣环境下稳定运行。
- 结构紧凑: 模块化设计, 节省空间。
- 持久耐用: 防腐材料与强化结构设计。
- Oil & Gas: Cooling refinery streams, natural gas, and LNG.
- Power Generation: Condensing steam turbines and cooling auxiliary systems.
- Chemical Industry: Managing exothermic reactions and vapor condensation.
- Renewable Energy: Supporting geothermal and biomass energy systems.
- HVAC & Manufacturing: Industrial heat recovery and process cooling.



应用场景 / Applications

- 石油化工: 炼油工艺流冷却、天然气及 LNG 冷凝。
- 电力能源: 蒸汽轮机冷凝、发电厂辅助系统降温。
- 化学工业: 控制放热反应、处理蒸汽冷凝。
- 新能源领域: 地热、生物质能系统配套。
- 工业制造: 余热回收、生产线工艺冷却。
- Eco-Friendly: Zero water consumption, no wastewater discharge.
- Cost-Effective: Lower operational and maintenance costs vs. water-cooled systems.
- High Adaptability: Performs reliably in extreme temperatures and harsh conditions.
- Compact Design: Modular structure for space-saving installations.
- Long Lifespan: Corrosion-resistant materials and robust engineering.



翅片管式换热器

Fin Tube Heat Exchanger/Radiator

翅片管换热器（或散热器）是一种通过结合管体与扩展表面（翅片）来提升热交换效率的装置。翅片大幅增加散热面积，可快速将流体（如空气、水、油或制冷剂）的热量传递至周围环境，广泛应用于工业加热或冷却场景。

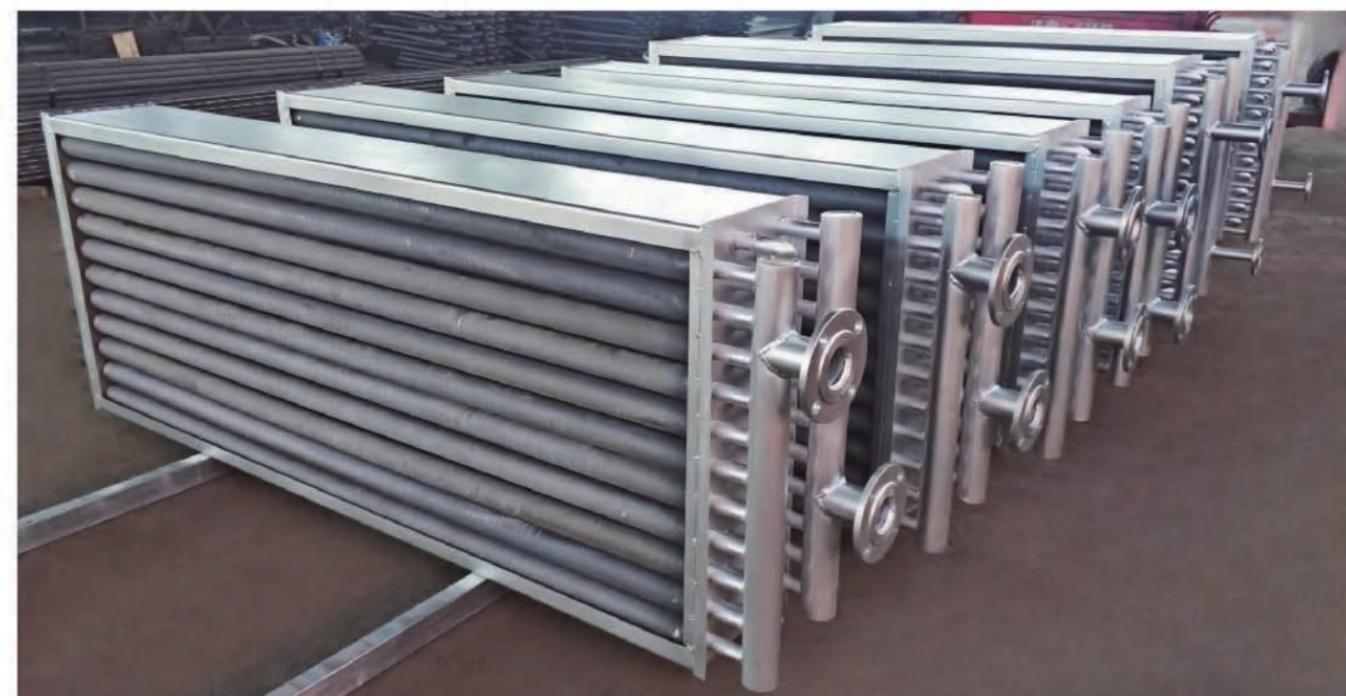
A Finned Tube Heat Exchanger (or Radiator) is a thermal management device that enhances heat transfer efficiency by combining tubes with extended surfaces (fins). The fins significantly increase the heat exchange area, allowing rapid dissipation of heat from fluids (e.g., air, water, oil, or refrigerants) to the surrounding environment. It is widely used for both heating and cooling applications across industries.



特点与优势 / Features & Advantages

- 高效传热：翅片结构大幅提升散热面积与效率。
- 紧凑轻量化：小体积实现大功率散热需求。
- 耐腐蚀性强：采用铝、不锈钢等材料，适应恶劣环境。
- 多场景适配：支持液体、气体及极端温度（-50° C 至 500° C）。
- 维护简便：结构简单，运行成本低。

- High Heat Transfer Efficiency: Fins amplify surface area for faster heat dissipation.
- Compact Design: Achieves high performance in limited space.
- Durability: Constructed with corrosion-resistant materials (e.g., aluminum, stainless steel).
- Versatility: Adaptable to liquids, gases, and extreme temperatures (-50° C to 500° C).
- Low Maintenance: Simple structure with minimal operational costs.



锅炉节能器

Boiler energy-saving device

高效节能，降低运营成本

我们的锅炉节能器采用优质 ND 钢 (09CrCuSb) 或不锈钢材质，耐腐蚀性强，适用于各类复杂烟气环境。核心翅片管采用高频焊工艺，翅片高度 12-16mm，间距 5-8mm，大幅增加换热面积，提升热回收效率达 15%-25%。

High-Efficiency Boiler Economizer: Save Energy, Cut Costs

Our boiler economizer is made of premium ND steel (09CrCuSb) or stainless steel, offering exceptional corrosion resistance for harsh flue gas environments. The finned tubes feature high-frequency welded fins (height 12-16mm, pitch 5-8mm), increasing heat exchange area and improving thermal efficiency by 15%-25%.

应用场景 / Applications

工业蒸汽锅炉、热电厂余热回收、化工行业废气热能再利用，助力企业实现减排降耗目标。

Ideal for industrial steam boilers, power plant waste heat recovery, and chemical process heating, helping industries meet energy-saving and emission reduction goals.



管壳式换热器

Shell and Tube Heat Exchanger

管壳式换热器是一种通过壳体内外流体（如液-液、气-液）进行热交换的工业级设备。其核心结构由壳体和内部管束组成，一种流体流经管内（管程），另一种流体在管外与壳体之间流动（壳程），凭借高耐压性和模块化设计，成为复杂工业场景的热管理主力。

A Shell and Tube Heat Exchanger is a robust and versatile thermal device designed to transfer heat between two fluids (e.g., liquid-liquid, gas-liquid) through a series of tubes enclosed within a cylindrical shell. One fluid flows through the tubes (tube side), while the other circulates outside the tubes within the shell (shell side). Its modular design and high-pressure tolerance make it a cornerstone of industrial heat exchange systems.

应用场景 / Applications

- 石油化工：原油冷却、天然气处理、炼油工艺换热。
- 能源电力：蒸汽冷凝、锅炉给水加热、核反应堆冷却。
- 化学工业：反应器控温、溶剂回收、蒸馏系统。
- 暖通空调：冷水系统、余热回收。
- Oil & Gas: Crude oil cooling, natural gas processing, and refinery operations.
- Power Generation: Steam condensers, boiler feedwater heating, and nuclear reactor cooling.
- Chemical Industry: Reactor temperature control, solvent recovery, and distillation.
- HVAC: Chilled water systems and heat recovery.

