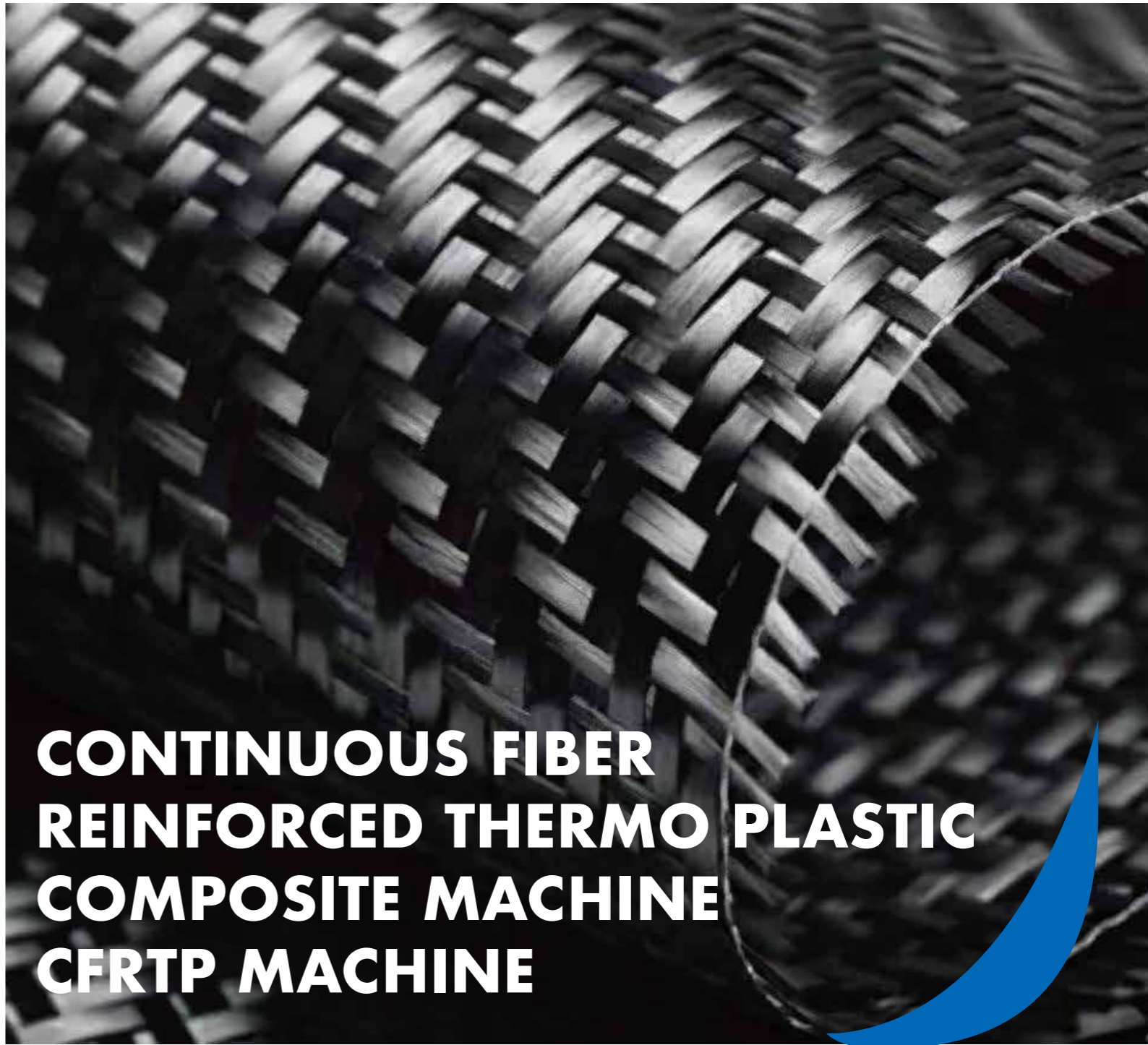




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CONTINUOUS FIBER REINFORCED THERMO PLASTIC COMPOSITE MACHINE CFRTP MACHINE

CFRTP
纤维增强复合材料设备

金纬机械
JWELL MACHINERY

碳纤维复合材料生产线 Carbon Fiber Reinforced Thermo Plastic Composite Machine

概述: 碳纤维复合材料是一种高强度、高模量的新型材料。通过复合模压等技术工艺在医疗器械, 航天科技, 汽车、轨道交通等领域得到了广泛应用。

Introduction: Carbon fiber composite material is a new type of material with high strength and high modulus. Through composite molding and other technical processes, it has been widely used in medical equipment, aerospace technology, automobiles, rail transit and other fields.



复合材料生产线重要部件 CFRTP Composite Machine Key Parts

挤出机特点 Extruder Features

- ◎ 采用高熔指树脂专用螺杆物料塑化充分、分散均匀
- ◎ 采用永磁同步电机驱动速度精确可控
- ◎ Adopt high melting index resin special screw material to fully plasticize and disperse evenly
- ◎ The drive speed of permanent magnet synchronous motor is precisely controllable



模具特点 Mold Features

- ◎ 平模采用衣架结构出料均匀并可调节
- ◎ 浸渍模具采用波形结构使熔体浸润充分纤维束分散均匀
- ◎ 型腔流道特殊加硬处理延长使用寿命
- ◎ The flat die adopts the hanger structure, and the material is uniform and adjustable
- ◎ The dipping die adopts a corrugated structure so that the melt is fully infiltrated and the fiber bundles are evenly dispersed
- ◎ Special hardening treatment of cavity runner to prolong service life



辊筒特点 Roller Features

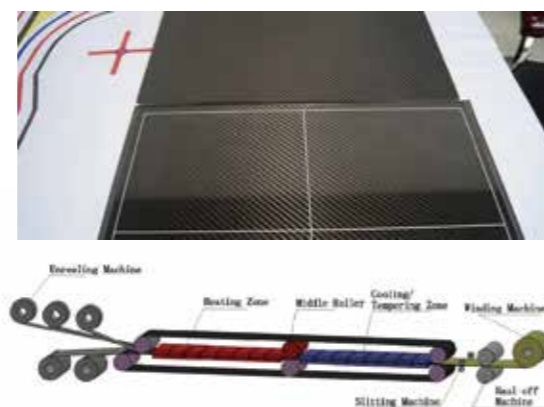
- ◎ 镜面辊筒表面光洁度可以达到Ra0.025μm
- ◎ 辊筒的圆柱度、同轴度均达到≤0.005mm
- ◎ 特殊的结构设计以保障极强的辊筒刚性和表面温度误差最小
- ◎ The surface roughness level of the roller can be reached Ra0.025μm
- ◎ The cylindricity and cocentricity of the roller can be reached ≤0.005mm
- ◎ Enhanced roller rigidity and minimized roller surface temperature deviation through special roller structure design



平板机复合材料生产线 CFRTP Plate Composite Machine

CFRT热塑性层压板复合生产线: 连续纤维增强带经过特殊的工艺制备出来的热塑性复合板, 拥有优良的机械物理性能。板材整体密度仅为钢板1/5、铝板的1/2。

生产流程: 由上下两条传送带传递压力并将接触式加热和冷却系统集成一体, 复合的材料会被均匀的加热, 材料在离开上下带之前被冷却, 根据不同工艺要求组合不同的加热区、冷却区长度及压合辊数量, 通过控制温度速度和压力, 材料会完美的贴合并具有较好的粘接牢固, 上下带均匀的间隙和精确的间距调节, 保证表面复合材料平整无褶皱, 既可实现连续工作。



CFRT thermoplastic laminate composite production line: The thermoplastic composite board prepared by continuous fiber reinforced tape through a special process has excellent mechanical and physical properties. The overall density of the plate is only 1/5 of the steel plate and 1/2 of the aluminum plate.

Production process: The pressure is transmitted by the upper and lower conveyor belts and the contact heating and cooling systems are integrated. The composite material will be heated evenly, and the material will be cooled before leaving the upper and lower belts. Different heating zones and cooling are combined according to different process requirements. The length of the zone and the number of pressing rollers, by controlling the temperature, speed and pressure, the material will be perfectly attached and have a good bond. The upper and lower belts have a uniform gap and precise spacing adjustment to ensure that the surface composite material is flat and wrinkle-free. To achieve continuous work.



预浸带复合材料生产线 Unidirection Prepreg Tape Composite Machine

概述: 连续纤维增强热塑性复合材料——是以热塑性树脂为基体, 连续性纤维为增强材料, 经过树脂熔融浸渍、挤压等工艺形成的高强度、高刚性、高韧性、可回收的新型热塑性复合材料。

CFRTP-UD单向带: CFRTP单向带为连续纤维经展开铺开并浸渍热塑性树脂再定型后的单层纤维增强热塑性复合材料片材。其特点是纤维彼此间平行排列(0°方向), 无交织。产品幅宽300-1500mm可根据需求定制。

主要应用: 汽车内外饰件、热塑性缠绕管道、体育休闲、家居建材、运输物流、航空航天。

Introduction: CFRTP (Continuous Fiber Reinforced Thermoplastic composites) ——Is based on thermoplastic resin as matrix and continuous fiber as reinforcement material, a new type of thermoplastic composite material with high strength, high rigidity, high toughness, and recyclable that is formed through resin melt impregnation, extrusion and other processes.

CFRTP-UD Unidirectional Tape: CFRT unidirectional tape is a single-layered, fiber-reinforced thermo plastic composite sheet in which the continuous fibers are unrolled and laid and impregnated with a thermoplastic resin. It is characterized by fibers arranged parallel to each other (0° direction) without interlacing. Product width 300-1500mm, can be customized.

Main application areas: automotive interior and exterior trims, thermoplastic winding pipes, sports leisure, home building materials, transportation logistics. Transportation logistics: floor & inner liners and roof panels of rail vehicles, interior and exterior automotive trim, sleeper carriages, truck compartments, ship decoration panels, container liners and roof panels;



- ①基础树脂: PP、PE、PET、PA6、PPS、PEEK等
- ②纤维类型: 玻璃纤维、碳纤维、芳纶、玄武岩纤维等高强度纤维
- ③制品厚度: 0.1~0.45mm
- ④制品宽度: 50~1500mm
- ⑤制品面密度: 100~650gsm
- ⑥制品纤维含量: 40%~70%
- ⑦牵引速度: 5~25m/min

- ① Basic resins: PP, PE, pet, pa6, PPS, peek, etc
- ② Fiber type: glass fiber, carbon fiber, aramid fiber, basalt fiber and other high strength fibers
- ③ Thickness of products: 0.1-0.45mm
- ④ Product width: 50-1500mm
- ⑤ Product surface density: 100-650gsm
- ⑥ Fiber content of products: 40% - 70%
- ⑦ Traction speed: 5-25m / min