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浆纱机 /SIZING MACHINE FOR STAPLE FIBER
长丝整浆并/WARPER, SIZING MACHINE AND REBEAMING MACHINE FOR FILAMENT FIBER
整经机/WARPER

射阳县龙德机械制造厂 SHEYANG LONGDE MACHINERY FACTORY

JUNSHANGDA LONGDE MECHANICS



君上达[®] 龙德机械

技艺因为专注而精良 品质因为专业而卓越

We are absorbed in improving skills and we persist in excellent quality.

We persist in excellent quality with endeavor



射阳县龙德机械制造厂

专业生产浆纱机、整浆并、整经机等前织纺织设备的机械工厂。

Sheyang Longde Machinery Manufacturing Factory specializes in producing sizing machines, warping machines and sizing warping re-beaming machines.

我们的实力

我们是专业生产浆纱机、整浆并、整经机等前织纺织设备的机械工厂。前织设备完全可以替代进口,产品遍及全国并出口到瑞典、土耳其、俄罗斯、孟加拉、越南、印尼、泰国、乌兹别克、巴基斯坦等国家。产品以先进的设计、可靠的性能、快捷的服务,赢得客户广泛赞誉。

我们的优势

我们有研发中心和纺织试验中心。研发中心由研发能力强的机械工程师、电气工程师和在织造准备上实践多年的专家顾问组成,针对国内特殊行业的特殊新工艺要求,研发了多台国内唯一可替代进口的准备设备,帮企业节约了投资;纺织试验中心拥有浆纱线和喷气布机等设备,有效地帮助了新产品的研制开发。

我们的骄傲

我们在浆纱机上首次使用全伺服驱动和伺服电机组成的分单元控制技术,精度高,机器运行稳定可靠,节约能源,极大的提高了织造效率;在整浆并上使用压磁式无漂移圆盘张力传感器无角度变化的检测送经张力,积极式送经,精确控制送经张力,特别适合超细旦织物;开发了国内首台门幅达3.6米的高档玻璃纤维上浆设备。

我们的坚守

我们坚信经验、技巧、精度和配置是产品质量的保证,奉行认真做事、踏实做人的理念, 求真务实,兢兢业业。从原材料的采购到金属切割加工,到整机组装,到24小时热线服务 ,我们用勤劳和汗水、专注和执着打造自己的品牌。

Our strength

We are good at producing sizing machines, warping machines and sizing—warping rebeaming. These machines are of high quality and can completely replace imported machines. So, the machines manufactured in our factory are well received by customers at home and abroad, thus winning high praises for the reliable performance, advanced design and quality accessible services.

Our advantages

We have our own research& development center where excellent engineers and experts join hands together to develop new products, replacing imported ones, which can meet the needs of various customers. And and help the companies reduce cost. We also have a textile testing center where we can develop new products with high efficiency with the help of a sizing line and air jet looms.

Our pride

We first use the full servo drive technology and the unit control technology consisting of servo motor in sizing machines, making the machines running more stably with high precision. So lots of energy can be conserved and weaving efficiency can be greatly improved. We use the piezo- magnetic- never-drift high precision tension sensor in pulping, realizing the aim of the detection of warp tension without any change of angle, letting off warp in an active way, and so the warp tension

can be controlled precisely, which is especially suitable for weaving superfine denier fabric. We develop the first high grade glass fiber sizing equipment with the width of 3.6m in China.

Our perseverance

As a saying goes, "No pains, no gains." We spare no efforts to guarantee the products with first-class quality for customers as we have rich experience, perfect skills in prodeing machines with high-grade precision and configuration. And we also provide 24-hour customer service hotline. We will do what we can to satisfy your needs and make sure that buying our products is your wise and right choice. what we can to satisfy your needs and make sure that buying our products is your wise and right choice.



S358 SIZING MACHINE FOR STAPLE FIBER

S358系列浆纱机



S358系列浆纱机技术特征

1、车头

卷绕张力1-7KN。

上落轴,织轴加压,伸缩筘升降,测长辊加压等均采用气动控制。

测长辊测长

可移动式织轴传动箱,实现拍合和调幅。滑轨轴采用整体结构,保证了精度,同时也加强了刚度。

自动上落轴装置

伸缩筘的伸缩,左右移动通过减速马达调节,伸缩筘和筘 座用专用模具制作,保证筘针眼均匀排列,筘针用高强度 钢,表面处理研磨后镀硬铬,镀好后加温去除表面的微气 孔,再研磨,保证硬度及光洁度。

双罗拉侧面压纱机构,最大压纱力3.5KN。

S358 SERIES SIZING MACHINE TECHNICAL CHARACTERISTICS

A, Headstock

winding tension 1-7 kn.

Pneumatic control device for doffing, beam pressure, expansion reed going up & down.

With measuring roller for detecting length,

Movable warp beam transmission gear box to realize the beating and adjust width of warp. The sliding rail shaft with integral structure in order to ensure accuracy and to reinforce the rigidity also.

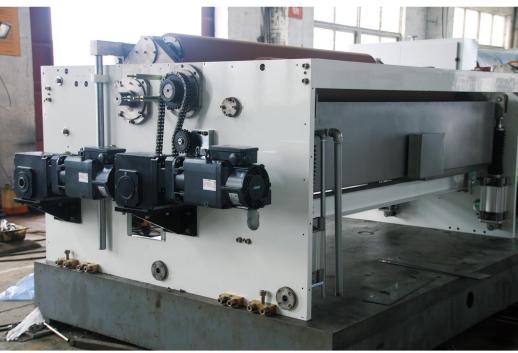
Automatic doffing device.

Expansion reed moving, reed moving to left and right to be adjusted by the gear motor, expansion reed and reed sley to be made of special mould to ensure uniform reed needle arrangement, reed needle made of high strength steel, surface grinding for treatment and then plating hard chromium, plating and micro pores on the surface with the heat removal, regrinding to ensure the smoothness and hardness.

Double rollers of two sides pressure mechanism for wary yarn, maximum pressure up to 3.5 KN.







3、浆槽

工作幅宽: 1800mm 2000mm 2200mm 2400mm。

双浸四压式结构/双浸三压式结构(前后压浆辊均为橄榄辊,可以互换)

压浆力线型加压自动控制功能。

上浆辊外包不锈钢,胶辊采用热稳定性好的橡胶,保证稳定的压浆力,浆槽升温后,压浆辊硬度下降不超过5度。

前后压浆辊、浸没辊均采用气动双侧同步加压结构形式。

浸没辊两端采用不锈钢轴承,精度高,使用寿命长。

浆液循环采用独立马达驱动的浆泵。

浆液加热采用蒸汽直接加热,并配备一套温度直接加热系统。同时配备夹层加热,由比例阀和薄膜调节阀组成进汽控制机构,实现渐变式开启和关闭。槽体采用双层结构,在夹层里装有22×厚3耐压304不锈钢无缝盘管。无缝盘管的尾部装有疏水阀。夹层盛水作传热介质,夹层腔上端有足够安全的出汽孔;无缝管进汽控制受浆槽浆液温度控制。浆槽采用钢板为支撑骨架,骨架外侧加不锈钢外罩,对传动件、气控组件、电气组件具有良好的密封防护效果,控制面板不动即可取下外罩,线路不受影响,维修保养非常方便。浆槽面板采用防水按钮。浆槽控制柜也可以设计在机外,可以充分防水。

纱出浆槽配湿分绞装置,湿分绞棒里通冷凝水(水通过制冷装置制冷)不管冬夏都能保证良好的结露,冷凝水温度可以设定并自动控制,湿分绞棒不锈钢涂特氟隆辅助浆槽带可调节支撑,保证幅宽方向全瀑布均匀溢流。独立滤网,全封闭,过滤效果好,方便取出好清洁。

浆槽容积: 主浆槽210L, 辅助浆槽180L。

湿分绞随车速变化而变化。

3、SIZING TANK

Working width: 1800,2000, 2200,2400 mm.

bilateral synchronous pressure structure.

Double soakage four pressure type structure/double soakage three pressure type structure (front and back squeezing rollers are olive roller for exchangeable) With linear squeezing pressure and automatic control function.

Sizing roller coated with stainless steel sheet, rubber roller to adapt with the good thermal stability materials to ensure the stability of squeezing, The hardness of squeezing roller reducing less than 5 degrees during sizing tank heating.

Front and back squeezing rollers and immersion rollers are adopted with pneumatic

The stainless steel bearings for both ends of the immersion rollers to ensure high precision and long service life.

The pump for circulation sizing agent driven by independent motor.

Sizing agent for heating with steam directly, and equipped with a set of direct heating system, and also equipped with interlayer heating at the same time, which consists of proportional valve and membrane regulator admission control mechanism to realize the gradient type opening and closing. The tank adopts a double–layer structure, in the interlays to fill with thick 22 x 3 pressure–resistant 304 stainless steel seamless steel coil, the rear section of the seamless coil with steam trap. Interlayer water as heat transfer medium, interlining cavity upper with vapor open for enough security, the quantity of steam feeding into sizing tank controlled by the temperature of sizing tank.

To adapt the steel plate for sizing tank support the skeleton with out cover of stainless steel, of which protects the transmission parts, pneumatic components, electrical components effectively, The control panel no need to remove for taking out cover, the wire line is not affected, the maintenance is very convenient. with waterproof button, sizing tank controller can be put out of machine in order to ensure waterproof. With wet split bar at output of sizing tank, inside of which has condensed water (water through cooling refrigeration equipment) through whatever winter or summer times can quarantee good condensation, condensation water temperature can be set and

Auxiliary sizing tank with adjustable support to ensure uniform width direction fall the overflow. Independent filter, fully enclosed, filtering effect is good, easy to take out for clean.

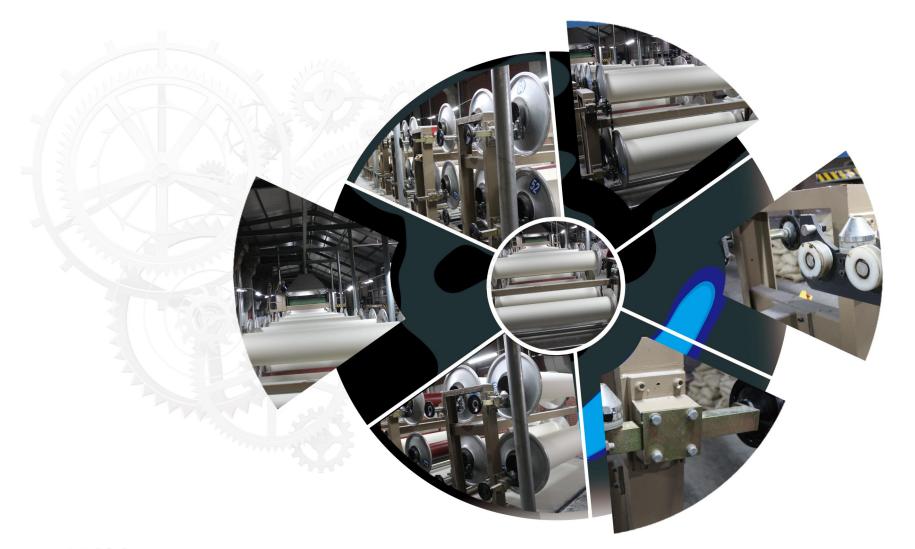
Sizing tank volume: main sizing tank 210 L, auxiliary sizing tank 180 L Wet split hank changes according to the machine speed

automatic control, wet split bar coated stainless steel fluoro









4、经轴架

四只经轴为一组、上下放置。

经轴最大直径 800mm或 1000mm。

工作幅宽: 1800mm 2000mm 2200mm 2400 mm。

退绕轴架左右采用三轮定位结构,经轴直接放置在尼龙滚轮上,轻松方便。左右的

三轮定位结构可左右移动,单边调节范围0~100mm。

经纱退绕张力自动控制系统,通过精密制造和张力传感器精确反馈,精密比例阀精确控制,可以让送经张力恒定控制,可以实现极小张力送经,更适应高支纱。

BEAM CREEL

Four beam as a group to place at up and down.

Maximum beam diameter 800 mm to 1000 mm.

Working width: 1800 mm, 2000 mm, 2200 mm, and 2400 mm.

The unwinding beam frame structure with three wheel positioning, the beam placed directly on the nylon roller, easy and convenient. The unilateral adjustment range for 0 to 100 mm

With warp unwinding tension automatic control system under the precision manufacturing and precise feedback to proportional valve control precisely to ensure the let off tension constant control to achieve minimum tension let-off to meet high counts yarn processing.

5、电气控制

整机采用了高性能PLC,同时配备触摸屏,实现了传动的同步运行 及对运行状况、工艺参数进行在线检测及实时控制。 经纱退绕张力自动控制系统,

浆液温度、烘燥温度自动控制系统

压浆力线型加压自动控制系统

浆液液位自动控制系统

回潮率自动检测系统。

ELECTRICAL CONTROL

To adopt high performance PLC, touch screen to realize the cont and detecting for transmission synchronous operation, the operation state and process parameters in real-time control.

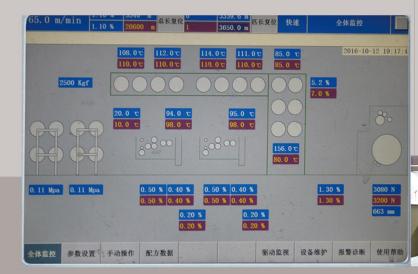
With the warp unwinding tension automatic control system,

With sizing agent temperature and drying temperature automates control system.

With linear squeezing pressure and pressing automatic controsystem.

Sizing liquid level automatic control system.

Moisture regain automatic detection system.



技术特征

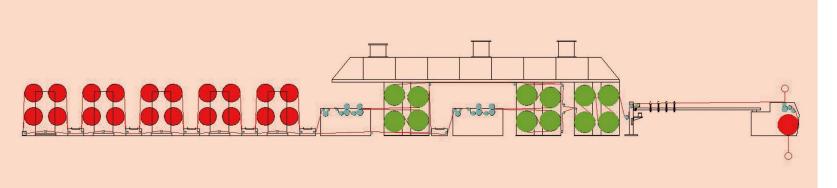
- 1、精度高,运行同步性好,转速转矩特性不随负载而变。采用西门子 S120伺服驱动器独有的装置间DRIVE-CLIQ同步数据传送功能及驱动器内置的位值-速度-转矩闭环控制系统,使伸长率控制精度达到0.01%,并且保证在升降过程和动态过程中保持不变,减少纱线断头,保证上浆率和伸长率。
- 2、能耗低,驱动系统采用共直流母线连接技术和可逆变的IGBT技术,使得多台同步运转的电机中处于发电状态的电机产生的电能反馈到直流母线上供其他电机驱动,系统所需的能量最小化。
- 3、车头织轴卷绕运用独有的精确卷绕控制软件(系统自动运算材料的转动惯量、摩擦力等),配以压磁式永无漂移高精度张力传感器形成的张力闭环系统,无角度变化检测,配套西门子专用的1PH8主轴伺服电机,能够将织轴从 110mm卷到 1000mm.卷绕张力可实现从50-700Kqf曲线设定。控制线使用屏蔽线,与电机线分开隔离。避免
- 干扰。电器设备总开关箱设有冷气控制温湿度。 4、自然风冷伺服电机配套原装德国变速箱,终身免加油,原装伺服电机专用动力电缆和编码器电缆的应用,系统的可靠性大幅度提高,运行稳定可靠。

THE TECHNICAL FEATURES

1.high precision, running synchronicity well, speed not to change along with the load torque. To adopt Siemens S120 servo driver DRIVE – CLIQ synchronous data transmission the unique DRIVE built–in bit value – speed – torque closed loop control system to ensure the elongation control precision reached at 0.01%, and ensure without changes during lifting process and dynamic process, to reduce yarn broken, to ensure sizing rate and elongation.

- 2.Low energy consumption, to adopt common DC bus drive system technology and the IGBT inverter technology to make some sets of synchronous operation motor in the generator state which energy feedback to the common DC bus for other motor driven so that this is for energy minimum consumption required.
- 3.The unique accuracy winding control software for headstock beam winding (system automatic operation inertia, friction, etc.),with piezomagnetic type without deviation high precision tension sensor tension to consist closed loop system, no angle change detection, with equipped with Siemens special 1PH8 main to be able to wind beam diameter from 110 mm to 1000 mm winding tension setting from 50–700 Kgf curve setting. Control wire using shielded wire to separate isolation for motor line in order to avoid interference. Electrical control box equipped with air condition.
- 4. Natural air cooling servo motor matching original German gearbox, lifelong without re-oiling, to adopt the original cable for servo motor and encoder to improve the reliability of the system, operation is stable and reliable.





二单元流程图M1、M2为2台电机 Two unit flow chart M1. M2 for two motors

S358-2S二单元浆纱机控制特点

二单元指车头、拖引辊和织轴卷绕分别由两个变频电机带动、通过两个变频器控制两电机实现对卷绕张力的控制。

干区张力即烘房到拖引辊之间的张力,由XP无级变速器精细调节。

湿区张力即上浆辊到烘房之间的张力,由XP无级变速器精细调节。

喂入张力即浆槽拖引辊到上浆辊之间的张力,由XP无级变速器精细调节。

S358–2S 2UNITE SIZING MACHINE CONTROL CHARACTERISTICS

Two units refers to headstock, towing roller and weaving beam, which is driven respectively by two frequency motor, with the inverter to control two motors for the winding tension. Dry zone tension is between the drying chamber and the towing tension, to be controlled by XP continuously variable transmission for fine adjusting.

Wet zone tension is between sizing roller and the drying chamber tension to be controlled by XP continuously variable transmission for fine adjusting.

The feeding tension is between towing roller from sizing tank to sizing roller tension to be controlled by XP continuously variable transmission for fine adjusting.

S358-7S 七单元浆纱机控制特点

七单元指织轴卷绕、车头、拖引辊、烘筒、两个浆槽上浆辊、两个浆槽拖引辊分别由七个 伺服电机带动、由七个伺服驱动器控制七个伺服电机,实现对卷绕张力、干区张力、湿区 张力、喂入张力的精确的控制。

S358-7S 7UNITE SIZING MACHINE CONTROL CHARACTERISTICS

Seven units refers to the warp beam winding, headstock, towing roller drying cylinder, two sizing rollers for the two sizing tank and two towing rollers for the two sizing tanks are driven respectively by seven servo motors with seven servo motor controllers to realize the winding tension, dry zone tension, wet zone tension, feeding tension for fine controlling

S358-9S九单元浆纱机控制特点

九单元在七单元基础上将烘房分成三个区。两个预烘和烘干分别由伺服驱动控制三个伺服电机带动。两个预烘和烘干之间的张力可以精确控制。全机控制更精确,适应品种更广泛。对于总经根数特别少的和特别多的以及特别细的纱,都能保证极好的上浆效果和伸长效果。机器结构强,制造精度高,运行同步好。

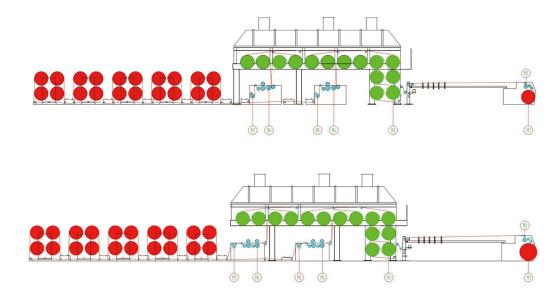
张力和伸长控制精确。

S358-9S QUNITS SIZING MACHINE CONTROL CHARACTERISTICS

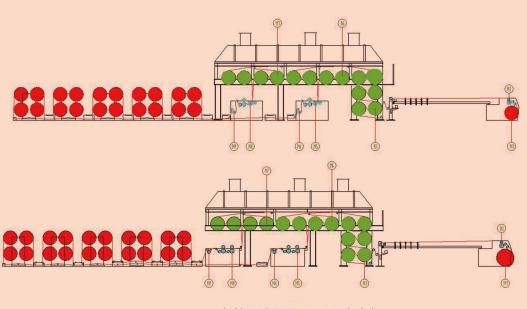
Nine units based on seven units to divide into three zones. Two pre–drying chambers and drying chamber driven respectively by three servo motors. The tension between two pre–drying cylinders and drying cylinder can be controlled precisely. The whole machine controlling with more precise to adapt to the varieties more widely, so that can realize the best sizing effects and elongation for less number yarn ends of warp and more number of yarn ends of warp and fine yarn.

Machine structure is strong, manufacturing high accuracy, good running synchronization.

Tension and elongation control precision

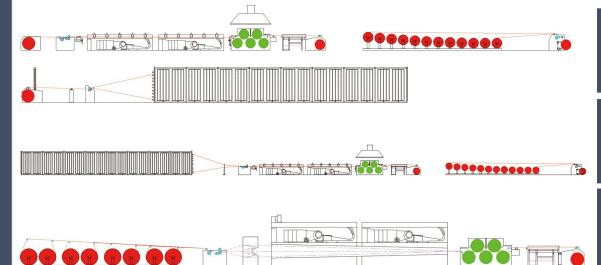


七单元流程图M1~M7为电机 7 units flow chart M1~M7 for motors



九单元流程图M1~M9为电机 S358-9S 9units sizing machine control characteristics





三段式/Three sections processing (经轴到浆轴方式)

二段式/Two sections processing (简子架到浆轴方式)

浆并联合/Sizing-rebeaming

三段式(经轴到浆轴方式)

适合于断头和毛羽较多的丝线或小批量生产的纺织工程

- 1、由高性能整经机从筒子架上将数根丝线卷绕在大卷装的经轴上。此过程可清理断头和消除原丝线缺陷。
- 2、将经轴放在张力退绕轴架上,经过上浆、烘干卷成浆轴。
- 3、再将浆轴\用并轴机合并卷成织轴,供织布机用。

二段式(筒子架到浆轴方式)

这是种原丝质量较好,生产效率较高的准备工程

- 1、从筒子架上将数根丝线直接牵引到浆纱机进行上浆并烘干后卷绕成浆轴。
- 2、再将分段浆轴用并轴机合并卷成织轴,供织布机用。

浆并联合(多个经轴到织轴)

适合于细旦丝。

- 2、再将多个经轴放在轴架上一起上浆、烘干合并成织轴。

High precision control

To adopt the sections synchronization control technology, with high precision disc tension sensor to execute the closed loop control for the superfine fiber production can be well controlled. Not only during normal operation, but also able during deceleration extremely stable tension and drawing work. As sizing beam becoming bigger, the tension between of the automatic control drying cylinder and sizing beam tension from the minimum tension 40 n to maximum tension 800 n stability control, during winding can be set the winding tension curves. If use full servo motor control, can realize stable control of lower tension. For extremely fine denier varieties, need very detailed setting, can be set on the 1 n unit, so as to maintain the stability of the degree of drawing

Excellent drying technology

Two connection type drying box, hot air reverse circulation, allowing filament fiber to high drying efficiency, which makes the temperature in the cabinet continues to meet the process state. Due to out of contact drying method in hot air oven, so can make filament fiber surface smooth and roundness. The high speed with $150 \sim 160~\text{C}$, low speed with $120 \sim 130~\text{C}$ of these two levels of temperature control mode, so it can not damage the characteristics of the sized filament fiber for high speed dry, for the thermal shrinkage large filament fiber drying temperature can also be under 80~C. Oven top and sides with the adiabatic materials in to order to reduce heat radiation; Oven strengthening structure, beautiful shape and simplicity. For the glass fiber, can choose gas burner type for drying.

With more high precision drying cylinders (5 pcs for basic configuration), the steam quantity in drying cylinder can be controlled automatically and respectively, in order to get effective temperature, thus can keep the quality of the filament fiber.

SIZING MACHINE FOR FILAMENT FIBER S351浆丝机

高质量的上浆效果

- 1、采用气动式控制压浆辊执行高压压浆方式:特殊结构的EP罗拉可满足高压压浆的要求,在幅宽方向实现均匀压浆,通过比例阀实现线性加压,压浆力根据速度无级自动控制。溢流过滤式的浆液循环系统,可满足片丝高质量的上浆效果。
- 2、设有湿分棒;上浆后的片丝,通过湿分棒进行分层,有效地防止丝线表面附着浆膜的损伤、断丝,消除毛羽的出现。棒管内流通冷冻水形成结露,防止绞棒上附着浆渣,冷冻水可设定和自动控制。分绞棒转速根据车速线性跟踪,使丝和水滴稳定的接触,通过此操作在停止、低速时,使丝不沾上过量的水滴并使浆液均匀地附着。

HIGH QUALITY SINING RESULT

To adopt pneumatic control squeezing sizing roller to press the sizing agent: special structure of EP roller of which meets the demand of high pressure to squeezing the sizing agent with uniformity sizing agent at the width of warp yarn, proportional valve to realize linearity pressure, the squeezing sizing pressure speed control with stepless speed change, overflow filter of sizing agent cycle system, to meet the high quality sizing demands of filament fiber.

With wet split bar: the sized filament fiber to separate with wet split bar to avoid the damaged sizing film of yarn surface, yarn broken and elimination of yarn feather. Inside of wet split bar with the frozen water of condensation to avoid the adhesion of sizing residue, to set the frozen water flow in automatic control, the speed of wet split bar for tracking sizing machine speed in linearity to make the yarn and drip contact stably with this operating so that the over quantity drip of water can not adhere to the yarn and also sizing agent to adhere to the yarn surface uniformity.







高精度控制

采用分单元同步控制技术,通过高精度圆盘张力传感器实现闭环控制,对超细旦纤维的生产都能很好控制。不仅在正常运转时、而且在加减速时也能够以极其稳定的张力和牵伸进行运转。随着浆轴卷径变大,自动控制烘筒和卷取浆轴之间的张力,实现了从最低张力40N~最高张力800N的稳定控制,卷绕时可以实现卷取张力曲线设定。如采用全伺服电机控制,则可以实现更低张力的稳定控制。对于极细旦品种,需要极细致的设定,可以在1N单位上设定,从而维持稳定的牵伸度。

出色的烘燥技术

- 1、二连式烘干箱,热风逆向循环,让丝片得以很高的干燥效率,使得箱内温度持续满足工艺设定状态。由于在热风烘箱内是无接触烘干的,因此丝可以保持光滑圆形的表面。采用高速运转时150~160℃、低速运转时120~130℃的两级温度控制方式,因此可以不损伤上浆的特性进行高速干燥,对热收缩率较大的丝也可以在80℃以下的温度进行烘干。烘箱上面和侧面均加厚了隔热保温,减少散热;烘箱结构加强,外形美观简约;对于玻璃纤维,可选择使用煤气燃烧器式烘干。
- 2、配套多只(基本型为5只)高精度烘筒,可分别自动控制烘筒内蒸汽量,以得到有效的温度,因而能保持丝片的品质。













Three sections processing (warping beam to sizing beam) – suitable for filament fiber of more yarn broken and feather with small batch processing. The yarn from bobbin creel to wind on the warp beam with high performance warper, this processing for disentangling yarn broken and cleaning up the original defect of the yarn. To put the warping beam on the rack for unwinding, with sizing and dry to wind the sized warp beam. Afterwards to rebeam the sized beam for weaving loom.

Two sections processing (creel to sizing beam) – For better yarn quality and high production efficiency processing. To put the yarn from bobbin creel into sizing machine for sizing processing directly and dry then to wind on the warp beam. Afterwards to rebeam the sized beams for weaving beam.

Sizing-rebeaming(several warping beams to loom beam), For extremely fine denier varieties. The yarn from bobbin creel to wind on the warp beam with high performance warper, this processing for disentangling yarn broken and cleaning up the original defect of the yarn. Several warp beams sized dried and winding into the loom beam at the same time.

HIGH QUALITY SIZING RESULT S351浆丝机







主要技术规格 / MAIN TECHNOLOGY SPECIFICATIONS

机械速度/speed:400m/min 工作幅宽/Working width:1300mm~2600mm 卷绕张力/Take-up tension: 40~800N 烘燥能力/Capacity for drying: 120kg/min 压浆力/Starch pressure:15000N 烘筒/Cylinder:3~5只800mm 烘箱/OVEN: 2节×6M

上蜡装置/上蜡或上油装置的设置对于保持丝片平滑、保护浆膜以及防止毛羽等现象 效果较好

浆自动供给/监视储浆槽的浆液位置,浆液位置下降时,打开浆供给阀;浆液位置上 升时,关闭浆供给阀。

浆泵变频器控制/由于高浓度浆液容易起泡,因此通过使用变频器控制浆液输送量 使其减少起泡,保持稳定的液体状态。

浆轴冷却装置/受到热影响的上浆丝可通过冷却实现稳定化

筘精密制作/伸缩筘和筘座用专用模具制作,保证筘针眼均匀排列,筘针用高强度 钢,表面处理研磨后镀硬铬,镀好后加温去除表面的微气孔,再研磨,保证硬度及

经轴退绕/由高精度圆盘张力传感器实现闭环控制。

Waxing unit/waxing or oiling device for keep the filament fiber smooth, protection starch film and prevent feather is good method

Sizing agent feeding /To detect the sizing agent storage tank position, sizing agent position fall down to start the feeding valve the position rise to stop the feeding valve.

Sizing agent pump with inverter control /Due to the high concentration sizing agent blister easily, so to use of frequency converter control the sizing agent quantity feeding for reduce blister to keep the sizing agent stable liquid state.

The sizing yarn to realize stabilization with cooling system as yarn affected by heat

Reed produced precisely/expansion reed crossed the slay made of special mould, ensure uniform reed dent eyes, reed dent with high strength steel, surface treatment after grinding hard chromium plating, plating and micro pores on the surface of the heat removal, regrinding, ensure the hardness and smoothness

Warp beam unwinding /warp beam unwinding executed by high precision disc tension sensor with closed-loop control

WARP REBEAMING MACHINE

S351并轴机

由PLC电脑控制并轴卷取时的工艺效果。设有防回转系统以避免中间停车时丝的张力发生 变化

轴架到车头送经张力控制有两种方式

- 1、通过使用稳定扭矩特性的空冷式磁粉制动器实现反馈式控制,由高精度圆盘张力传感 器实现闭环控制,从而实现送经张力控制自动化、保证每根纱送出的张力一致。
- 2、电机驱动浆轴实现积极式送经, 电机可以采用变频电机, 由高精度圆盘张力传感器实 现闭环控制,对于细旦、超细旦丝以及玻璃纤维可以精确控制,如用伺服电机控制,则 精度更高。由于是正反转动交替排列,因此减轻经纱条纹。停电时,由于电机的电源被 切断,为了防止超转造成纱的松弛,电机带制动装置,使经轴停止。也可用气动制动装 置。高精度圆盘张力传感器装在导纱辊上,无角度变化地检测送经张力,随着浆轴卷径 变小,精确控制送经张力,也可以进行曲线设定。独立卷绕单元,织轴卷绕采用电机实 现,通过高精度圆盘张力传感器闭环控制,自动控制卷绕张力卷绕时,可以实现卷绕张 力曲线设定,随着卷绕变大,自动降低卷绕张力。









The result of processing with PLC computer control for take – up of rebeaming with anti – slewing system in order to avoid the tension change when machine stop.

There are two ways for tension control

With stable torque characteristics of magnetic powder brake of air cooled to achieve the feedback control, by high precision disc tension sensor to fulfil closed-loop control, thus to realize the automatic let-off tension control to ensure the tension of each yarn uniformity. The sizing beam driven by motor to achieve positive let off, the frequency motor can be equipped, with the high precision disc tension sensor to execute closed-loop control, for the fine denier and superfine filament and glass fiber can be precisely controlled with servo motor control, the precision is higher. Because of positive and negative rotation alternation arrangement so that to reduce the stripe mark on the warp yarn. The motor with brake system in order to prevent excess revolutions for the sizing beam during power-off, the pneumatic brake equipment can be used also.

The yarn guide roller with high precision disc tension sensor detecting the tension of let off without angel changes as the decrease of sizing beam diameter to control the let-off tension precisely, also can use curve setting.

ndependent winding unit, weaving beam winding driven by motor with high precision disc tension sensor to execute closed loop control, for automatic control of winding tension the curve set can be used, when the winding diameter increased to reduce the winding tension







自动调节两移动车头箱的横向位置来适应不 的织轴幅宽。气动上落轴 ectric control two headstocks of lateral novement to adapt the width of beam. Pneumatic device for doffing

机械速度 Speed:200m/min 织轴幅宽 Loom beam width:1300~3600mm 织轴卷装 Winding Dia :800/1000

并数 Quantity of beam rack:6-24只 卷取张力:Winding tension 100-7000N



WARPER S351整经机

- 1、高速度、大卷装,交流电机直接拖动经轴,并由PLC控制、变频器实现无级调速,恒线速卷绕。
- 2、采用光栅编码器与电脑组成的对经轴直接计长的先进计长与测速系统,消除了间接计长的误差。同时采用另一只光栅编码器和导纱辊进行跟踪计长,保证准确。
- 3、由先进的电脑系统与触摸屏的智能终端组成的操作界面,可设定和显示各种工艺性能参数,有故障检测系统检测故障。4、经轴、压丝辊、测速辊三辊同步高效制动,压丝辊设有阻尼加压和瞬间回弹装置,以避免对丝的磨损。压丝辊的压力可以任意设定,使经轴卷绕表面平滑,不同规格的丝获得与之相适应的卷绕密度。
- 5、通过喂丝罗拉装置调节整经时丝的张力。喂丝罗拉由电机带动,通过张力传感器检出张力,对整经张力进行实时闭环控制,筒子架的张力无需变更。
- 6、筘座左右横向移动,使经轴的卷绕表面达到平滑,横向移动量可以调节。
- 7、筒子架有翻转式和小车式两种,纱筒排列方法有四边形和三角形两种。配红外线断经 监控装置、静电消除装置和多种可选择的张力器。

- 1. high speed, large package, warp beam driven by AC motor directly and controlled by PLC with frequency converter to realize stepless speed change, constant linear winding.
- 2. To adopt the grating encoder and computer for metering of the sizing beam directly of which is an advanced metering and detecting system, to eliminate the deviation of indirect metering. Meanwhile, another grating encoder for tracking metering for the guide roller to ensure the length accurate.
- 3. With the advanced computerized system of intelligent terminal with touch screen operation interface, can be set and display various process parameters, with self-diagnoses system.
- 4. Warp beam, pressing roller and tachometer roller of these three rollers in synchronization for efficient braking. Pressing roller equipped with damping pressure and instantaneous rebound device in order to avoid the wear of filament fiber. The pressure of pressing roller can be arbitrarily set, to make warp beam winding surface smooth, the winding density for different filament fiber.
- 5. By feeding roller device to adjust the filament fiber tension during warping. feeding roller driven by motor, the tension detected by sensor, real–time closed–loop control for warping tension, the tension of bobbin creel no need to change.
- 6. The reed sley to move right and left for winding beam surface smooth, the amount of lateral movement can be adjusted.
- 7. Two type of bobbin creel, turnover and car type, yarn bobbin arrangement method has two kinds of quadrilateral and triangular. With infrared monitoring device, electrostatic eliminator and a variety of optional tensioner.















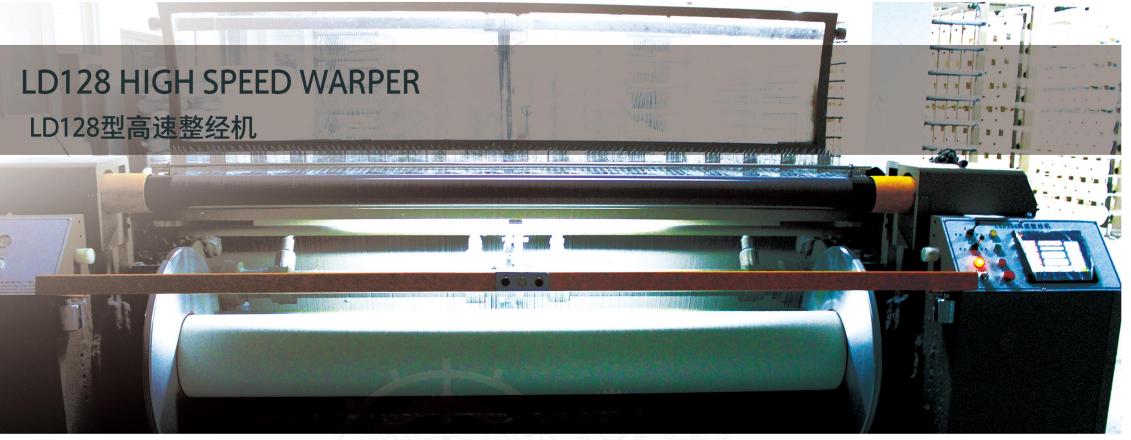




主要技术规格 MAIN TECHNOLOGY SPECIFICATIONS

项目/Item 技术参数/Specifications 机械速度/speed 800m/min800 rpm

经轴幅宽/Width of beam 1300mm~1800mm



主要技术特征

- 1、高速度、大卷装、交流电机直接拖动经轴,并由PLC控制、变频器实现无级调速,恒线速卷绕。
- 2、采用光栅编码器与电脑组成的对经轴直接计长的先进计长与测速系统,消除了间接计长的误差,同时采用另一只光栅编码器和导纱辊进行跟踪计长,保证准确。
- 3、由先进的电脑系统与触摸屏的智能终端组成的操作界面,可设定和显示各种工艺性能参数,有故障检测系统检测故障。
- 4、经轴、压辊、测速辊三辊同步高效制动,压辊设有阻尼加压和瞬间回弹装置,以避免对纱线的磨损。
- 5、经轴拍合、采用电机驱动,机械夹紧,定心准确安全。
- 6、高速转动体经过了动平衡,在纱线强度允许情况下,真正实现高速运转。
- 7、导纱辊采用铝合金管精加工,内填吸震剂,经过动平衡和表面阳极氧化处理,保证导纱辊耐磨和高速运转。
- 8、采取左右钳制式双重刹车。
- 9、箱体间内置加强式结构,刚性特强,运转平稳。
- 11、设有机电连锁保护装置,安全操作栏杆、任何异常情况迅速停车,绝对保证机器及人生安全。
- 12、筒子架优化组合,适应各种品种的需求。对于总经根数不太多,一般4000根以下的,如不需上浆,可以做成大筒子架,将经 纱一起绕上织轴。
- 13、灵敏的断纱自停,任何一断头都无处逃遁。

- 1, High speed, large package, warp beam driven by AC motor directly, with PLC control of frequency stepless speed adjusting for winding at constant linear speed.
- 2, The advanced grating encoder and computer metering length and detecting speed system in order to eliminate indirect metering deviation. Meanwhile another grating encoder and the guide roller for tracking metering to ensure metering accuracy.
- 3, The operating interface consisted of advanced computer terminal and touch screen, can set and display all Kinds of technological parameters, with fault self–diagnosis detecting system.
- 4, Warp beam, pressing roller and tachometer roller all of these three rollers in synchronization for efficient braking. Pressing roller equipped with damping pressure and instantaneous rebound device in order to avoid the wear of filament fiber.
- 5, Beam beating type, driven by motor, mechanical clamping, centering alignment accurate and safety.
- 6. Under the condition of yarn strength to reach high speed dynamic balance, to achieve high speed operation truly.
- 7, Guide roller to adopt aluminum alloy tube with finish machining, to fill in shock absorption agent, through the dynamic balance and surface anodic oxidation treatment to ensure the guide roller wear resistant and high speed.
- 8, To adopt dual type clamp around the brake
- 9, The built-in body with strengthening structure, strong rigidity, smooth operation
- 10, Fully enclosed windscreen with humanized design, safe, quiet, clean and beautiful
- 11, The interlocking device equipped with mechanical and electrical protection device Safety operating rail, any abnormal situation quickly stop operation to ensure the machines and life safety.
- 12. Optimization combination of the bobbin creel to adapt to variety of needs. To make a big bobbin creel to wind the weaving beam directly for the total number of the yarn ends less than 4000 and also no need sizing.
- 13, Yarn breaking automatic stop sensitively, no missed detection.

主要技术参数

压辊加压形式 弧线式 平行针线式

设计车速: 1200m/min

经轴边盘直径: Φ800mm、Φ1000mm、Φ1250mm、Φ1460mm

幅 宽: 1800mm、1600mm、1400mm(可根据客户要求选择,达2800mm)

制动距离: ≤3m

筒子架容量: 560 可根据客户要求选择)

锭 距: 240×240mm、300×300mm (可根据客户要求选择)

层数:6层(可根据客户要求选择)

主电机参数: 7.5kw/380v、11kw/380v、15kw/380v (据具体规格定)

MAIN TECHNICAL PARAMETERS:

Press roller press type: arc line /parallel line type

Design speed: 1200m/min

Beam flange diameter:

Φ800mm, Φ1000mm, Φ1250mm, Φ1460mm (other available)

Working width: 1800mm,1600mm,1400mm,

(other available 2800mm)

Braking distance: ≤3m Capacity of creel:560 (other available)

Distance of spindles:240 × 240mm, 300 × 300mm(other available)

Number of layers:6 (other available)

Main motor parameters: 7.5Kw/380v, 11Kw/380v, 15Kw/380v (on request by customers)

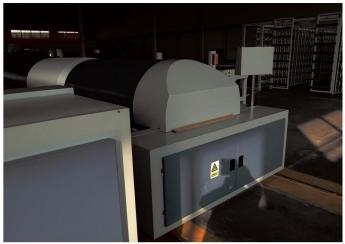












主要技术特征

- 1、高速度,大卷装,交流电机直接传动、变频调速、实现恒线速卷绕、整经倒轴均为无级调速。
- 2、由工业电脑PLC、光栅旋转编码器、伺服电机组成全机动作的控制执行系统,对经 纱位移爬坡进行控制、检测、性能稳定可靠,位移精度高、经纱成形好。
- 3、微电脑与光栅旋转编码器组成闭环控制系统,实现直接计长、计匹、计绞和测速功能。
- 4、高强薄壁钢质固定锥角滚筒与高精度伺服电机控制的整经台配合,可满足所有品种的整经工艺。
- 5、采用气液转换机构和钳制式制动器实现高效制动,并由此机构产生倒轴阻尼张力,可根据品种要求无级调整。
- 6、采用高精度滚珠丝杠和直线导轨,保证位移准确。
- 7、整经台和整机的移动分别各用一根滚珠丝杠带动,保证运行中位移无变化。
- 8、配备矩形翻转式筒子架,集体换筒,内(外)侧引纱,采用全封闭红外线断经检测装置,灵敏可靠。
- 9、采用触摸屏,操作方便,并能在线显示故障、有较强的故障查询功能。
- 10、该机可配备多种辅助装置:绞纱上油(蜡)机构,绞纱固体上蜡机构,片纱上油(
- 蜡)机构,静电消除装置等。
- 11、可配打印机,打印工艺过程卡及产量统计。
- 12、可进行远程监控,方便维修。
- 13、主电器采用进口件,选用口牌可根据客户要求商定。

适用范围

本机适用于丝织、色织、毛纺、麻纺及各类化纤织造的前织准备,是进口、国产剑杆、喷水、片梭等无梭织机的理想配套设备,具有优良的性能价格比。

Main technical features

- 1. With high speed, large package, driven by AC motor directly, frequency control speed, constant winding and rebeaming at stepless speed change.
- 2. The whole executing system consists of industrial computer PLC, grating rotary encoder and servo motor to detect and test the displacement of warp yarn climbing with a stable and reliable performance, high accuracy displacement and good forming warp.
- 3. Closed loop control system of microcomputer and grating rotary encoder to realize direct metering length, batch, hank and speed detecting.
- 4. High strength thin wall steel drum with high precision servo motor to control the warping machine, can satisfy all kinds of warping process.
- 5. Adopting gas–liquid conversion mechanism and muzzle brakes efficient braking, which produces damping tension for rebeaming, can be set stepless speed adjustment according to the demands.
- 6. with high precision ball bearing guide screw and linear guide rail, to ensure the accuracy of the displacement.
- 7. Warping machine and operation desk shifted by bal bearing bars separately to ensure no change displacement during operation
- 8. Equipped with rectangular tilting bobbin creel, collective bobbin changing, inside (outside) lead thread. to adopt totally enclosed infrared end breakage detection device, it is sensitive and reliable.
- 9. Adopt touch screen, easy to operate, and can display the fault online, and with self–diagnosis function.
- 10. The machine can be equipped with a variety of auxiliary equipment: oiling for hank g (wax), solid wax for hank, oiling for yarn (wax), and electrostatic eliminator, etc
- 11. Can be equipped printer for printing process card and production statistics
- 12. Remote monitoring can be performed, and convenient maintenance
- 13. Main electrical parts imported, any choice according to customers demands.



