安徽聚芯智造科技股份有限公司
Anhui Juxin Intelligent Manufacturing Technology Co., Ltd

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01 Company brief introduction

Anhui Juxin Intelligent Manufacturing Technology Co., Ltd. is located in Tongling City, Anhui Province, China. It was initially established in 1991, The number of technical personnel accounts for 45% of the total employees.

08 Enterprise Honor

02 Main products–Dies for round wire

Drawing dies

ND drawing die

Features

- High quality natural diamond
- High temperature resistance
- Ultra-high precision
- Available in 0.02mm to 2.6mm

Advantages

- Suitable for fine and ultra-fine wires
- low surface friction
- Wire surface is smooth
- High wire drawing performance andlow power consumption
- Make stock plans available

PCD drawing die

1 Features

- Suitable for dry and wet drawing
- Available in any case size
- Various particle sizes available
- Dies available for high temperature drawing
- Dies with tighter tolerances available

2 Advantages

- Persistence (longer than TC,SCD & ND)
- Ideal for long production runs
- Suitable for highly corrosive wires
- Wire remains round even with severe die wear
- Make stock plans available

SCD drawing die

Features

- Using 111-face crystal orientation diamond
- Wear profile can be predicted
- Predictable maximum recut size
- High temperature resistance
- Various ultra-high-precision dies are available

Advantages

- Ideal for fine and extra fine drawing
- low surface friction
- Wire surface is smooth
- Various stock plans available

Bunching and stranding die

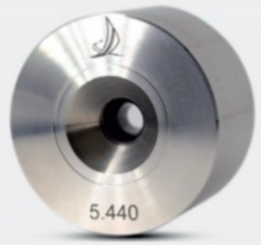
Features

- Optimum die shape tailored to your process
- Wide range of applications

Advantages

- Superior performance and wire quality
- low surface friction
- Wire surface is smooth

Nano drawing die



Features:

- Ultra-smooth tool surface
- High wear resistance
- Low coefficient of friction
- Suitable for large diameters
- High diameter accuracy

Advantages:

- Save conductive wire o.r cablematerial
- High machine uptime
- Reduce power consumption
- Excellent wire or cable surface
- Long diameter stability

Excellent electrical conductivity is achieved through the use ofdiamond-coated dies, allowing cable manufacturers to reduce costs.

Multi-wire cables are typically formed using bundling, stranding and compactiondies. Bunching or stranding dies combine single and multi-strand wires, whilecompaction dies compact the stranded wires to the desired form factor. The ultra-smooth diamond coating on the carbide die ensures the smoothest wire and cablesurfaces available today. Nano Dies (nano-coated dies) are the ideal combination oflarge-size cemented carbide dies and the excellent surface properties of randomlyoriented synthetic diamonds. When current flows through the surface of the wire,the smooth surface provides higher conductivity than previously achieved by usingcemented carbide dies. This allows cable manufacturers to save raw material, as thesame conductivity can be achieved with a smaller diameter cable. Nanodiamondcoated dies reduce the power consumption required to bundle, twist or compactconductors by minimizing friction.The nano-diamond-coated dies manufactured by JuXin use the most advanceddiamond coating technology, allowing cable companies to save material andmanufacturing costs by improving cable quality, extending die life, and reducingoverall costs.

Enameling dies

PCD enameling dies

Features

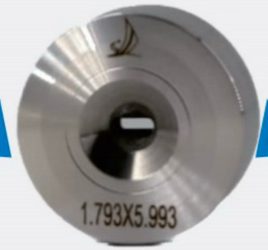
- Materials are tungsten carbide tip type and one piece type
- The minimized resistance, as the inside surfaces are highly polished,allows the insulating varnish to flow smoothly.
- The profile of the approach is the optimal design for assuring stablewire positioning at the center of the bearing.
- The minimum bearing diameter is capable of manufacturing enameling wire with diameters as fine as 0.1mm.

Advantage

- High precision dies mean improved uniformity of insulation thickness and evenness.
- There is a minimum variation in the precision of the outside diameter of the finished product after enameling is completed.
- There is a minimum leakage and breakages due to blisters are reduced.

03 Main product–Dies for shaped wire

Shaped wire drawing die

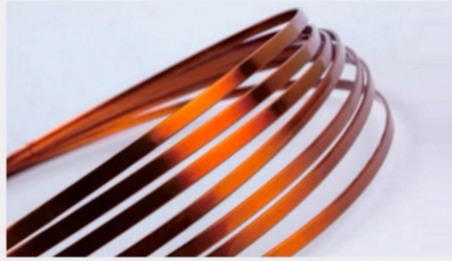


Features

- Gradually deform from one shape to another
- Small dimensional tolerance
- Set of modules can be engineered
- Available in TC, PCD, SCD and ND materials
- Starts from size 0.150mm*0.150mm

Advantages

- Smooth wire or rod surface
- The die with diamond core can prolong the service life of the die



The company can produce drawing dies in different shapes, such as : rectangular, square, fan-shaped, hexagon.etc. Customized products are available as per requirement.

Shaped wire enameling dies

01 Features

- Materials are tungsten carbide tip type and one piece type
- The minimized resistance, as the inside surfaces are highly polished,allows the insulating varnish to flow smoothly.
- The profile of the approach is the optimal design for assuring stablewire positioning at the center of the bearing.
- Starts from size 0.150mm*0.150mm

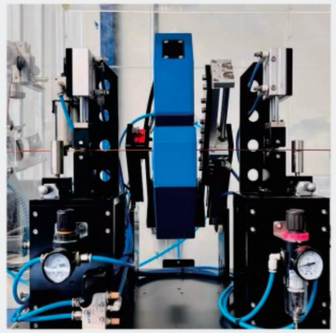
Advantage 02

- High precision dies mean improved uniformity of insulation thickness and evenness.
- There is a minimum variation in the precision of the outside diameter of the finished product after enameling is completed.
- There is a minimum leakage and breakages due to blisters are reduced.

04 Flat wire surface bead detector

Main function

On-line checking the bead default of the enameled wire surface, and labeling by coding.



1. Equipped with optical sensing lens, optically detect the wire surface

Integrated concave convex measuring machine is a kind of auto measuring system that using advanced sensor technology, can get the precised data in μm. It can be used for the continuous and precise quality control on the wire. It includes the hardware of the surface bur default detecting and the data connecting, and the software for specific sensor of the data management is also included.

The main part of the integrated concave convex measuring machine is the dual shaft high speed measuring system imported from UK, the detecting on the wire surface is non-contact, high-speed and precise

It is easier to use, and has lower maintenance and longer life.

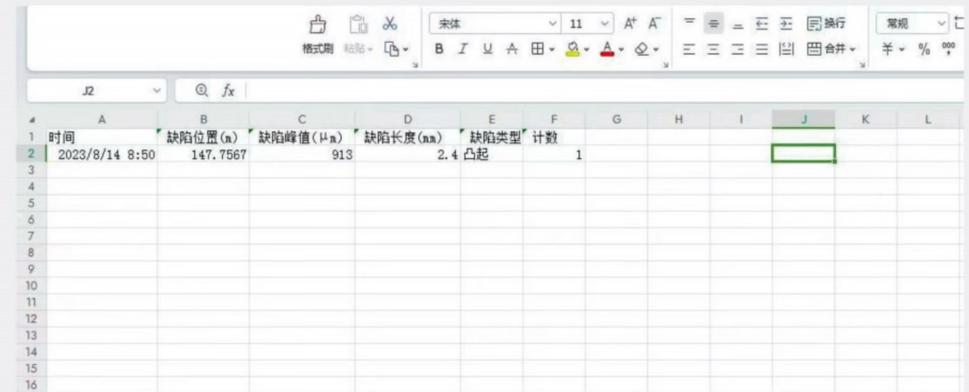
Item	No. of the shaft	Sampling rate	Min. length of the default	Min. height of the default	Max wire speed	Max wire size
Integrated concave convex measuring machine	2	10KHz/s	0.25mm	5μm	150m/min	15mm×15mm

(Notes: The data of the min default is based on the wire speed of 15m/min, it will be changed with the change of the wire speed.)

2.Combined with the independently developed control program, has the operation interfacein both English & Chinese, and can check on real time.

3、The detecting data is automatically stored and formed with a list, the defaults information is easier to see.

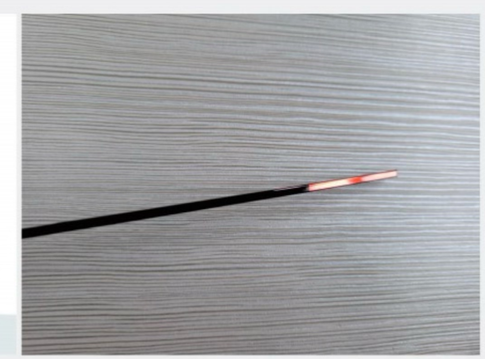
During the production process, the bur defaults information detected on every spool of the wire, including the bur size, length, location and time being detected, all will be automatically stored after the taking-up of the present spool, and all these information will be come out in excel sheet.



时间	缺陷位置(m)	缺陷峰值(μm)	缺陷长度(mm)	缺陷类型	计数
2023/8/14 8:50	147.7567	913	2.4	凸起	1

4、The controlled printer program can 100% labeling the burs detected by ink jet printing.

Only need to connect with the ink jet printer, the detector can label the defaults by ink jet printing on all the defaults detected, the customer can see the location of each default easily.

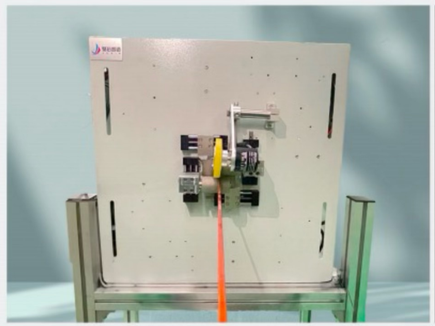


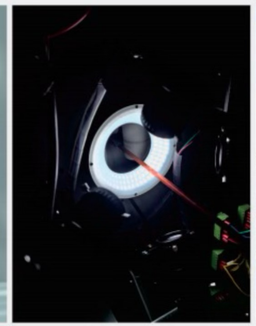
05 Flat wire visual surface defaults detector

Main function

Identify the defaults on the enameled wire surface, such as beads, scratches, blots, etc., and achieve the default cross section calculation, locating record,and alarm.

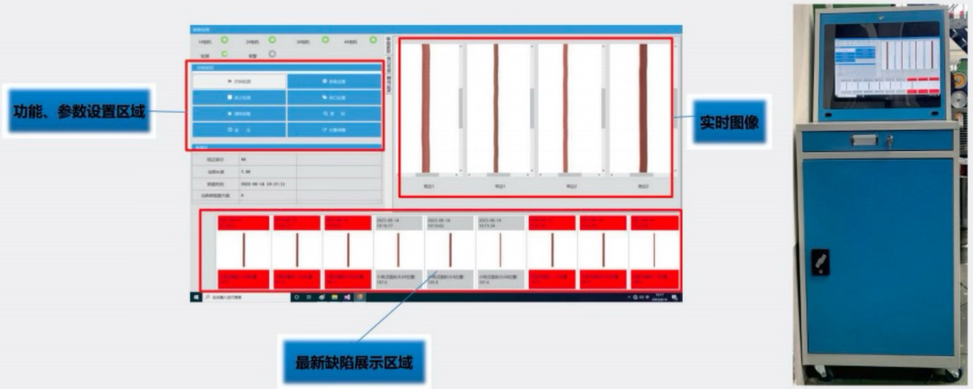
1.Characteristics:Non-contact optical measurement, non-stop production of the wire, online continuous measurement with high speed, applied for both low wire speed and high wire speed, real time analog signal output, detecting the default in μm, allowed remote adjustment.



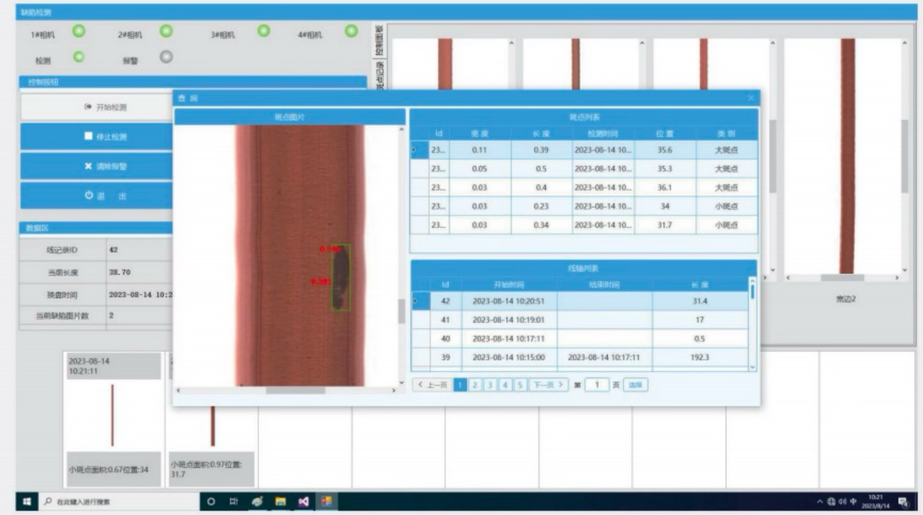


2.Software solution

Default customized, setup, and show the real time default pictures.



Defaults identified can be automatically stored, counted and looked in.



AI data learning

For those which temporarily have not been identified as defaults, can build up the new judgement on defaults by customize the minimum defaults cross section and maximumquantity of the defaults in a certain length,etc.