



ZHANGJIAGANG CITY VICROWN NEW MATEREAL CO. , LTD.

VICROWN

V I CROWN NEW MATERIAL

Accurate

Efficient

Stability

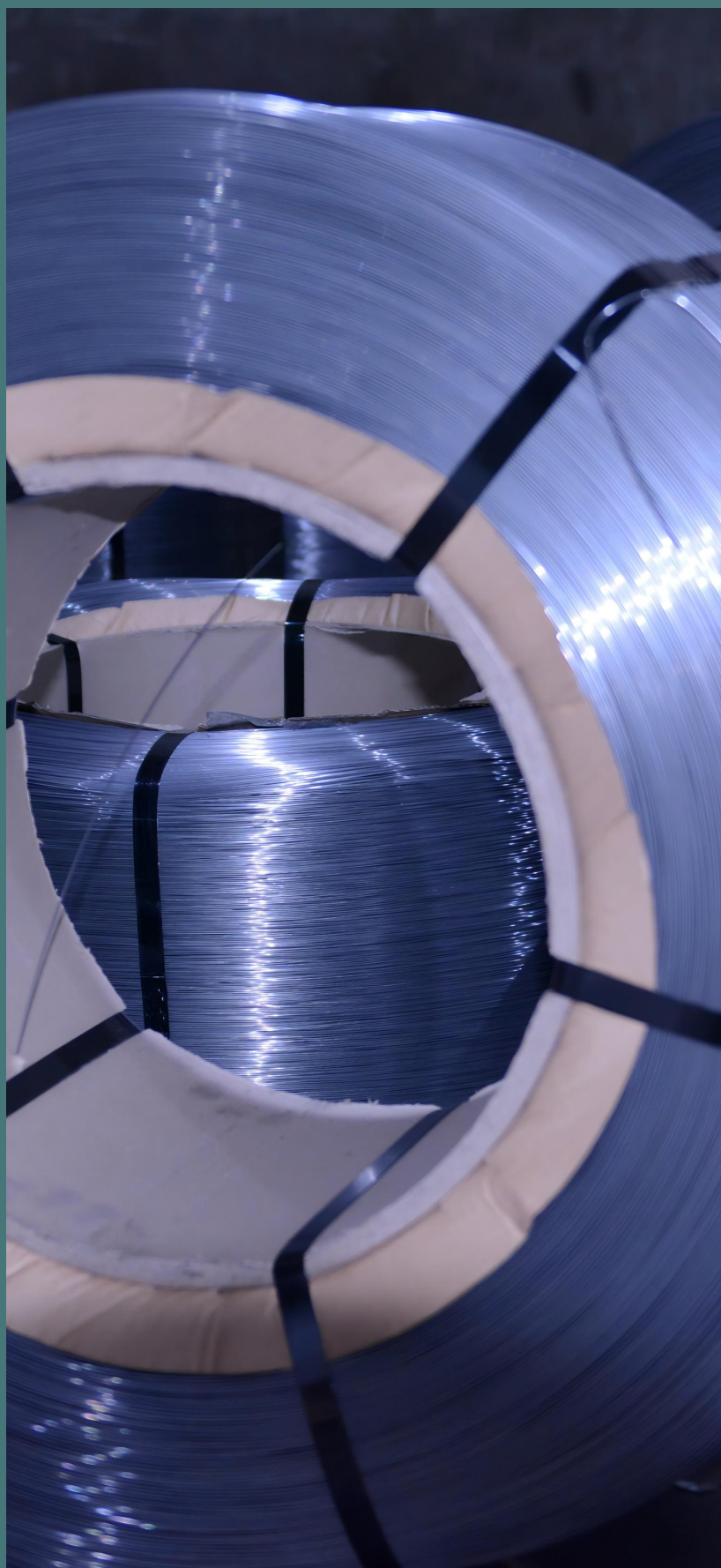


Exquisite craftsmanship, strength defines the future

STEEL WIRE

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VICROWN is a steel wire manufacturer in Zhangjiagang, Suzhou, China, specializing in the field of steel wire manufacturing for more than 20 years. We have been exporting to European and American countries for a long time, providing customers with high-quality steel wire that meets international standards.



STEEL WIRE

Widely Applicable Fields

01 Automotive Industry

Steel wire, as the "invisible skeleton" of the automotive industry, is indispensable

02 Machinery Manufacturing

Steel wire has become the "invisible thread" of mechanical manufacturing with high strength, high precision, and versatility.

03 Construction Industry

From a foundation 30 meters underground to a skyscraper, steel wire remains the 'invisible backbone' of architecture



From the birth of a steel wire to carrying the weight of a 10000 ton bridge, VICROWN has always engraved 'strength' into its genes, ensure that every roll of steel wire can protect safety in extreme environments. We are committed to providing high-precision and high-strength steel wire solutions for global industries



High Carbon Steel Wire

► Core Advantages

- » **High strength and tensile properties:** Made of high-quality high-carbon steel (carbon content 0.45%-1.00%), the tensile strength can reach **1500-3000MPa**, suitable for high-load scenarios.
- » **Wear-resistant and durable:** After special heat treatment processes (such as lead quenching or oil quenching), the surface hardness is increased to **HRC 45-60**, extending the service life.
- » **Precise size control:** The diameter range covers 0.1mm to 10mm, and the tolerance is strictly controlled at **±0.01mm** to meet the needs of precision processing.
- » **Corrosion Resistance :**Optional galvanizing, copper plating, or epoxy coating processes can significantly improve corrosion resistance and adapt to harsh environments such as humidity and salt spray.

Parameters	Standard
Grade	GB/ASTM/JIS 45/C1045/S45C 60/C1060/S58C 70/C1069/S70-CSP 80/C1080 SWRH62A SWRH72A SWRH82B T90/T1250
Implementation Standard	GB/ASTM/JIS/DIN/EN/BS
Packaging	Z1/Z2/Steel Reel
Surface	Smooth/Copper Plating/Galvanized
Surface Finish	Ra ≤0.2μm (No Burrs, Cracks)
Coating Thickness	5-30μm (Galvanized layer complies with ISO 7989)



Copper Coated Steel Wire

► Core Advantages

- » **High strength and tensile properties:** The steel core enhances the structural strength, with a tensile strength of **600-1800MPa**, realizing the dual functional integration of "conductivity + load-bearing".
- » **The plating layer is dense and durable:** The electroplating/chemical plating process accurately controls the thickness of the copper layer (**5-50μm**), and the bonding force passes the **ASTM B571** bending test without peeling, and the anti-oxidation performance is improved by 3 times. Optional tin plated copper or brass plated composite layer, suitable for extreme temperature and humidity environments
- » **Multi scenario adaptation:** The surface presents matte, glossy, antique and other textures, and passes the 48-hour neutral salt spray test, taking into account both decorativeness and durability. The diameter is **0.05mm-8mm** and can be flexibly customized, supporting annealed soft or spring hard delivery, and adapting to precision processing needs.

Parameters	Specifications
Substrate material	Low carbon steel (SWRM6/10), high carbon steel, stainless steel
Diameter range	0.8mm – 3.5mm (special-shaped wire can be customized)
Coating type	Pure copper, tin-plated copper, silver-plated copper, copper-nickel alloy
Copper layer thickness	5μm – 50μm (±1μm precision control)
Conductivity	≥85% IACS (20°C environment)
Tensile strength	600MPa – 1800MPa (determined by substrate and process)
Surface roughness	Ra 0.2μm – 1.6μm (customized according to application scenarios)
Certification standards	ASTM B258, IEC 60228, RoHS, REACH



Galvanized Steel Wire

► Core Advantages

- » **Super strong anti-rust and anti-corrosion:** Adopting hot-dip galvanizing/electro-galvanizing process, the zinc layer is uniform and dense (the zinc coating amount can reach **300g/m²**), passing the **ISO 9227** standard 2000-hour salt spray test, and the service life is **3-5** times longer than that of ordinary steel wire.
- » **Excellent mechanical properties:** The base material is made of high-quality high-carbon steel (such as **SWRH62A, 72A**), with a tensile strength of **800-2000MPa** and an elongation of **≥5%**, with both rigidity and toughness.
- » **Flexible processing and environmental protection:** Supports customization of diameters from **0.5mm to 12mm**, can be pre-bent, twisted and woven to meet the diverse needs of fences, cables, etc. Chromium-free passivation treatment process, in compliance with **RoHS/REACH** regulations, 100% recyclable.

Parameters	Specifications
Substrate material	High carbon steel (SWRH62A/72A), medium carbon steel, low alloy steel
Diameter range	0.6mm – 6mm (special specifications can be customized)
Zinc coating thickness	20-300g/m ² (graded according to ISO 1461 standard)
Tensile strength	800MPa – 2000MPa (comprehensive strength of substrate + coating)
Elongation	≥5% (ASTM A641 standard)
Surface characteristics	Smooth , slight zinc flower, flat passivation treatment
Certification standards	ISO 1461, ASTM A641, BS EN 10244



Phosphated Steel Wire

► Core Advantages

- » **Excellent corrosion resistance:** Phosphated steel wire adopts surface phosphating treatment technology to form a dense and firmly bonded phosphating layer, significantly improving its anti-corrosion performance, effectively resisting environmental erosion such as oxidation and humidity, and having a service life far exceeding traditional galvanized steel wire.
- » **High strength and long lifespan:** Phosphated steel wire has a high elastic modulus, excellent material uniformity, and a tensile strength of up to **600-2000 MPa**, meeting the requirements of high-strength applications. The porous structure of the phosphating film can store lubricating grease, reduce friction and wear, suppress micro fatigue cracks, and the fatigue life can reach **3-4** times that of ordinary steel wire ropes, reducing daily operating costs by more than **60%**.

Parameters	Specifications	Execution standards
Material	SWRH72A/SAE1074/Customized alloy	ASTM A510
Diameter range	Φ1.2mm-Φ4.0mm	ISO 6892-1
Tolerance control	±0.05mm(<1mm)	DIN 1543
Tensile strength	1600-2200MPa	ISO 6892-1
Surface shrinkage rate	≥45%	ASTM E8/E8M
Twisting performance	≥35 times/100d (d=wire diameter)	EN 10218-2
Phosphating layer weight	2.5-4.5g/m ²	ISO 9717
Friction coefficient	0.10-0.15 (dry state)	DIN 51834
Fatigue life	1×10 ⁷ times (R=0.1)	DIN 50113



Cut Shot Steel Wire

► Core Advantages

- » **Higher hardness and strength:** Due to the high hardness and strength of the processed parts, high requirements are placed on the cut shot steel wire, requiring the abrasive to not break and to be wear-resistant.
- » **Long service life:** Cut shot steel wire is made by cutting steel wire into sections. The structure of cut shot steel wire is very dense, with a long service life, high hardness, and fast processing speed.
- » **Higher production efficiency:** Compared with cast steel pellets and stainless steel pellets, cut shot steel wire have higher processing efficiency and relatively lower processing costs.

Parameters	Specifications
Material	High carbon steel (optional SWRH72A/82B), low carbon steel, stainless steel (304/316)
Diameter range	0.5mm – 3.0mm (special specifications can be customized)
Tensile strength	1800-2200MPa
Hardness	450 -650 Hv
Elongation	≥5%
Certification standards	SAEAMS2431、SAEJ441、VDFI8001



Steel Wire For Brush

► Core Advantages

- » **Excellent material performance:** Made of high-quality high-carbon steel or stainless steel (such as **304/316**), with a tensile strength of **800-2000 MPa**, it can be bent repeatedly without breaking, and is suitable for high-frequency cleaning scenarios.
- » **Corrosion and rust resistance:** Galvanizing, copper plating or electrophoretic coating process, salt spray resistance test ≥ 500 hours (**ASTM B117**), suitable for humid, acidic and alkaline environments.
- » **Smooth surface without burrs:** Precision polishing, surface roughness **$Ra \leq 0.15\mu m$** , to avoid scratching the treated surface during cleaning.
- » **Diversified form adaptation:** Flexible diameter selection: covering **0.05mm to 2.0mm**, supporting full-specification customization from ultra-fine wire (precision instrument brush) to thick wire (industrial floor brush).

Parameters	Specifications
High carbon steel wire	in accordance with ASTM A510 (cold drawn carbon steel wire) standard, carbon content 0.70%-0.95%.
Stainless steel wire	in accordance with ASTM A313 (316 acid and alkali resistant steel wire) or GB/T 4240 (austenitic stainless steel).
Tensile strength	800-2000 MPa (adjusted according to the purpose).
Bending life	$\geq 50,000$ times (0.3mm diameter steel wire, 180° repeated bending test)
Coating thickness	8-15 μm for zinc coating (ISO 1461), uniformity error of electrophoretic coating $\leq 5\%$.
Rust resistance	pass neutral salt spray test ≥ 72 hours (GB/T 10125).



Duct Steel Wire

► Core Advantages

- » **High strength, compressive and tensile strength:** Made of high carbon steel or special stainless steel material, with a tensile strength of **1800-2200 MPa**, effectively preventing deformation and bursting of the hose.
- » **Adaptable to harsh environments:** Surface galvanized/copper plated, or made of 316L stainless steel material, resistant to acid, alkali, salt spray, and high temperature and humidity environments, extending the service life of the hose.
- » **Combining flexibility and durability:** The unique annealing process makes the steel wire both flexible and rigid, with no deformation after repeated bending, suitable for dynamic working conditions.

Parameter	Specification details
Material	High carbon steel, galvanized steel wire, copper plated steel wire, bronze plated steel wire, brass plated steel wire
Diameter range	0.5mm-3.5mm (customizable)
Tensile strength	1800-2200 MPa
Elongation rate	≥ 6%
Temperature resistance range	-40 ° C to+300 ° C (adjusted according to coating/material)
Surface treatment	galvanizing, copper plating, and PVC coating
Certification standard	ISO 9001 ASTM A853、 EN 10270-1

► VICROWN VALUS

Accurate / Efficient
Stability / Innovate



VICROWN NEW MATERIAL will continue to uphold the spirit of "tough as steel, faithful as gold", layout the future with a global perspective, and connect the world with reliable quality. We firmly believe that every roll of steel wire carries the heavy burden of our customers. From microscopic metal structures to macroscopic product performance, we pursue zero defects with almost stringent standards and create industrial backbones that can withstand the test of time with ingenuity. No matter how times change, we will always be your trusted partner - because every steel wire embodies our persistent pursuit of excellence.





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