

粗钨丝/Coarse tungsten wire



» 用途

Application

主要用于改制制造各种灯用钨丝、绕制弹簧电极等。
It is drawn to prepare tungsten filaments for various lamps, spring electrodes, etc.

牌号 Code	用途 Application
CCW92	用于拉制汽车灯用钨丝、高温卤素灯用钨丝等。 It is drawn to make filaments for automotive lamps and high temperature halogen lamp, etc.
CCW91	用于拉制卤素灯用钨丝、汽车辅助灯用钨丝等。 It is drawn to make filaments for halogen lamp and automotive auxiliary lamps, etc.
CCW61	用于拉制普通照明灯用钨丝（普通泡、节能灯）。 It is drawn to make filaments for general lamps (ordinary bulbs, energy-saving lamps).
CCW31	用于绕制弹簧电极等。 It is drawn to make spring electrode.

» 规格

Specification

表面状态 Surface	拉制 Drawn		电解抛光 Electropolished	
	直径公差 Dia. Tolerance (mm)	椭圆度 Ovality (mm)	直径公差 Dia. Tolerance (mm)	椭圆度 Ovality (mm)
0.35≤d≤1.0	±0.01	±0.01	±0.01	±0.01

» 物理性能

Physical property

类别 Size D (mm)	单根丝净重 weight of single wire G (kg)	深伤裂点数 X (split quantity/kg)	脆性 Brittleness	抗拉强度 (Tensile strength N/mm ²)
0.35≤d<0.6	2.0≤G≤5.5	X≤35	Pass	1900~2400
0.6≤d≤1.0	2.0≤G≤11	X≤15	Pass	1850~2350
检测 Analysis method	电子秤 Electronic balance	涡流探伤 Eddy current inspection	弯折 Bending test	拉力试验机 Tensile strength tester

注：有特殊要求在订货时说明。
Remarks: Special requirement should be declared when placing order.

细钨丝/Fine tungsten wire



» 用途

Application

细钨丝主要用于绕制各种白炽灯、荧光灯、卤素灯、汽车灯灯丝，绕制灯丝承托圈等。
Fine tungsten wire is mainly used to make coils for incandescent lamps, fluorescent lamps, halogen lamps, automotive lamps, and make bearing rings of filament, etc.

牌号 Code	K含量 Potassium content (ppm)	高温性能 High temperature property	规格范围 Size range (mm)	用途 Application
CCW92	80~100	Excellent	0.015~0.35	高温卤素灯灯丝、汽车灯。 It will be made into coils for high temperature halogen lamps, automotive lamps.
CCW91	70~90	Excellent	0.015~0.35	卤素灯、汽车辅助灯等。 It will be made into coils for halogen lamps, automotive auxiliary lamps, etc.
CCW61	60~75	Good	0.015~0.35	普通白炽灯、荧光灯、节能灯、灯丝承托圈等。 It will be made into coils for incandescent lamps, fluorescent lamps, energy-saving lamps, and bearing rings, etc.

» 尺寸公差

Dimensional tolerance

钨丝直径 Diameter (μm)	钨丝重量 Diameter in weight (mg/200mm)	200mm丝段偏差% Tolerance of diameter in weight, %			单长 Single length (m)
		9 level	1 level	11 level	
15≤d≤18	0.68≤p≤0.98	±2.5	±3.0	±4.0	5000
18<d≤40	0.98<p≤4.85	±2.0	±2.5	±3.0	2000
40<d≤80	4.85<p≤19.39	±1.5	±2.0	±2.5	1000
80<d≤300	19.39<p≤272.71	±1.0	±1.5	±2.0	300
300<d≤350	272.71<p≤371.18	±1.0	±1.5	±2.0	300

注：尺寸公差和单长可按客户要求订制。
Note: Dimensional tolerance and single length can be customized according to customer's requirements.

» 加工状态
Wire status

产品名称 Product name	产品代码 Code	加工状态 Wire status	直线度 Straightness
卤素灯黑钨丝 Coated tungsten filaments for halogen lamp	WLH	拉制 Drawn	
卤素灯白钨丝 Cleaned tungsten filaments for halogen lamp	WLB	拉制+电解抛光 Drawn and electropolished	
卤素灯矫直白钨丝 Straightened & cleaned tungsten filaments for halogen lamp	WLS	拉制+电解抛光+矫直 Drawn, electropolished and straightened	对于矫直型钨丝，其直线性满足下列要求： For straightened tungsten wires, the straightness meets following requirements:
汽车灯黑钨丝 Coated tungsten filaments for automotive lamp	WQH	拉制 Drawn	①直径d≤100μm (30.3mg)，取500mm丝段，其自然下垂高度不少于450mm。 (1) Diameter d ≤ 100μm (30.3 mg), the free sagging height of 500mm wire shall not be less than 450mm.
汽车灯白钨丝 Cleaned tungsten filaments for automotive lamp	WQB	拉制+电解抛光 Drawn and electropolished	②直径d>100μm，切取200mm长丝段，放置在平板上，其100mm弦长的弧高不超过10mm。 (2) diameter d > 100μm, cut 200 mm filament and place it on a flat plate, the arc height of 100mm chord should not exceed 10 mm.
汽车灯矫直白钨丝 Straightening and cleaned tungsten filaments for automotive lamp	WQS	拉制+电解抛光+矫直 Drawn, electropolished and straightened	
普通灯黑钨丝 Coated tungsten filaments for ordinary bulbs	WPH	拉制 Drawn	
普通灯白钨丝 Cleaned tungsten filaments for ordinary bulbs	WPB	拉制+电解抛光 Drawn and electropolished	



钨绞丝及合股丝

Tungsten wire for stranding and stranded tungsten wire



» 用途
Application

制作真空镀膜用加热器。Used for heaters of vacuum coating.

牌号 Code	K含量 (wt%) Potassium content (wt%)	性能及用途 Property and application
CCW91	0.0070~0.0090	用于绞合制作特殊耐高温加热器，加工性能较好。 It is used for making special high temperature resistant heater, with common processability.
CCW61	0.0060~0.0075	用于绞合制作耐高温加热器，加工性能好。 It is used for making high temperature resistant heater, with good processability.
CCW31	0.0040~0.0060	用于绞合制作普通加热器，加工性能最好。 It is used for making common heater, with best processability.

» 化学成分

Chemical composition

牌号 Code	W含量 W content (wt%)	其它元素最大含量 Max. content of impurities (ppm)					
		K	Fe	Al	Mo	As/Ca/Cr/Mg/ Mn/Na/Ni/Ti/Si	Bi/Cd/ Cu/Pb/Sb/Sn
CCW91	99.95	70~90	20	15	30	10	5
CCW61	99.95	60~75	20	15	30	10	5
CCW31	99.95	40~60	20	15	30	10	5
Analysis method	Minusing	AAS	AAS	ICP	ICP	AAS/ICP	ICP

» 钨绞丝典型规格及物理性能

Typical specifications and physical properties of tungsten wire for standing

规格 Size (mm)	公差 Tolerance (mm)	单根丝净重G weight of single wire, G (kg)	探伤裂点数 Split X (split quantity/kg)	脆性 Brittleness	抗拉强度 Tensile strength, N/mm ²
0.60	± 0.01	2.0≤G≤5.5	X≤35	Qualified	1850~2350
0.76	± 0.01	2.0≤G≤11	X≤40	Qualified	1850~2350
0.80	± 0.01	2.0≤G≤11	X≤40	Qualified	1850~2350
0.82	± 0.01	2.0≤G≤11	X≤40	Qualified	1850~2350
0.85	± 0.01	2.0≤G≤11	X≤40	Qualified	1850~2350
1.00	± 0.01	2.0≤G≤11	X≤40	Qualified	1850~2350
检测 Inspection	数显千分尺 Digital Micrometer	电子秤 Electronic balance	涡流探伤 Eddy current inspection	弯折 Bending test	拉力试验机 Tensile strength tester

注：有特殊要求请在订货时说明。
Remarks: Special requirement should be declared when placing order.

» 钨合股丝典型规格及物理性能

Typical specifications and physical properties of stranded tungsten wire

规格 Size (mm)	单重 Single weight G (kg)	绕制根数 No. of stranding wire	TPI	旋转方向 Stranding direction	表面状态 Surface status
0.60	G≥1.0	3 or 4	按客户要求 According to customer requirements	右旋或左旋 Right or left	黑色或白色 Coated or cleaned
0.76	G≥1.0	3 or 4	按客户要求 According to customer requirements	右旋或左旋 Right or left	黑色或白色 Coated or cleaned
0.80	G≥1.0	3 or 4	按客户要求 According to customer requirements	右旋或左旋 Right or left	黑色或白色 Coated or cleaned
0.82	G≥1.0	3 or 4	按客户要求 According to customer requirements	右旋或左旋 Right or left	黑色或白色 Coated or cleaned
0.85	G≥1.0	3 or 4	按客户要求 According to customer requirements	右旋或左旋 Right or left	黑色或白色 Coated or cleaned
1.00	G≥1.0	3 or 4	按客户要求 According to customer requirements	右旋或左旋 Right or left	黑色或白色 Coated or cleaned
检测 Inspection	电子秤 Electronic balance	目测 Vision	弯折 Bending test	目测 Vision	目测 Vision

示例 Demonstration:

绕制根数 No. of stranding wire	3
TPI	10/30mm
旋转方向 Stranding direction	Right
表面状态 Surface status	白色 Cleaned



钨丝/Coarse tungsten wire



» 用途

Application

主要用于钨丝绳、捆扎丝、引出线等。
It is drawn to prepare tungsten ropes, strapping wire, lead wire, etc.

牌号 Code	用途 Application
CCW92	用于高温炉引出线。 It is used for lead wire in high temperature furnace.
CCW91	用于捆扎丝。 It is used for strapping wire.
CCW61	用于钨丝绳。 It is used for tungsten ropes.

» 规格

Specification

表面状态 Surface	拉制 Drawn		电解抛光 Electropolished		
	规格尺寸 Size (mm)	直径公差 Dia. Tolerance (mm)	椭圆度 Ovality (mm)	直径公差 Dia. Tolerance (mm)	椭圆度 Ovality (mm)
	0.15≤d<0.35	± 0.005	± 0.005	± 0.005	± 0.005
	0.35≤d<1.5	± 0.01	± 0.01	± 0.01	± 0.01
	1.5≤d<2.0	± 0.015	± 0.015	± 0.015	± 0.015

» 物理性能

Physical properties

类别 Size D (mm)	单根丝净重 weight of single wire G (kg)	探伤裂点数 Split X (split quantity/kg)	脆性 Brittleness	抗拉强度 Tensile strength N/mm ²
0.15≤d<0.35	0.1≤G≤5.5	X≤35	Pass	2100~2700
0.35≤d<0.6	2.0≤G≤5.5	X≤35	Pass	1900~2400
0.6≤d<1.0	2.0≤G≤11	X≤15	Pass	1850~2350
1.0≤d<2.0	2.0≤G≤11	X≤15	Pass	1750~2250
检测 Analysis method	电子秤 Electronic balance	涡流探伤 Eddy current inspection	弯折 Bending test	拉力试验机 Tensile strength tester

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