



登封市创威碳化物制品有限公司
Dengfeng Chuangwei carbide products Co., Ltd.

简介 BRIEF INTRODUCTION

登封市创威碳化物制品有限公司,位于中原腹地世界文化遗产嵩山风景区,距禅宗圣地少林寺向南10公里处,公司主要从事于二硅化钼电热元件和碳化硅电热元件及钨钼材料的研究和生产开发,拥有电热元件行业的高级工程师研发和专业技术指导,不断提升产品品质,积累了丰富的制造经验,雄厚的技术力量,先进的工艺装备,完整的质量保证体系和科学的管理模式。其中硅碳棒分为:等直棒、粗端部棒、枪棒、U型棒、五节棒、特种1400型棒等几大品种上千种规格,硅钼棒分为:U型棒、W型棒和特种1800型棒;产品广泛应用于电子、陶瓷、玻璃、荧光材料、磁性材料、冶炼耐火材料等特种行业,产品销往全国各地,并出口美国、加拿大、英国、瑞典、德国、西班牙、捷克、乌克兰、日本、韩国、印度、澳大利亚、新西兰、巴西、墨西哥、马来西亚、泰国、伊朗、南非、港台等四十多个国家和地区,客户包括各领域世界知名跨国厂商。

我们始终坚持以质量求生存,以信誉求发展,以尽善尽美的服务和灵活的经营方式为宗旨服务于广大中外客商,满足不同客户的需求,并引进一批先进的设备不断开发研制新的产品,扩大公司规模及生产线,经过我们不懈的努力,"创威"产品将成为中国电热元件行业发展的先锋。

DengFengShi Chuangwei carbide products Co., Ltd., located in the hinterland of the Central Plains world cultural heritage Songshan scenic area, away from the Zen Buddhism sacred Shaolin Temple 10 kilometers south, research and development and production company is mainly engaged in the two electric heating elements of molybdenum silicide and silicon carbide heating element and tungsten molybdenum material, a heating element Industry Senior Engineer R & D and professional and technical guidance, continuous improvement the quality of the products, accumulated a wealth of manufacturing experience, strong technical force, advanced equipment, complete quality guarantee system and scientific management mode. The silicon carbide rod is divided into: several kinds of straight bar, rod, thick end gun rod, rod, bar, - Section five special type 1400 bar, thousands of specifications, silicon molybdenum bar is divided into: U-shaped rod, w rod and special type 1800 bar; products are widely used in electronics, ceramics, glass, fluorescent materials, magnetic materials, smelting refractory material of construction industry, products are sold throughout the country, and exported American, Canada, Britain, Sweden, Germany, Spain, Czech, Ukraine, Japan, South Korea, India, Australia, New Zealand, Brazil, Mexico, Malaysia, Thailand, Iran, South Africa, Hong Kong and Taiwan and more than 40 countries and regions, customers include all areas world-renowned multinational manufacturers.

We always adhere to the quality of survival, to the credibility of development, to reach the acme of perfection service and flexible mode of operation for the purpose of service to our customers at home and abroad, to meet the needs of different customers, and the introduction of a number of advanced equipment, and constantly develop new products, expand the company's scale and the production line, through our unremitting efforts, "Chuangwei" products will become China heating element industry pioneer.



Chuangwei Super

二硅化钼电热元件

MoSi₂ Heating Elements

概述

General description

二硅化钼电热元件是一种以硅为基础的电阻发热元件,其在氧化气氛下加热到高温,表面生成一层致密的石英玻璃膜,保护其不再氧化。因此,其具有独特的高温抗氧化性。在氧化气氛下,其最高温度可达 1800℃,其适用温度为 500~1700℃。可以用作陶瓷、磁性材料、玻璃、冶金、耐火材料等工业高温炉的加热元件。

Mosi₂ heating element is a kind of resistance heating element basically made of high pure Molybdenum Disilicide. In oxidizing atmosphere, a layer of compact quartz protective film is formed on the surface of Mosi₂ element owing to the high-temperature combustion, which prevent Mosi₂ from continuously oxidizing. In oxidizing atmosphere, its Max temperature can reach 1800℃, and its applicable temperature is 500~1700℃, it can be widely used in such applications as sintering and heat treatment of ceramics, magnet, glass, metallurgy, refractory, etc.

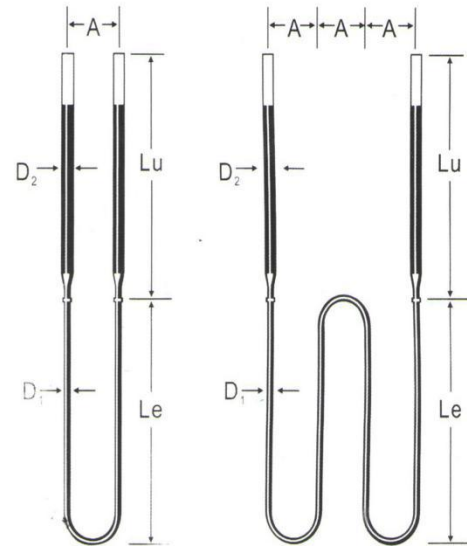
The commercial name of our Mosi₂ heating elements is Chuangwei Super Heating Elements

二硅化钼电热元件的机械性质和其它陶瓷制品一样,在常温下属于脆性材料容易断裂,这给运输和安装带来了一定的困难,但只要安装合理和使用得当是可以避免的。

Having the same mechanical character as other ceramic products, Mosi₂ heating elements are brittle materials so that they are easy to rupture at the normal temperature, which brings some difficulties to transport and install, but it may be avoided if they were installed and used correctly.

二硅化钼电热元件的标志

Dimension marks of elements



材料等级 Material Grade :1700,1800

直径 Diameter :D₁\D₂mm\mm

热端长度 Hot zone length :Le,mm

冷端长度 Cold end length :Lu, mm

间距 Shank Spacing:A ,mm

例如 Examples:

U 型 Shape,材料等级 Material Grade 1800,

D₁=3mm, D₂=6mm, Le=140mm,

Lu=125mm, A=25mm

表示为 Specify as:

Chuangwei Super MS 18,U 型 Shape,3/6×140×125×25

W 型 Shape, 材料等级 1700,D₁=6mm, D₂=12mm,Le=300mm, Lu=250mm, A=50mm

表示为 Specify as:

Chuangwei Super MS17,W 型 Shape,6/12 × 300×250×50



二硅化钼电热元件的理化性质

Physical and chemical properties of elements

1. 物理性质 Physical properties

体积密度 Volume density	抗折强度 Bend strength	维氏硬度 Vichers-hardness	气孔率 Porosity rate	吸水率 Water absorption	热伸长率 Hot extensibility
5.5~5.6kg/cm ³	15~25kg/cm ²	(HV) 570kg/mm ²	7.4%	1.2%	4%

2. 化学性质 Chemical properties

高温抗氧化性:高温氧化气氛下,元件的表面生成一层致密的石英(SiO₂)保护层以防止 MoSi₂ 继续氧化。当元件温度大于 1700℃,熔点为 1710℃的 SiO₂ 保护层融化,由于表面的张力的作用,SiO₂ 溶聚成滴,而失去保护作用。元件在氧化气氛下,再继续使用时,SiO₂ 保护层重新生成。

Oxygen-resistance under high temperature:in oxidizing atmosphere, a layer of compact quartz(SiO₂) protective film is formed on the surface of element owing to the high-temperature combustion,which prevent MoSi₂ from continuously oxidizing.When the element temperature is higher than 1700℃,the SiO₂ protective film will be fused because its fusing point is 1710℃and the SiO₂ is fused into molten drops owing to the action of its surface extension,which cause losing its protective ability.In the oxidizing atmosphere, when the element is continuously used,the protective film from again.

必须指出的是元件不宜在 400~700℃范围内长时间适用。否则元件会因低温的强烈氧化作用而粉化。

It should be pointed out that element cannot be used for rather long time in 400~700℃,otherwise,it will be powdered owing to the strong oxidizing action in low temperature.

3. 不同气氛对元件温度的影响

The Max temperature of elements in different atmospheres

气氛 Atmosphere	最大元件温度 Max element temperature	
	Songming Super MS 17	Songming Super MS 18
空气 Air	1700°C	1800°C
氮气 Nitrogen	1600°C	1700°C
氩气 Argon 氦气 Helium	1600°C	1700°C
氢气 Hydrogen	1100~1450°C	1100~1450°C
N ₂ /H ₂ 95/5%	1250~1600°C	1250~1600°C
应用领域 General applications	主要用于工业热处理炉, 烧结炉, 铸造炉, 玻璃融化炉, 冶炼炉等。 Most types of industrial furnace for heat treatment, forgoing, sintering glass melting and refining and for use in radiant tubes.	主要用于实验炉, 测试设备和高温烧结炉等。 Laboratory furnaces, testing equipment and high temperature sintering production furnace



二硅化钼电热元件的安装 Installation of elements

1. 垂直悬挂 Vertically hanging

二硅化钼的电热元件常温下脆性很大,高温时又有可塑性,所以U型元件最好的安装方法是垂直悬挂。通过固定夹将元件垂直悬挂于炉顶上。这样安装的目的就是避免将机械应力加到元件发热端上,否则容易引起元件断裂。

Under normal temperature, MoSi_2 element is very brittle, while under high temperature it is plasticity. So, the better way for installation of the U shape element is to hang it vertically to the furnace top by the element holder. Such way is to avoid putting the mechanical stress directly to the element heat-generating end, otherwise, the element will easily be broken.

2. 固定夹 Element holder

整个元件的重量都是由固定夹承担,元件的位置也由它来决定。因此,必须仔细安装,保证元件垂直悬挂,为避免局部过热,元件下端圆锥部分一定要伸到炉膛内。

The element holder supports the whole weight of the element and the position of the element is also determined by it. Therefore, it must be installed carefully to assure that the element is vertically hung. In order to prevent the element from being over heated locally, the taper part of the element lower end must put into the furnace chamber.

3. 连接带 Connection strap

接触元件的连接导线采用铝编织带或多层铝箔。外面的夹子只能起到夹紧作用,不用来导电。导线的末端与母线联结。为了避免应力传到元件上,导线长度应略大于元件和母线间的直线距离。

The connection strap is made of aluminum braid strap or multi-layer aluminum foil. The outside clamp isn't used for electrical conduction. The end of strap contacts bus and the length of strap should be a little larger than the linear distance between the element and bus.

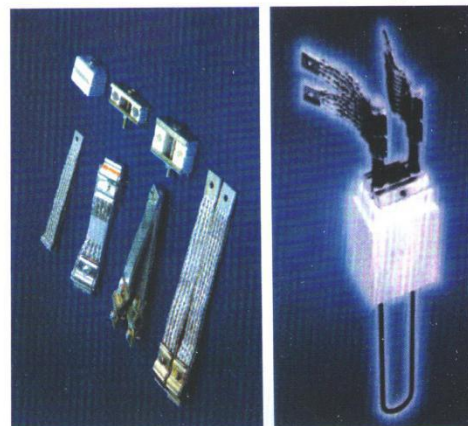
安装元件时夹头上的螺丝不要一次拧的太紧,待元件升到高温时再次拧紧,因为这时元件有一定塑性不易折断。夹头部分温度一般不要高于 200°C ,因此,夹头导线与元件接触电压应降低 0.1V 。为避免辐射热传到夹头,夹头下端和穿砖上面的距离不应小于 50mm 。为了避免损坏,一般直径 $6/12\text{mm}$ 元件不能使用 170A ,直径 $9/18\text{mm}$ 元件不能长期使用 300A 。

When install the element, don't fix the strap too much at one time, it can be tightened when the element rises to high temperature. As the element has some plastic and isn't easily broken. The temperature of the wire clip generally shouldn't be higher than 200°C . Therefore, the contact voltage between the clip wire and element should be lowered to 0.1V . In order to avoid that the radiation heat is conducted to the distance between the lower end of the dip and upper surface of the through brick should not less than 50mm . Generally for $6/12$ element, 170A should not be used long time and for $9/18$ element, 300A shouldn't be used for long time.

二硅化钼电热元件的附件 Accessories of element

二硅化钼电热元件的标准附件包括元件固定夹和两条带有夹子的铝编织连接带。用于不同直径元件的附件如下:

The nominal accessories of MoSi_2 elements include the element holder and 2 aluminum braid connecting straps. The accessories for different diameter elements are the following:





二硅化钼炉子的操作

Operation of $Mosi_2$ furnace

1. 炉子的干燥 Drying of the furnace

新砌筑或长期不用的炉子在使用前需要干燥。一般干燥温度为 100~200℃,而元件长期在低温下使用将会引起低温氧化。小型炉子干燥时间短,几个小时对元件影响不大。大型炉子干燥时间长需要注意。为了通风,最好将炉门打开,随着温度升高可以半开,到 1000℃以上完全关闭炉门。

The new built furnace or the furnace that haven't been used for a long time should be dried before operation. The drying temperature generally is 100~200℃. The element that has been used for a long period under low temperature will cause low-temperature oxidation. For the small-sized furnace, as its drying time is short, several hours will affect the element little, but for the large-sized one, as its drying is long, it should be dried carefully. You'd better open the furnace gate to make it ventilated. The gate may be half-opened with the rising of temper and fully closed when the temperature rises above 1000℃.

2. 炉子的启动 Starting of the furnace

如果炉子干燥好了或不需要干燥就可以启动升温,为了避免过大电流冲击而使电器设备过负荷应采用下列步骤启动:

If the furnace has been dried or needn't to be dried, then it may be started to raise temperature. In order to avoid that it is impacted by over current and the electric device is overloaded, the following steps should be adapted:

小型炉子 small furnace (功率 power < 100kw)		大型炉子 large furnace (功率 power 100~500100kw)	
炉温 furnace temp	电压 voltage	炉温 furnace temp	电压 voltage
20~150℃	1/3 工作电压 working voltage	20~300℃	1/3 工作电压 working voltage
150~500℃	2/3 工作电压 working voltage	300~700℃	2/3 工作电压 working voltage
500℃ 工作温度 working temp	全工作电压 full working voltage	700℃ 工作温度 working temp	全工作电压 full working voltage

3. 元件的更换 replacing of element

在操作工程中发现元件损坏应首先确定位置,同时准备好组合元件。然后将损坏的元件夹头导线与母线连结的螺丝松开,清理开陶瓷棉,连用穿砖一起拔出来,再将新组合元件从炉顶插入,连结好导线,堵好陶瓷棉即可升温。

If it is found that one element is damage during operating, firstly, you should determine, where it is, at the same time prepare a made up one. Then loosen the thread which links the lead wire of the damaged element and the bus, clear out the ceramic coten and pull out the through-brick. Afterward insert the new element from the furnace top, link the lead wire, block the gap with ceramic coton and start to raise temperature.

二硅化钼电热元件参考数据

Reference data for Chuangwei Super heating element

1. 1800 等级 3/6mm 的 U 型元件

1800 Grade U type 3/6mm elements

热端 冷端 Le Lc	150	180	200	250	300	350
150	376 0.186 8.4	440 0.217 9.3	483 0.239 10.7	591 0.292 13.1	698 0.345 15.5	805 0.398 17.9
200	391 0.193 8.7	455 0.225 10.1	498 0.246 11.1	605 0.299 13.4	712 0.352 15.8	820 0.405 18.2
250	405 0.200 9.0	470 0.232 10.4	512 0.253 11.4	620 0.306 13.8	727 0.359 16.2	834 0.412 18.5
280	411 0.203 9.1	475 0.233 10.6	518 0.255 11.5	626 0.309 13.9	733 0.362 16.3	840 0.415 18.7
300	420 0.207 9.3	484 0.239 10.8	527 0.260 11.7	634 0.313 14.1	742 0.366 16.5	849 0.419 18.9

条件 condition: 功率 power: W
元件温度 element temp, 1700℃ 热电阻 resistance: Ω
炉子温度 furnace temp, 1600℃ 工作电压 voltage: V
电流 amperage 45A
表面负荷 surface load 11.5W/cm²

2. 1800 等级 4/9mm 的 U 型元件

1800 Grade U type 4/9mm elements

热端 冷端 Le Lc	150	180	200	250	300	350
150	492 0.116 7.6	579 0.137 8.9	637 1.151 9.8	781 0.185 12.0	925 0.219 14.2	1070 0.253 16.5
200	507 0.120 7.8	594 0.141 9.1	652 0.154 10.0	796 0.188 12.2	940 0.223 14.5	1085 0.257 16.7
250	522 0.124 8.0	609 0.144 9.4	667 0.158 10.3	811 0.192 12.5	955 0.226 14.7	1100 0.262 16.9
280	528 0.125 8.1	615 0.146 9.5	673 0.159 10.3	817 0.193 12.6	961 0.228 14.8	1106 0.262 17.0
300	537 0.127 8.3	624 0.148 9.6	682 0.161 10.5	826 0.195 12.7	970 0.230 14.9	1115 0.264 17.2

条件 condition: 功率 power: W
元件温度 element temp, 1700℃ 热电阻 resistance: Ω
炉子温度 furnace temp, 1600℃ 工作电压 voltage: V
电流 amperage 65A
表面负荷 surface load 11.5W/cm²



3.1700 等级 6/12mm 的 U 型元件 1700 Grade U type 6/12mm elements

热端 Le 冷端 Lu	150	180	200	250	300	350	400	450	500	550	600
150	987 0.044 6.6	1152 0.051 7.7	1262 0.056 8.4	1536 0.068 10.2	1810 0.080 12.1	2084 0.093 13.9					
200	1025 0.046 6.8	1189 0.053 7.9	1299 0.058 8.7	1573 0.070 10.5	1848 0.082 12.3	2122 0.094 14.1	2398 0.106 16.0				
250	1062 0.047 7.1	1227 0.055 8.2	1337 0.059 8.9	1611 0.072 10.7	1885 0.084 12.6	2159 0.096 14.4	2433 0.108 16.2	2708 0.120 18.1			
270	1077 0.048 7.2	1242 0.055 8.3	1352 0.060 9.0	1626 0.072 10.8	1900 0.084 12.7	2174 0.097 14.5	2448 0.109 16.3	2723 0.121 18.2	2997 0.133 20.0		
300	1100 0.049 7.3	1264 0.056 8.4	1374 0.061 9.2	1648 0.073 11.0	1923 0.085 12.8	2197 0.098 14.6	2471 0.110 16.5	2745 0.122 18.3	3109 0.134 20.1	3294 0.146 22.0	3568 0.159 23.8
350	1137 0.051 7.6	1302 0.058 8.7	1412 0.063 9.4	1686 0.075 11.2	1960 0.087 13.1	2234 0.099 14.9	2508 0.111 16.7	2783 0.124 18.6	3057 0.136 20.4	3331 0.148 22.2	3605 0.162 24.0
400	1175 0.052 7.8	1339 0.060 8.9	1449 0.064 9.7	1723 0.077 11.5	1998 0.089 13.3	2272 0.101 15.1	2546 0.113 17.0	2820 0.125 18.8	3094 0.138 20.6	3369 0.150 22.5	3643 0.164 24.3
450		1377 0.061 9.2	1487 0.066 9.9	1761 0.078 11.7	2035 0.090 13.6	2309 0.103 15.4	2583 0.115 17.2	2858 0.127 19.1	3132 0.139 20.9	3406 0.151 22.7	3680 0.164 24.5
500			1798 0.080 12.0	2073 0.092 13.8	2347 0.104 15.6	2621 0.116 17.5	2895 0.129 19.3	3169 0.141 21.1	3444 0.153 23.0	3718 0.165 24.8	
550				2110 0.094 14.1	2384 0.106 15.9	2658 0.118 17.7	2933 0.130 19.5	3207 0.143 21.4	3481 0.155 23.2	3755 0.167 25.0	
600					2148 0.095 14.3	2422 0.108 16.1	2696 0.120 18.0	2970 0.132 19.8	3244 0.144 21.6	3519 0.156 23.5	3793 0.169 25.3
650						2733 0.121 18.2	3008 0.134 20.1	3282 0.146 21.9	3556 0.158 23.7	3830 0.170 25.5	
700							2771 0.123 18.5	3045 0.135 20.3	3319 0.148 22.1	3594 0.160 24.0	3868 0.172 25.8

条件 condition: 元件温度 element temp,1500°C 炉子温度 furnace temp,1300°C 功率 power:W 热电阻 resistance:Ω
电流 amperage 150A 表面负荷 surface load 15W/cm² 工作电压 voltage:V

4.1800 等级 6/12mm 的 U 型元件 1800 Grade U type 6/12mm elements

热端 Le 冷端 Lu	150	180	200	250	300	350	400	450	500	550	600
150	686 0.048 5.7	800 0.056 6.7	877 0.061 7.3	1068 0.074 8.9	1260 0.087 10.5	1451 0.101 12.1					
200	711 0.049 5.9	825 0.057 6.9	902 0.063 7.5	1093 0.076 9.1	1285 0.089 10.7	1476 0.103 12.3	1667 0.116 13.9				
250	736 0.051 6.1	850 0.059 7.1	927 0.064 7.7	1118 0.076 9.3	1310 0.091 10.9	1501 0.104 12.5	1692 0.118 14.1	1884 0.131 15.7			
270	746 0.052 6.2	860 0.060 7.2	937 0.065 7.8	1128 0.078 9.4	1320 0.092 11.0	1511 0.105 12.6	1702 0.118 14.2	1894 0.132 15.8	2085 0.145 17.4		
300	761 0.053 6.3	875 0.061 7.3	952 0.066 7.9	1143 0.079 9.5	1335 0.093 11.1	1526 0.106 12.7	1717 0.119 14.3	1909 0.133 15.9	2100 0.146 17.5	2292 0.159 19.1	2483 0.172 20.7
350	786 0.055 6.5	900 0.063 7.5	977 0.068 8.1	1168 0.081 9.7	1360 0.094 11.3	1551 0.108 12.9	1742 0.121 14.5	1934 0.134 16.1	2125 0.146 17.7	2317 0.161 19.3	2508 0.174 20.9
400	811 0.056 6.8	925 0.064 7.7	1002 0.070 8.3	1193 0.083 9.9	1385 0.096 11.5	1576 0.109 13.1	1767 0.123 14.7	1959 0.136 16.3	2150 0.149 17.9	2342 0.163 19.5	2533 0.176 21.1
450		950 0.066 7.9	1027 0.071 8.6	1218 0.085 10.2	1410 0.098 11.7	1601 0.111 13.3	1792 0.124 14.9	1984 0.138 16.5	2175 0.151 18.1	2367 0.164 19.7	2558 0.178 21.3
500				1243 0.086 10.4	1435 0.100 12.0	1626 0.113 13.6	1817 0.126 15.1	2009 0.140 16.7	2200 0.153 18.3	2392 0.166 19.9	2583 0.179 21.5
550					1460 0.101 12.2	1651 0.115 13.8	1842 0.128 15.4	2034 0.141 16.9	2225 0.155 18.5	2417 0.168 20.1	2608 0.181 21.7
600					1485 0.103 12.4	1676 0.116 14.0	1867 0.130 15.6	2059 0.143 17.2	2250 0.156 18.8	2442 0.170 20.3	2633 0.183 21.9
650						1892 0.131 15.8	2084 0.145 17.4	2275 0.158 19.0	2467 0.171 20.6	2658 0.185 22.1	
700							1917 0.133 16.0	2109 0.146 17.6	2300 0.160 19.2	2492 0.173 20.8	2683 0.186 22.4

条件 condition: 元件温度 element temp,1500°C 炉子温度 furnace temp,1300°C 功率 power:W 热电阻 resistance:Ω
电流 amperage 150A 表面负荷 surface load 15W/cm² 工作电压 voltage:V



5.1700 等级 9/18mm 的 U 型元件 1700 Grade U type 9/18mm elements

热端 Lc 冷端 Lu	150	180	200	250	300	350	400	450	500	550	600	650	700	750	800
250	1596 0.021 5.8	1841 0.024 6.7	2005 0.027 7.3	2414 0.032 8.8	2822 0.037 10.3	3231 0.043 11.7	3640 0.048 13.2	4049 0.054 14.7	4458 0.059 16.2	4866 0.064 17.7	5275 0.070 19.2	5684 0.075 20.7	6093 0.081 22.2	6502 0.086 23.6	6910 0.091 25.1
300	1653 0.022 6.0	1899 0.025 6.9	2062 0.027 7.5	2471 0.033 9.0	2880 0.038 10.5	3289 0.043 12.0	3697 0.049 13.4	4106 0.054 14.9	4515 0.060 16.4	4924 0.065 17.9	5333 0.071 19.4	5741 0.076 20.9	6150 0.081 22.4	6559 0.087 23.9	6968 0.092 25.3
350	1711 0.023 6.2	1956 0.026 7.1	2120 0.028 7.7	2529 0.033 9.2	2937 0.039 10.7	3346 0.044 12.2	3755 0.050 13.7	4164 0.055 15.1	4573 0.060 16.6	4981 0.066 18.1	5390 0.071 19.6	5799 0.077 21.1	6208 0.082 22.6	6617 0.087 24.1	7025 0.093 25.5
400	1768 0.023 6.4	2104 0.027 7.3	2177 0.029 7.9	2586 0.034 9.4	2995 0.040 10.9	3404 0.045 12.4	3812 0.050 13.9	4221 0.056 15.3	4630 0.061 16.8	5039 0.067 18.3	5448 0.072 19.8	5856 0.077 21.3	6265 0.083 22.8	6674 0.088 24.3	7083 0.094 25.8
450		2071 0.027 7.5	2235 0.030 8.1	2644 0.035 9.6	3052 0.040 11.1	3461 0.046 12.6	3870 0.051 14.1	4279 0.057 15.6	4688 0.062 17.0	5096 0.067 18.5	5505 0.073 20.0	5914 0.078 21.5	6323 0.084 23.0	6732 0.089 24.5	7140 0.094 26.0
500			2292 0.030 8.3	2701 0.036 9.8	3110 0.041 11.3	3519 0.047 12.8	3927 0.052 14.3	4336 0.057 15.8	4745 0.063 17.3	5154 0.068 18.7	5563 0.074 20.2	5971 0.079 21.7	6380 0.084 23.2	6789 0.090 24.7	7198 0.095 26.2
550				2759 0.038 10.0	3167 0.042 11.5	3576 0.047 13.0	3985 0.053 14.5	4394 0.058 16.0	4803 0.064 17.5	5211 0.069 19.0	5620 0.074 20.4	6029 0.080 21.9	6438 0.085 23.4	6847 0.091 24.9	7255 0.096 26.4
600				2816 0.037 10.2	3225 0.043 11.7	3634 0.048 13.2	4042 0.053 14.7	4451 0.059 16.2	4860 0.064 17.7	5269 0.070 19.2	5678 0.075 20.6	6086 0.080 22.1	6495 0.086 22.1	6904 0.091 25.1	7313 0.097 26.6
650					3282 0.043 11.9	3691 0.049 13.4	4100 0.054 14.9	4509 0.060 16.4	4918 0.065 17.9	5326 0.070 19.4	5735 0.076 20.9	6144 0.081 22.3	6553 0.087 23.8	6962 0.092 25.3	7370 0.097 26.8
700					3340 0.044 12.1	3749 0.050 13.6	4157 0.055 15.1	4566 0.060 16.6	4975 0.066 18.1	5384 0.071 19.6	5793 0.077 21.1	6201 0.082 22.6	6610 0.087 24.0	7019 0.093 25.5	7428 0.098 27.0
750						3806 0.050 13.8	4215 0.056 15.3	4624 0.061 16.8	5033 0.067 18.3	5441 0.072 19.8	5850 0.077 21.3	6259 0.083 22.8	6668 0.088 24.2	7077 0.094 25.7	7485 0.099 27.2
800						3864 0.051 14.0	4272 0.056 15.5	4681 0.062 17.0	5090 0.067 18.5	5499 0.073 20.0	5908 0.078 21.5	6316 0.084 23.0	6725 0.089 24.5	7134 0.094 25.9	7543 0.100 27.4

条件 condition: 元件温度 element temp,1500°C 炉子温度 furnace temp,1300°C 功率 power:W 热电阻 resistance:Ω
电流 amperage 275A 表面负荷 surface load 14.5W/cm² 工作电压 voltage:V

6.1800 等级 9/18mm 的 U 型元件 1800 Grade U type 9/18mm elements

热端 Lc 冷端 Lu	150	180	200	250	300	350	400	450	500	550	600	650	700	750	800
250	1106 0.023 5.0	1278 0.026 5.8	1393 0.029 6.3	1679 0.035 7.6	1966 0.041 8.9	2253 0.047 10.2	2540 0.052 11.5	2827 0.058 12.8	3114 0.064 14.2	3401 0.070 15.5	3687 0.076 16.8	3974 0.082 18.1	4261 0.088 19.4	4548 0.094 20.7	4835 0.100 22.0
300	1143 0.024 5.2	1315 0.027 6.0	1430 0.030 6.5	1717 0.035 7.8	2004 0.041 9.1	2291 0.047 10.4	2578 0.053 11.7	2864 0.059 13.0	3151 0.065 14.3	3438 0.071 15.6	3725 0.077 16.9	4012 0.083 18.2	4299 0.089 19.5	4586 0.095 20.8	4872 0.101 22.1
350	1181 0.024 5.4	1353 0.028 6.1	1468 0.030 6.7	1754 0.036 8.0	2041 0.042 9.3	2328 0.048 10.6	2615 0.054 11.9	2902 0.060 13.2	3189 0.066 14.5	3476 0.072 15.8	3762 0.078 17.1	4049 0.084 18.4	4336 0.090 19.7	4623 0.096 21.0	4910 0.101 22.3
400	1218 0.025 5.5	1390 0.029 6.3	1505 0.031 6.8	1792 0.037 8.1	2079 0.043 9.4	2366 0.049 10.8	2653 0.055 12.1	2939 0.061 13.4	3226 0.067 14.7	3513 0.073 16.0	3800 0.079 17.3	4087 0.084 18.6	4374 0.090 19.9	4661 0.096 21.2	4947 0.102 22.5
450		1428 0.029 6.5	1543 0.032 7.0	1829 0.038 8.3	2116 0.044 9.6	2403 0.050 10.9	2690 0.056 12.2	2977 0.062 13.5	3264 0.067 14.8	3551 0.073 16.1	3837 0.079 17.4	4124 0.085 18.7	4411 0.091 20.1	4698 0.097 21.4	4985 0.103 22.7
500			1580 0.033 7.2	1867 0.039 8.5	2154 0.044 9.8	2441 0.050 11.1	2728 0.056 12.4	3014 0.062 13.7	3301 0.068 15.0	3588 0.074 16.3	3875 0.080 17.6	4162 0.086 18.9	4449 0.092 20.2	4736 0.098 21.5	5022 0.104 22.8
550				1904 0.039 8.7	2191 0.045 10.0	2478 0.051 11.3	2765 0.057 12.6	3052 0.063 13.9	3339 0.069 15.2	3626 0.075 16.5	3912 0.081 17.8	4199 0.087 19.1	4486 0.093 20.4	4773 0.099 21.7	5060 0.105 23.0
600					1942 0.040 8.8	2229 0.046 10.1	2516 0.052 11.4	2803 0.058 12.7	3089 0.064 14.0	3376 0.070 15.3	3663 0.076 16.7	3950 0.082 18.0	4237 0.088 19.3	4524 0.093 20.6	4811 0.099 21.9
650						2266 0.047 10.3	2553 0.053 11.6	2840 0.059 12.9	3127 0.065 14.2	3414 0.071 15.5	3701 0.076 16.8	3987 0.082 18.1	4274 0.088 19.4	4561 0.094 20.7	4848 0.100 22.0
700						2304 0.048 10.5	2591 0.054 11.8	2878 0.059 13.1	3164 0.065 14.4	3451 0.071 15.7	3738 0.077 17.0	4025 0.083 18.3	4312 0.089 19.6	4599 0.095 20.9	4886 0.101 22.2
750							2628 0.054 11.9	2915 0.060 13.3	3202 0.066 14.6	3489 0.072 15.9	3776 0.078 17.2	4062 0.084 18.5	4349 0.090 19.8	4636 0.096 21.1	4923 0.102 22.4
800							2666 0.055 12.1	2953 0.061 13.4	3239 0.067 14.7	3526 0.073 16.0	3813 0.079 17.3	4100 0.085 18.6	4387 0.091 19.9	4674 0.097 21.2	4961 0.102 22.5

条件 condition: 元件温度 element temp,1700°C 炉子温度 furnace temp,1600°C 功率 power:W 热电阻 resistance:Ω
电流 amperage 220A 表面负荷 surface load 10W/cm² 工作电压 voltage:V



钼粉 (FMO-1, FMO2) Molybdenum powder

钼粉 (FMO-1, FMO2) 产品简介

外观: 呈灰色粉末无肉眼可见夹杂物。

费氏粒度: 按用户要求根据合同约定生产
7um ≥ Fiss ≥ 2um

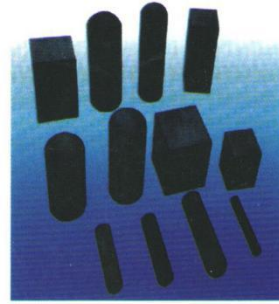
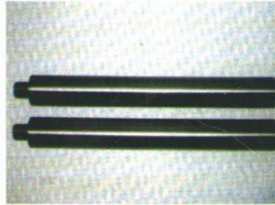
牌号: FMO-1, FMO2

用途: FMO-1 主要用来生产大型板坯, 棒坯, 拉丝条等钼制品的原料。FMO2 可用于可控硅圆片, 钼顶头等原材料。杂质含量符合 GB3461-82 标准。



钼丝 (MO1 MO2) 产品简介 **代号:** SGHM

用途: 纯钼丝, 杆主要用于电真空器件, 电光源零件, 线切割丝以及高温加热元件等。



二氧化锡电极 具有许多优异性能, 在全电熔或电辅助加热炉中是理想的电极材料。经过使用验证性能稳定, 受到用户的好评, 质量与产量在国内处于领先地位。

Sno2-A 电极广泛用于铅含量低于 52% 的铅玻璃, 光学玻璃 (冕牌玻璃, 钡冕玻璃), 眼镜玻璃, 特种玻璃及工艺品玻璃熔窑。

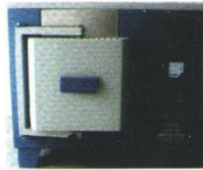
Sno2-B 是耐高温电极, 适用于普通铅玻璃, 玄武岩纤维, 磷酸盐玻璃和其它高温特种玻璃。

纯度: MO ≥ 99.93% **密度:** ≥ 10.15/m

单重: 3kgs~70kgs **规格:** Φ(16-100) × L (mm)

外观: 轧制棒: 呈黑褐色, 表面光滑平直, 无裂痕, 重皮, 坑, 槽等缺陷, 弯曲度小于 2mm。**电极棒:** 呈光亮银灰色金属光泽。(根据用户图纸要求进行加工, 表面光洁度较高)。

用途: 主要用于电助熔玻璃窑炉用电极, 打钼杆方面。



该产品采用国际先进的新型材料取代传统的炉体耐火砖, 具有节能, 省电, 温控精度高, 保温性能好, 微电脑控制, 可编程全自动升温, 降温热效率高, 性能可靠, 重量轻等特点, 炉壁温度接近室温等有利条件是理想的新一代高效节能电炉。广泛应用于陶瓷, 化工, 电子, 冶金, 新材料开发, 机械, 耐火材料, 建材, 特种材料等领域等实验和生产。

主要技术参数:

1. 升温速度: 13~30 分钟的时间内达到电炉的最高温度。
2. 耗能为普通电炉的 50%, 重量为普通电炉的 30%。
3. 微电脑多段程序升温。
4. 温度范围: 室温~1000℃, 1200℃, 1400℃, 1600℃, 1700℃。
5. 炉膛尺寸: 可按照用户要求制造标准尺寸炉膛。