

UHP Graphite Electrodes

Port: Tianjin Port

Packing: Wooden Case

Delivery time: 5-7days

Minimum order quantity: 20tons

Supply Ability: 5000 tons/month

UHP Graphite Electrodes

UHP graphite electrodes are manufactured from premium low-ash raw materials, including petroleum coke, needle coke and coal tar pitch. Through strict production procedures of calcination, batching, kneading, forming, baking, pressure impregnation, high-temperature graphitization and professional CNC precision machining, the finished electrodes achieve extremely stable physical and electrical performance.

UHP graphite electrodes feature ultra-low resistivity, superior electrical conductivity, low ash content, dense and uniform structure, excellent oxidation resistance and outstanding mechanical strength. As the most high-grade conductive consumables, they are widely used in high-power electric arc furnaces and various smelting furnaces for steelmaking and metal smelting.

性能 Properties		单位 Unit	石墨电极公称直径 Nominal Diameter Of Electrode			
			UHP		HP	RP
			300-600 mm	650-800mm	300-800mm	300-800mm
电阻率 Electric resistivity	电极 Electrode	$\mu \Omega .m$	4.8-5.8	4.6-5.8	5.8-6.6	7.8-8.8
	接头 Nipple		3.8-4.5	3.8-4.5	4.2-5.0	5.0-6.5
抗折强度 Flexural strength	电极 Electrode	Mpa	10.0-14.0	10.0-14.0	10.0-13.0	7.0-12.0
	接头 Nipple		20.0-26.0	22.0-26.0	18.0-22.0	15.0-20.0
弹性模量 Young's modulus	电极 Electrode	Gpa	9.0-13.0	10.0-14.0	8.0-12.0	7.0-9.3
	接头 Nipple		15.0-18.0	15.0-18.0	14.0-16.0	12.0-14.0

体积密度 Bulk density	电极 Electrode	$\geq$ g/cm ³	1.68-1.74	1.70-1.74	1.62-1.66	1.53-1.56
	接头 Nipple		1.77-1.82	1.78-1.84	1.74-1.80	1.70-1.74
热膨胀系数 CTE(100-600 ℃)	电极 Electrode	$\times 10^{-6}/^{\circ}\text{C}$	1.1-1.4	1.1-1.4	1.6-1.9	2.2-2.6
	接头 Nipple		0.9-1.2	0.9-1.2	1.1-1.4	2.0-2.5
灰分 Ash			0.3	0.3	0.3	0.5

Notes of the use of graphite electrode

1.The electrode holder should be held in the place beyond the security line of the top electrode;otherwise, the electrode would be easily broken.the contact surface between the holder and the electrode should be cleaned up regularly to maintain a good contacting,the cooling jacket of the holder shall be avoided from water leakage.

2.Identify the reasons it there is gap in the electrode junction,do not use them until the gap is eliminated.

3.If there is falling off of nipple bolt when connecting electrodes,it is necessary to complete the nipple bolt.

4.The application of electrode should avoid of tilting operation, particularly , the group of connected electrodes should not be put horizontally so as to prevent from breaking.

5.When charging materials to the furnace,the bulk materials should be charged to the place of the furnace bottom,so as to minimize the impact of the large furnace materials on the electrodes.

6.The large pieces of insulation materials should be avoided of stacking on the bottom of the electrodes when smelting .so as to prevent from affecting the electrode use,or even broken.

7.Avoid of collapsing the furnace lid when rising or dropping the electrodes,which may result in electrode damage.

8.It is necessary to prevent the steel slag from splashing to the threads of the electrodes or nipple stored in the smelting site,which may damage the precision of the threads.

Packing

Graphite electrode is packaged by wooden cages and nipple is packaged by wooden boxes.graphite electrode and nipple can be packaged together according to the requirements of the customers.the products are protected by waterproof and dustproof plastic inside and fixed by steel bands,fit for road and sea transportation .