

RP Graphite Electrode

Port : Tianjin Port

Packing : Wooden Case

Delivery time : 5-7days

Minimum order quantity : 5tons

Supply Ability : 5000 tons/month

RP graphite electrodes are applicable for working current density below 17 A/cm². They are mainly used in conventional electric arc furnaces for steelmaking, silicon smelting and yellow phosphorus production. Artificial graphite electrodes are produced from high-quality low-ash raw materials, including petroleum coke, needle coke and coal tar pitch. The whole manufacturing process includes calcination, batching, kneading, forming, baking, pressure impregnation, graphitization and professional CNC precision machining. Endowed with a dense and uniform structure, the finished products feature low resistivity, excellent electrical conductivity, low ash content, outstanding oxidation resistance and high mechanical strength. They are ideal conductive materials for electric arc furnaces (EAF), ladle furnaces (LF) and submerged arc furnaces (SAF).

性能 Properties		单位 Unit	石墨电极公称直径 Nominal Diameter Of Electrode			
			UHP		HP	RP
			300-600 mm	650-800m m	300-800mm	300-800mm
电阻率 Electric resistivity	电 极 Electrode	μΩ.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	≥g/cm3	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°C)	电 极 Electrode	×10 ⁻⁶ /°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

Connection of graphite electrodes

1.受潮湿的电极，使用前要烘干。

Wet graphite electrodes must be dried prior to use.

2.去除备用电极孔上的泡沫塑料保护帽，检查电极孔内螺纹是否完整。

The foam protective caps on the electrodes socket shall be removed to verify the integrity of the internal threads of the electrode socket.

3.用不含油和水的压缩空气清理备用电极表面和孔内螺纹；避免用钢丝团或金属刷砂布清理。

The surfaces of the electrodes and the internal threads of the socket shall be cleared by

compressed air free of any oil and water.no steel wool or metal sand cloth shall be used in such clearance.

4.将接头小心地旋入备用电极一端（不建议将接头直接装入炉上撤换下来的电极）的电极孔内，不得碰撞螺纹。

The nipple must be screwed carefully into the electrode socket of one end of the electrode without collision with the internal threads (it is not suggested to directly put the nipple into the electrode removed from the furnace).

5.将电极吊具（建议采用石墨材质的吊具）拧入备用电极另一端的电极孔内。

The lifting appliance (it' s preferred to adopt graphite lifting appliance) should be screwed into the electrode socket of the other end of the electrode.

6.起吊电极时，垫松软物到备用电极装接头一端的下面，以防止地面碰损接头；用吊钩伸入吊具的吊环后吊起，吊运电极要平稳，防止电极松脱或与其它固定装置碰撞。

When lifting the electrode,cushion-like materials must be put on the ground under the connecting end of the electrode to avoid and collision,after the lifting hook has been put into the ring of the lifting appliance,the electrode shall be lifted smoothly to prevent it from falling or colliding with any other fixture.

7.将备用电极吊到待接电极上方，对准电极孔后慢慢落下：旋转备用电极，使螺旋吊钩与电极一起转动下降；在两支电极端面相距 10-20mm 时，再次用压缩空气清理电极两个端面和接头的裸露部分；在最后完成下放电极是，不可过猛，否则因猛烈碰撞，会导致电极孔和接头的螺纹受损。

The electrode shall be lifted above the head of the working electrode and dropped slowly aiming at the electrode socket,then the electrode will be screwed to make the helical hook and the electrode declining and turning together,when the distance between the end faces

of two electrodes is 10-20mm,the two end face of the electrodes and the outer part of the nipple must be cleared again by compressed air.finally,the electrode must be laid gently,or the threads of the electrode socket and nipple will be damaged because of the violent collision.

8.用力矩扳手拧备用电极，直到两支电极的端面紧密接触为止（电极和接头的正确连接夹缝小于0.05mm）.

Use torque spanner to screw the electrode until the end faces of the two electrodes contact closely(the gap of correct connection between the electrodes is less than 0.05mm)

Transportation of graphite electrodes

1.石墨电极在长途运输中要加盖防雨篷布

Cover a rain-proof tarpaulin on the graphite electrodes in the course of long-distance transportation.

2.用起重机械吊卸木箱包装的电极时，必须使用钢丝绳，不是直接勾住电极的钢包装带进行吊卸。

It is important to use a wire rope when lifting the wooden-packaged electrodes with a lifting crance.it is forbidden to lift the electrodes with the steel packaging belts on the wooden-packaged.

3.为保护电极端面和螺纹，不得直接用铁钩勾挂电极孔吊运电极。

For the purpose of protecting the electrodes end and threads,it is not allowed to lift an eletrode with a grappling iron hooking the electrode socket.

4.装卸接头箱子时，应轻拿轻放，以防损伤螺纹。

Put slightly when loading and unloading the nipple box so as to prevent damage to 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 land transportation and sea transportation .