



HİLA DIŞ TİC LTD
HİLA INTERNATIONAL TRADING Co.



STEEL PLANTS
RAW MATERIALS

CATALOG

GRAPHITE ELECTRODES

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GRAPHITE ELECTRODE

Materials:

Needle coke,CPC,Coal Pitch;

Process:

Petroleum coke,Crushing, calcining Forming,Baking, Impregnation,Graphitization,Machining, Final product.

Grades:RP/HP/SHP/UHP;

Application:Used in EAF/LF to make steel.

Supply Ability:

7000 Metric Ton/Metric Tons per Month RP/HP/UHP Grade

Category:

RP: Regular Powder electrode

HP: High-Power electrode

UHP: Ultra-High-Power electrode

Diameter: 150-1276mm

Length: 1200-2700mm

Property

Strict consumption control;

Low graphite electrode consumption Low resistivity

High temperature strength

Low thermal expansion coefficient Low ash

Good thermal conductivity and electrical conductivity

Dense and equal structure;

High resistance to oxidation; High mechanical strength; High resistance to thermal shocks;

Exact mechanical machining; Manufacturing within narrow tolerance;

Needle coke content accounts for 100%, raw materials imported from Japan and South Korea

UHP graphite electrodes from Rongxing suit the operating conditions of modern arc furnaces by high mechanical stability, excellent thermal conductivity, low electrical resistance, factors which are of decisive importance for obtaining economical consumption rates.

GRAPHITE ELECTRODE



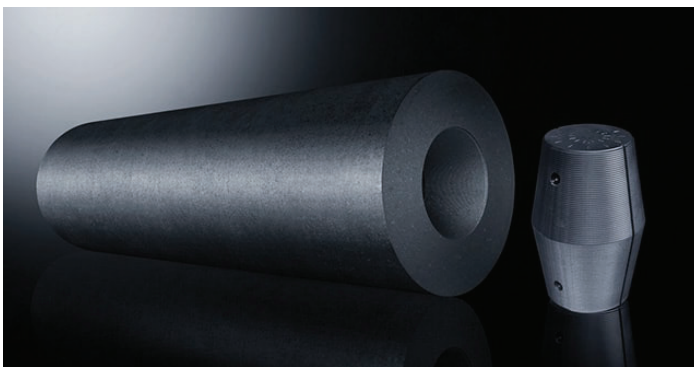
GRAPHITE ELECTRODE

PHYSICAL & CHEMICAL PROPERTIES OF ELECTRODE AND NIPPLE

ITEM		Unit	Nominal diameter (mm)									
			NP				HP		UHP			
			300~450		500~800		350~500	550~700	350~500		550~750	
			Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical				
LSR ≤	E	μΩ·m	9.0	10.5	9.0	10.5	7.5	7.5	6.3	5.0~6.0	5.8	4.8~5.5
	N		8.0	8.0	6.3	6.3	5.3	3.8~4.5	4.3	3.5~4.1		
Flexural Strength ≥	E	MPa	7.0	6.5	10.0	8.5	10.5	11.0~13.0	10.0	10.0~13.0		
	N		15.0	15.0	17.0	17.0	20.0	20.0~25.0	23.0	24.0~30.0		
Elastic Modulus ≤	E	GPa	9.3	9.3	14.0	14.0	14.0	8.0~12.0	14.0	7.0~10.0		
	N		14.0	14.0	16.0	16.0	20.0	12.0~16.0	22.0	16.0~21.0		
Bulk Density ≥	E	g/cm ³	1.53	1.52	1.60	1.60	1.66	1.68~1.73	1.68	1.69~1.73		
	N		1.70	1.70	1.72	1.72	1.75	1.76~1.82	1.78	1.79~1.84		
CTE (100°C- 600°C) ≤	E	10 ⁻⁶ /°C	2.9	2.9	2.4	2.4	1.5	1.3~1.5	1.5	1.3~1.5		
	N		28	2.8	2.2	2.2	1.4	1.0~1.3	1.3	1.0~1.3		
Ash ≤		%	0.5	0.5	0.5	0.5	0.5	0.2~0.4	0.5	0.2~0.4		

ELECTRODE LENGTH AND ALLOWABLE DEVIATION

Unit(mm)					
Nominal (mm)	Standard (mm)		Shortened (mm)		Remark
	Max	Min	Max	Min	
1600	1700	1500	1500	1325	Specific length can be supplied according to customer's demand.
1800	1900	1700	1700	1525	
2000	2100	1900	1900	1825	
2200	2300	2100	2100	1925	
2400	2500	2300	2300	2125	
2700	2900	2550	2550	2400	
3000	3200	2850	2850	2700	



GRAPHITE ELECTRODE

ELECTRODE DIAMETER AND ALLOWABLE DEVIATION

Unit(mm)				
size Specification	Nominal	ACTUAL DIAMETER		Length
		Max	Min	
RP	300	307	302	1600 / 1800 / 2000
	350	358	352	1600 / 1800 / 2000
	400	409	403	1600 / 1800 / 2000 / 2200
	450	460	454	1600 / 1800 / 2000 / 2200
	500	511	505	1800 / 2000 / 2200 / 2400
	550	562	556	1800 / 2000 / 2200 / 2400 / 2700
	600	613	607	2000 / 2200 / 2400 / 2700
	650	663	659	2000 / 2200 / 2400 / 2700
	700	714	710	2000 / 2200 / 2400 / 2700
	750	765	761	2000 / 2200 / 2400 / 2700
	800	816	812	2000 / 2200 / 2400 / 2700
HP	350	358	352	1600 / 1800 / 2000
	400	409	403	1600 / 1800 / 2000 / 2200
	450	460	454	1600 / 1800 / 2000 / 2200
	500	511	505	1800 / 2000 / 2200 / 2400
	550	562	556	1800 / 2000 / 2200 / 2400 / 2700
	600	613	607	2000 / 2200 / 2400 / 2700
	650	663	659	2000 / 2200 / 2400 / 2700
	700	714	710	2000 / 2200 / 2400 / 2700
	750	765	761	2000 / 2200 / 2400 / 2700
UHP	350	358	352	1600 / 1800 / 2000
	400	409	403	1600 / 1800 / 2000 / 2200
	450	460	454	1600 / 1800 / 2000 / 2200
	500	511	505	1800 / 2000 / 2200 / 2400
	550	562	556	1800 / 2000 / 2200 / 2400 / 2700
	600	613	607	2000 / 2200 / 2400 / 2700 / 3000
	650	663	659	2200 / 2400 / 2700 / 3000
	700	714	710	2200 / 2400 / 2700 / 3000
	750	765	761	2200 / 2400 / 2700 / 3000

GRAPHITE ELECTRODE

RECOMMENDED CURRENT LOAD OF ELECTRODE

Grade	Nominal Diameter (mm)	Allowable current (A)		Current Density (A/cm ²)	
		AC	DC	AC	DC
RP Electrode	300	10000~13000	-	14~18	-
	350	13500~18000	-	14~18	-
	400	18000~23500	-	14~18	-
	450	22000~27000	-	13~17	-
	500	25000~32000	-	13~16	-
	550	28000~34000	-	12~14	-
	600	30000~36000	-	11~13	-
	650	32000~39000	-	10~12	-
HP Electrode	700	34000~42000	-	9~11	-
	350	17400~24000	-	17~24	-
	400	21000~31000	-	16~24	-
	450	25000~40000	-	15~24	-
	500	30000~48000	-	15~24	-
	550	34000~53000	-	14~22	-
	600	38000~58000	-	13~21	-
	650	41000~65000	-	12~20	-
	700	45000~72000	-	12~19	-
UHP Electrode	350	20000~32000	-	20~32	-
	400	25000~41000	-	20~32	-
	450	32000~49000	-	20~30	-
	500	40000~60000	-	20~30	-
	550	45000~68000	49000~78000	18~28	20~32
	600	52000~81000	58000~93000	18~28	20~32
	650	60000~85000	64000-100000	18~28	20~32
	700	71000~100000	79000~120000	18~27	20~30
	750	82000~123000	91000~135000	18~27	20~30

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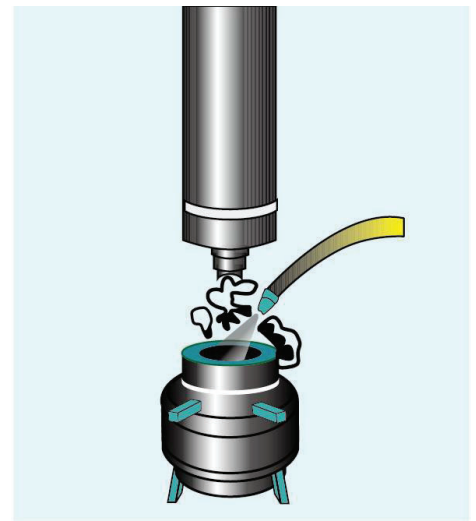
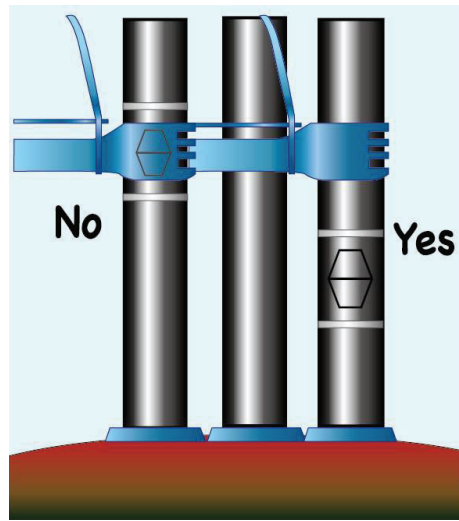
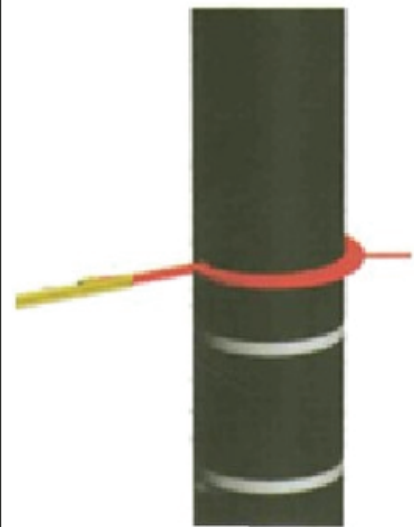
MACHINING DIMENSION OF ELECTRODE AND NIPPLE

Unit(mm)							
Application Scope	Nominal Dia.	Nipple		Medium Dia (d ₂ /D ₂)	Socket		Pith (P)
		Large Dia. (d)	Length (L)		Small Dia. (D ₁)	Depth (S)	
RP/HP/UHP	300	177.16	270.90	172.95	168.73	141.50	8.47
	350	215.90	304.80	211.69	207.47	158.40	
	400	215.90	304.80	211.69	207.47	158.40	
	400	241.30	338.70	237.09	232.87	175.30	
	450	241.30	338.70	237.09	232.87	175.30	
	450	273.05	355.60	268.84	264.62	183.80	
	500	273.05	355.60	268.84	264.62	183.80	
	500	298.45	372.60	294.24	290.02	192.20	
	550	298.45	372.60	294.24	290.02	192.20	
	300	177.80	215.90	174.64	171.48	114.00	
	350	203.20	254.00	200.04	196.88	133.00	
	400	222.25	304.80	219.09	215.93	158.40	
	400	222.25	355.60	219.09	215.93	183.80	
	450	241.30	304.80	238.14	234.98	158.40	
	450	241.30	355.60	238.14	234.98	183.80	
	500	269.88	355.60	266.72	263.56	183.80	
	500	269.88	457.20	266.72	263.56	234.60	
	550	298.45	355.60	295.29	292.13	183.80	
	550	298.45	457.20	295.29	292.13	234.60	
	600	317.50	355.60	314.34	311.18	183.80	
	600	317.50	457.20	314.34	311.18	234.60	
	650	355.60	457.20	352.44	349.28	234.60	
	650	355.60	558.80	352.44	349.28	285.40	
	700	374.65	457.20	371.49	368.33	234.60	
	700	374.65	558.80	371.49	368.33	285.40	
	750	406.40	584.60	403.24	400.08	260.00	
	750	406.40	609.80	403.24	400.08	310.80	
	800	431.80	635.00	428.64	425.48	323.50	

GRAPHITE ELECTRODE

RECOMMENDED TIGHTENING TORQUE

Electrode Dia. (mm)	Torque (N • m)
300	900
350	1300
400	1550
450	1850
500	2400
550	2750
600	3800
650	4300
700	5200
750	6800





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