

Rongsheng Graphite Electrodes Physical and Chemical Index Tables

1. Technique Data of RP Graphite Electrode

TECHNICAL PROPERTIES OF GRAPHITE ELECTRODES					
ITEM	UNIT	DIA 300-600mm			
		STANDARD		SOLID SURVEY	
		ELECTRODE	NIPPLE	ELECTRODE	NIPPLE
RESISTIVITY, $\leq$	$\mu\Omega\text{m}$	9.0-10.5	8.5	8.0-9.0	5.5
BENDING STRENGTH $\geq$	MPa	6.4-7.8	13	9.1-10	15
ELASTIC MODULUS, $\leq$	GPa	9.3	14	9	13.7
ASH, $\leq$	%	0.3	0.3	0.3	0.3
BULK DENSITY, $\geq$	g/cm ³	1.52	1.68	1.56-1.62	1.7
CTE(100-600℃), $\leq$	$\times 10^{-6}/^{\circ}\text{C}$	2.9	2.8	2.4	

SPECIFICATIONS AND ALLOWANCE OF GRAPHITE ELECTRODES							
Diameter(mm)				Length(mm)			
Nominal Diameter		Actual Diameter		Nominal Length	Allowance		
Mm	inch	Max	Min	Mm	Length	Max	Min
300	12	307	302	1600 1800	± 100	-100	-275
350	14	357	352				
400	16	409	403				
450	18	460	454				
500	20	511	505	1600			
550	22	556	553	1800			
600	24	613	607	2000			
				2200			

2. Technique Data of HP Graphite Electrode

TECHNICAL PROPERTIES OF GRAPHITE ELECTRODES					
ITEM	UNIT	300-600mm			
		STANDARD		SOLID SURVEY	
		ELECTRODE	NIPPLE	ELECTRODE	NIPPLE
RESISTIVITY, $\leq$	$\mu\Omega\text{m}$	7.0-7.5	6.5	6.5-7.0	4.5
BENDING STRENGTH, $\geq$	MPa	9.8-10.5	14	12-15	15-18
ELASTIC MODULUS, $\leq$	GPa	12	16	12	14
ASH, $\leq$	%	0.3	0.3	0.3	0.3
BULK DENSITY, $\geq$	g/cm ³	1.6	1.7	1.68-1.73	1.75
CTE(100-600℃), $\leq$	$\times 10^{-6}/^{\circ}\text{C}$	2.4	2.2	2.2	2.0

SPECIFICATIONS AND ALLOWANCE OF GRAPHITE ELECTRODES							
Diameter(mm)				Length(mm)			
Nominal Diameter		Actual Diameter		Nominal Length	Allowance		
mm	inch	max	min	mm	length	max	min
300	12	307	302	1600 1800	±100	-100	-275
350	14	357	352				
400	16	409	403				
450	18	460	454				
500	20	511	505	1600 1800 2000 2200			
550	22	556	553				
600	24	613	607				

3. Technique Data of UHP Graphite Electrode

TECHNICAL PROPERTIES OF GRAPHITE ELECTRODES					
ITEM	UNIT	DIA 300-600mm			
		STANDARD		SOLID SURVEY	
		ELECTRODE	NIPPLE	ELECTRODE	NIPPLE
RESISTIVITY _m , ≤	μΩm	7.0-7.5	6.5	6.5-7.0	4.5
BENDING STRENGTH, ≥	MPa	9.8-10.5	14	12-15	15-18
ELASTIC MODULUS, ≤	GPa	12	16	12	14
ASH, ≤	%	0.3	0.3	0.3	0.3
BULK DENSITY, ≥	g/cm ³	1.6	1.7	1.68-1.73	1.75
CTE(100-600℃), ≤	X10 ⁻⁶ /℃	2.4	2.2	2.2	2.0

SPECIFICATIONS AND ALLOWANCE OF GRAPHITE ELECTRODES							
Diameter(mm)				Length(mm)			
Nominal Diameter		Actual Diameter		Nominal Length	Allowance		
mm	inch	max	min	mm	length	max	min
300	12	307	302	1600 1800	±100	-100	-275
350	14	357	352				
400	16	409	403				
450	18	460	454				
500	20	511	505	1600 1800 2000 2200			
550	22	556	553				
600	24	613	607				

4. Technique Data of Graphite Electrode Nipples

DIMENSIONS OF TRUNCATED NIPPLES(4TPI)													
Diameter		Nipple							Socket				Pitch
mm	inch	D		L		d2		I	d1		H		
300	12	177.80	-0.5-0	215.90	-1-0	129.20	-5-0	<7	171.48	0+0.5	114.00	0+7	6.35
350	14	203.20	-0.5-0	254.00	-1-0	148.20	-5-0	<7	196.88	0+0.5	133.00	0+7	6.35
400	16	222.3	-0.5-0	304.80	-1-0	158.80	-5-0	<7	215.93	0+0.5	158.40	0+7	6.35
400	16	222.3	-0.5-0	355.60	-1-0	150.00	-5-0	<7	215.93	0+0.5	183.80	0+7	6.35
450	18	241.30	-0.5-0	304.80	-1-0	177.90	-5-0	<7	234.98	0+0.5	158.40	0+7	6.35
450	18	241.30	-0.5-0	355.60	-1-0	169.42	-5-0	<7	234.98	0+0.5	183.80	0+7	6.35
500	20	269.90	-0.5-0	355.60	-1-0	198.00	-5-0	<7	263.56	0+0.5	183.80	0+7	6.35
500	20	269.90	-0.5-0	181.08	-1-0	181.08	-5-0	<7	263.56	0+0.5	234.60	0+7	6.35
550	22	298.45	-0.5-0	226.58	-1-0	226.58	-5-0	<7	292.13	0+0.5	183.80	0+7	6.35
550	22	298.45	-0.5-0	209.65	-1-0	209.65	-5-0	<7	292.13	0+0.5	234.60	0+7	6.35
600	24	317.50	-0.5-0	245.63	-1-0	245.63	-5-0	<7	311.18	0+0.5	183.80	0+7	6.35
600	24	317.50	-0.5-0	228.70	-1-0	228.70	-5-0	<7	311.18	0+0.5	234.60	0+7	6.35

DIMENSIONS OF TRUNCATED NIPPLES(3TPI)													
Diameter		Nipple							Socket				Pitch
Mm	Inch	D		L		D2		I	D1		H		
300	12	177.16	-0.5-0	270.90	-1-0	116.90	-5-0	< 10	168.73	0+0.5	141.50	0+7	8.47
350	14	215.90	-0.5-0	304.80	-1-0	150.00	-5-0	< 10	207.47	0+0.5	158.40	0+7	8.47
400	16	215.90	-0.5-0	304.80	-1-0	150.00	-5-0	< 10	207.47	0+0.5	158.40	0+7	8.47
400	16	241.30	-0.5-0	338.70	-1-0	169.80	-5-0	< 10	232.87	0+0.5	175.30	0+7	8.47
450	18	241.30	-0.5-0	338.70	-1-0	169.80	-5-0	< 10	232.87	0+0.5	175.30	0+7	8.47
450	18	273.05	-0.5-0	355.60	-1-0	198.70	-5-0	< 10	264.62	0+0.5	183.80	0+7	8.47
500	20	273.05	-0.5-0	355.60	-1-0	198.70	-5-0	< 10	264.62	0+0.5	183.80	0+7	8.47
500	20	298.45	-0.5-0	372.60	-1-0	221.30	-5-0	< 10	290.02	0+0.5	192.20	0+7	8.47
550	22	298.45	-0.5-0	372.60	-1-0	221.30	-5-0	< 10	290.02	0+0.5	192.20	0+7	8.47