

# Foreword

- As the Semiconduct developing, opaque electric arc crucible is demanded and instead of the small clear crucible.
- The property of opaque electric arc crucible
  1. The purity is high and the using temperature is better
  2. The diameter is big and exact
  3. The quality is stable
  4. The price is cheaper

The solution to In order to increase the temperature and the using life of the crucible

1. Using Unimine sand on the inner surface
2. Spraying metal  $\text{BaO}_2$  on the inner surface

# Introduce the crucible

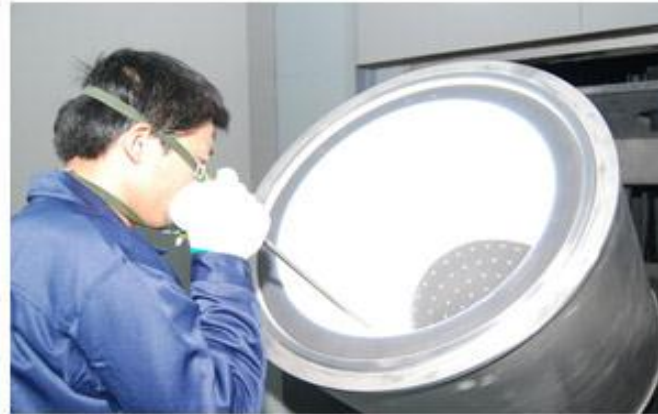
- Adopt Unimine sand and in vacuum
- rotate the graphite container, using the centrifugal effect ,melting the sand, shaping the crucible
- Using the special electrical arc method on inner surface there is glass film about 2-3mm thickness which is usefull to prevent the bubble of crucible transgress
- Our crucible is 8"---24"
- Quality and specification are stable,high purity, high temperature keep normal



# The worker operating the machine



生产现场



装料



操控平台



初成品

# The process

- High pure sand → graphite mold → put the sand into vacuum furnace → start melting → cooling normal and take out → first check → cut and bevel → second check → clean and dry → third check → packing → keep in stock



## The data of crucible

Sio <sub>2</sub> Purity	≥99.8
Density	≥1.9-1.95
normal Intensity of pressure	≥50 (Mpa)
Coefficient of thermal Expansion	<0.5 ( × 10-6K-1 )
Highest temperature	1400℃

# 纯度的化学分析

型 号	Al	Fe	Ca	Cu	K	Na	Li	B	OH
JNC-A	20	1	1.5	0.1	3	3	3	0.3	30
JNC-B	15	0.3	0.6	0.05	0.7	1.0	0.7	<0.1	30
JNC-C	8	0.2	0.6	0.02	0.3	0.9	0.2	<0.05	30

# 规格尺寸Dimensions:

坩埚尺寸 Dimensions	外径 OD	高度 Height	厚度(WT)			R	r
			T1	T2	T3		
8"	203 ± 0/3	153 ± 3	5.5 ± 1.5	3	8.5	305	30
10"	254 ± 2	178 ± 3	6.0 ± 1.5	3.5	9	305	70
12"	305 ± 2	228 ± 3	6.5 ± 1.5	4	9.5	305	80
14"	355 ± 2	254 ± 3	7.5 ± 1.5	5	10.5	400	90
16"	404 ± 2	305 ± 3	8.5 ± 1.5	6	11.5	400	90
18"	457 ± 2	355 ± 3	8.5 ± 1.5	6	11.5	500	120
20"	508 ± 4	381 ± 3	10 ± 3	6	11.0	500	120
22"	558 ± 4.5	381 ± 3	10 ± 3	7	11.0	558	89
24"	610 ± 4.5	381 ± 3	11 ± 2	7 ± 1	11.0	610	89



# The purity of sand

Type	Al	Fe	Ca	Cu	K	Na	Li	B	OH
JNC-A	20	1	1.5	0.1	3	3	3	0.3	30
JNC-B	15	0.3	0.6	0.05	0.7	1	0.7	<0.1	30
JNC-C	8	0.2	0.6	0.02	0.3	0.9	0.2	<0.05	30

