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青岛中冶高温材料有限公司

QINGDAO ZHONGYE HIGH TEMPERATURE MATERIALS CO.,LTD.

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青岛中冶高温材料有限公司

QINGDAO ZHONGYE HIGH TEMPERATURE MATERIALS CO.,LTD.

中国 · 青岛
Qingdao China

诚信天下 和合共赢

Grand and magnificent integrity of the world

Quality is the first
Customer is the most important
质量第一 客户至上

目录 CONTENTS

企业简介 Company Introduction	1
坩埚系列产品 Crucibles	3
石墨碳化硅坩埚规格型号 Specification and model of crucible	4
石墨粘土坩埚规格型号 Specification and model of clay crucible	9
浸入式辐射管规格型号 Specification and model of radiant tube	13
测温管保护套规格型号 Specification and model of temperature measuring tube protective sleeve	14
中冶坩埚预热 preheating Procedure	15
中冶坩埚使用以及保养方法 Crucible care and use	16
产品特点 Product introduction	17
常见问题分析 The Common Problem Analysis	18
售后服务	20

Factory Profile

COMPANY
>>> INTRODUCTION
企业简介美丽的海滨城市——青岛
The beautiful coastal city -- Qingdao

青岛中冶高温材料有限公司座落在上合组织地方经贸合作示范区—青岛胶州市。这里气候宜人，交通便利，胶东国际机场、同三高速、济青高速、204国道、胶州湾高速、胶州湾跨海大桥胶济铁路等交通动脉直通该区，青岛海港、空港距此亦只40公里。

青岛中冶高温材料有限公司是一家集设计、开发、生产、制造、施工于一体的高新技术企业。公司具有连铸三大件生产线及金属冶炼用坩埚生产线，拥有先进的生产设备，优良的工艺技术，完善的质保体系。本厂所生产的连铸用铝镁碳质耐火材料整体塞棒、浸入式水口、快换水口和长水口得到全国各大钢厂的方坯、板坯中间包广泛使用，并拥有二十年的中间包整体承包经验，为中间包承包提供专业的技术方案。所生产的坩埚系列产品在冶炼行业得到广泛认可，尤其在氧化锌方面做出重大突破。

我们已通过ISO9001-2015质量体系认证，企业严格按照ISO9001: 2015《质量管理体系-要求》及《耐火材料产品生产许可证实施细则》并结合本厂实际情况制定了有效的质量管理控制体系，并不断完善，保证其有效实施。取得由国家技术监督总局审核颁发的“工业产品（耐火材料）生产许可证”（证书编号：06518Q31056ROM）

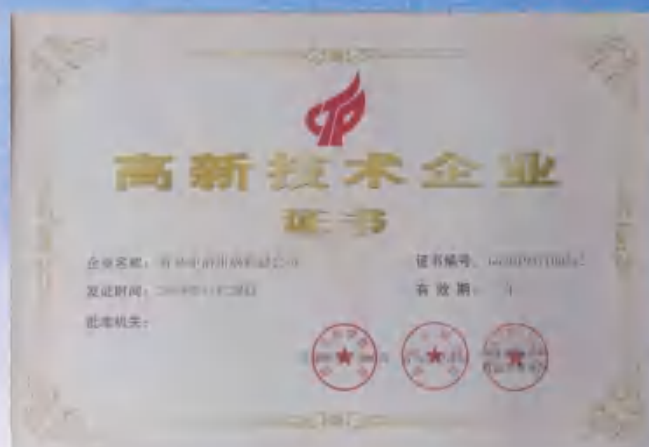
我们的产品质量过硬，产品使用寿命均可达到或超过厂家的要求。高素质的员工队伍，精良的生产设备，完善的检测手段，先进的生产工艺和科学的企业管理，是我们优质产品的有力保证。

我们十分注重技术进步、售后服务及无止境的质量改革，“质量第一，客户至上”是我们的服务宗旨。我们企业全体员工将共同努力，不断提高，不断创新，竭诚为新老客户提供最优质的产品和服务！

Qingdao Zhongye temperature materials Co., Ltd. is located in Jiaozhou City, Qingdao, the local economic and Trade Cooperation Demonstration Zone of SCO. It has a pleasant climate and convenient transportation. Jiaodong International Airport, Tongsan expressway, Jiqing expressway, national highway 204, Jiaozhou Bay Expressway and Jiaoji railway are directly connected to the area. Qingdao harbor and airport are only 40 km away from it.

Qingdao MCC high temperature materials Co., Ltd. is a high-tech enterprise integrating design, development, production, manufacturing and construction. The company has three continuous casting production lines and crucible production lines for metal smelting, with advanced production equipment, excellent technology and perfect quality assurance system. The aluminum magnesium carbon refractory integral stopper, submerged nozzle, quick change nozzle and long nozzle for continuous casting produced by our factory are widely used in billet and slab tundish of major steel plants all over the country. We have 20 years of tundish overall contracting experience and provide professional technical solutions for tundish contracting. The crucible series products are widely recognized in the smelting industry, especially in the aspect of zinc oxide.

We have passed the iso9001-2015 quality system certification. In strict accordance with iso9001:2015 "quality management system - Requirements" and "detailed rules for the implementation of refractory product production license" and in combination with the actual situation of our factory, we have formulated an effective quality management control system and continuously improved it to ensure its effective implementation. Obtained the "industrial product (refractory) production license" (Certificate No.: 06518q31056rom) approved and issued by the State Administration of Technology Supervision. Our products are of excellent quality, and their service life can meet or exceed the requirements of manufacturers. High quality staff, excellent production equipment, perfect testing means, advanced production technology and scientific enterprise management are the powerful guarantee of our high-quality products. We attach great importance to technological progress, after-sales service and endless quality reform, "quality first, customer first" is our service tenet. All staff of our company will make joint efforts to continuously improve and innovate, and wholeheartedly provide new and old customers with the best quality products and the most satisfactory service!



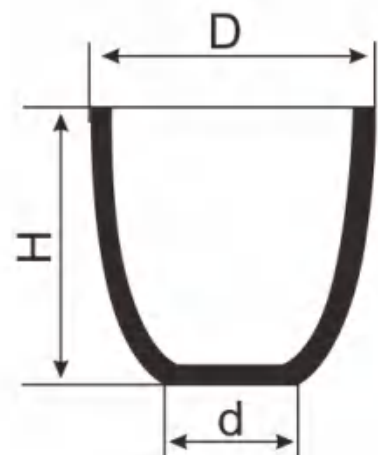
石墨碳化硅坩埚规格型号

Specification and model of crucible

序号	型号	OD外径	H高度	ID内部直径	BD底部直径
1	80	330	410	265	230
2	100	350	440	282	240
3	110	330	380	260	205
4	200	420	500	350	230
5	201	430	500	350	230
6	350	430	570	365	230
7	351	430	670	360	230
8	300	450	500	360	230
9	330	450	450	380	230
10	350	470	650	390	320
11	360	530	530	460	300
12	370	530	570	460	300
13	400	530	750	446	330
14	450	520	600	440	260
15	453	520	660	450	310
16	460	565	600	500	310
17	463	570	620	500	310
18	500	520	650	450	360
19	501	520	700	460	310
20	505	520	780	460	310
21	511	550	660	460	320
22	650	550	800	480	330
23	700	600	500	550	295
24	760	615	620	550	295
25	765	615	640	540	330
26	790	640	650	550	330
27	791	645	650	550	315
28	801	610	675	525	330
29	802	610	700	525	330
30	803	610	800	535	330
31	810	620	830	540	330
32	820	700	520	597	280
33	910	710	600	610	300
34	980	715	660	610	300
35	1000	715	700	610	300



序号	型号	OD外径	H高度	ID内部直径	BD底部直径
36	1050	715	720	620	300
37	1200	715	740	620	300
38	1300	715	800	640	440
39	1400	745	550	715	440
40	1510	740	900	640	360
41	1550	775	750	680	330
42	1560	775	750	684	320
43	1650	775	810	685	440
44	1800	780	900	690	440
45	1801	790	910	685	400
46	1950	830	750	735	440
47	2000	875	800	775	440
48	2001	870	680	765	440
49	2095	830	900	745	440
50	2096	880	750	780	440
51	2250	880	880	780	440
52	2300	880	1000	790	440
53	2700	900	1150	800	440
54	3000	1030	830	920	500
55	3500	1035	950	925	500
56	4000	1035	1050	925	500
57	4500	1040	1200	927	500
58	5000	1040	1320	930	500



说明 Explanation:

坩埚可以根据客户需求做如下要求:

Crucibles can be made as below requirrnents

1、预留定位孔。以便定位。直径为100mm，深度为12mm
Setrecess to facilitate the positioning groove positioning.Diameter is 100mm,Depchs is 12mm

2、要求在坩埚上口安装浇嘴

Install pouring nozzle in the top of the crucible as required.

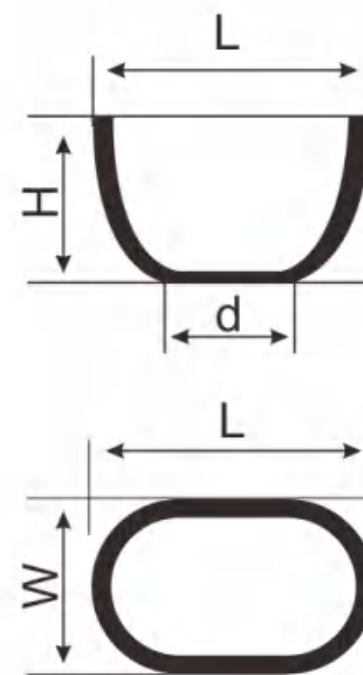
3、增加测温孔

Pyrometer hole in the wall is avaliable

4、根据提供图纸在底部或者侧面开孔

The bottom or side hole is available cocording to the drawing

序号	型号	OD外径	H高度	ID内部直径	BD底部直径
59	U700	785	520	505	420
60	U950	837	540	547	460
61	U1000	980	570	560	480
62	U1160	950	520	610	520
63	U1240	840	670	548	460
64	U1560	1080	500	580	515
65	U1580	842	780	548	463
66	U1720	975	640	735	640
67	U2110	1080	700	595	495
68	U2300	1280	535	680	580
69	U2310	1285	580	680	575
70	U2340	1075	650	745	645
71	U2500	1280	650	680	580
72	U2510	1285	650	690	580
73	U2690	1065	785	835	728
74	U2760	1290	690	690	580
75	U4750	1080	1250	850	740
76	U5000	1340	800	995	874
77	U6000	1355	1040	1005	880



说明 Explanation:

坩埚可以根据客户需求做如下要求:

Crucibles can be made as below requirrnents

1、预留定位孔。以便定位。直径为100mm，深度为12mm

Setrecess to facilitate the positioning groove positioning.Diameter is 100mm,Depchs is 12mm

2、要求在坩埚上口安装浇嘴

Install pouring nozzle in the top of the crucible as required.

3、增加测温孔

Pyrometer hole in the wall is avaliable

序号	型号	OD外径	H高度	ID内部直径	BD底部直径
78	IND205	330	505	280	320
79	IND285	410	650	340	392
80	IND300	400	600	325	390
81	IND480	480	620	400	480
82	IND540	420	810	340	410
83	IND760	530	800	415	530
84	IND700	520	710	425	520
85	IND905	650	650	565	650
86	IND906	625	650	535	625
87	IND980	615	1000	480	615
88	IND900	520	900	428	520
89	IND990	520	1100	430	520
90	IND1000	520	1200	430	520
91	IND1100	650	900	564	650
92	IND1200	630	900	530	630
93	IND1250	650	1100	565	650
94	IND1400	710	720	622	710
95	IND1850	710	900	625	710
96	IND5600	980	1700	860	965



说明 Explanation:

坩埚可以根据客户需求做如下要求:

Crucibles can be made as below requirrnents

1、预留定位孔。以便定位。直径为100mm, 深度为12mm

Setrecess to facilitate the positioning groove positioning. Diameter is 100mm, Depchs is 12mm

2、要求在坩埚上口安装浇嘴

Install pouring nozzle in the top of the crucible as required.

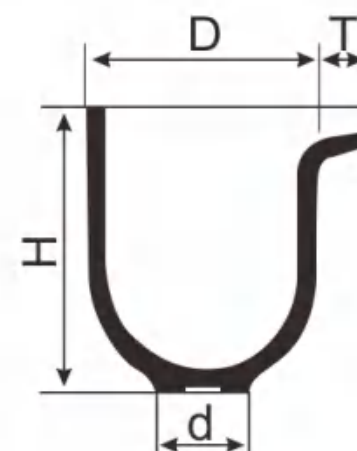
3、增加测温孔

Pyrometer hole in the wall is avialable

4、根据提供图纸在底部或者侧面开孔

The bottom or side hole is available cocording to the drawing

序号	型号	OD外径	H高度	ID内部直径	BD底部直径
97	Z803	620	800	536	355
98	Z1800	780	900	680	440
99	Z2300	880	1000	780	330
100	Z2700	880	1175	780	360



说明 Explanation:

坩埚可以根据客户需求做如下要求:

Crucibles can be made as below requirrnents

1、预留定位孔。以便定位。直径为100mm, 深度为12mm

Setrecess to facilitate the positioning groove positioning. Diameter is 100mm, Depchs is 12mm

2、要求在坩埚上口安装浇嘴

Install pouring nozzle in the top of the crucible as required.

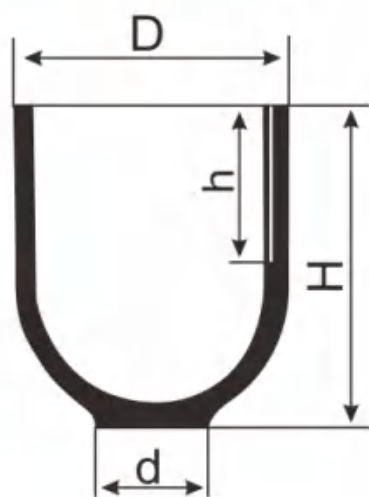
3、增加测温孔

Pyrometer hole in the wall is avialable



石墨粘土坩埚规格型号:

Specification and model of clay crucible



型号	代号	高度H	上口外径OD	底部直径BD
CN210	570#	500	610	250
CN250	760#	630	615	250
CN300	802#	800	615	250
CN350	803#	900	615	250
CN400	950#	600	710	305
CN410	1250#	700	720	305
CN410H680	1200#	680	720	305
CN420H750	1400#	750	720	305
CN420H800	1450#	800	720	305
CN420	1460#	900	720	305
CN500	1550#	750	785	330
CN600	1800#	750	785	330
CN687H680	1900#	680	785	305
CN687H750	1950#	750	825	305
CN687	2100#	800	825	305
CN750	2500#	875	830	350
CN800	3000#	1000	880	350
CN900	3200#	1100	880	350
CN1100	3300#	1170	880	350

说明 Explanation:

坩埚可以根据客户需求做如下要求:

Crucibles can be made as below requirrnents

1、预留定位孔。以便定位。直径为100mm, 深度为12mm

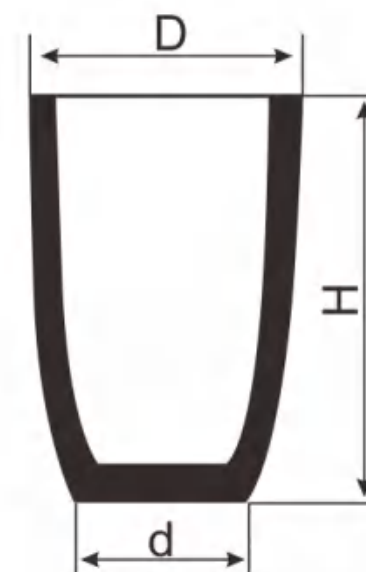
Setrecess to facilitate the positioning groove positioning. Diameter is 100mm, Depchs is 12mm

2、要求在坩埚上口安装浇嘴

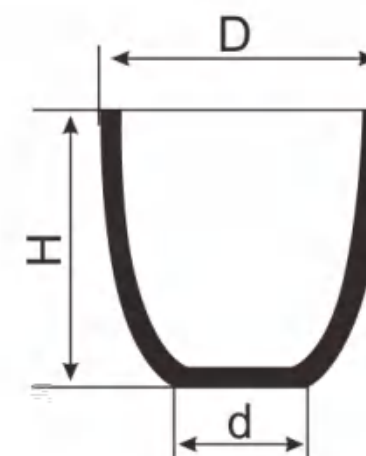
Install pouring nozzle in the top of the crucible as required.

3、增加测温孔

Pyrometer hole in the wall is available



型号	代号	高度H	上口外径OD	底部直径BD
CA300	300#	450	440	210
CA400	400#	600	500	300
CA500	500#	660	520	300
CA600	501#	700	520	300
CA800	650#	800	560	320
CR351	351#	650	435	250



型号	代号	高度H	上口外径OD	底部直径BD
CU210	570#	500	605	320
CU250	760#	630	610	320
CU300	802#	800	610	320
CU350	803#	900	610	320
CU500	1600#	750	770	330
CU600	1800#	900	900	330

说明 Explanation:

坩埚可以根据客户需求做如下要求:

Crucibles can be made as below requirrnents

1、预留定位孔。以便定位。直径为100mm, 深度为12mm

Setrecess to facilitate the positioning groove positioning. Diameter is 100mm, Depchs is 12mm

2、要求在坩埚上口安装浇嘴

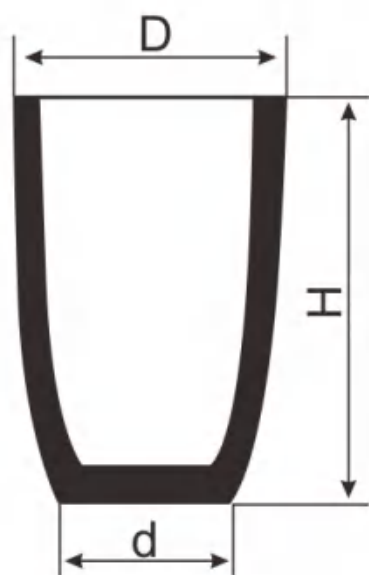
Install pouring nozzle in the top of the crucible as required.

3、增加测温孔

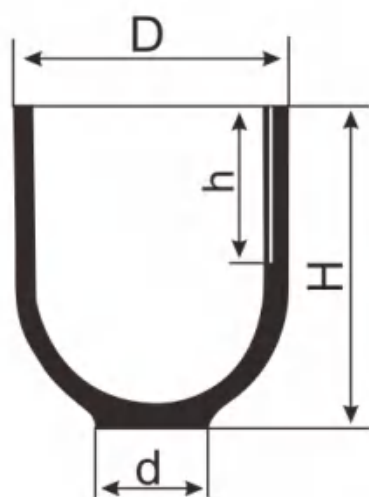
Pyrometer hole in the wall is available

4、根据提供图纸在底部或者侧面开孔

The bottom or side hole is available cocording to the drawing



型号	代号	高度H	上口外径OD	底部直径BD
RA100	100#	380	330	205
RA200H400	180#	400	400	230
RA200	200#	450	410	230
RA300	300#	450	450	230
RA350	349#	590	460	230
RA350H510	345#	510	460	230
RA400	400#	600	530	310
RA500	500#	660	530	310
RA600	501#	700	530	310
RA800	650#	800	570	330
RR351	351#	650	420	230



型号	代号	高度H	上口外径OD	底部直径BD
RN250	760#	630	615	250
RN500	1600#	750	785	330
RN430	1500#	900	725	320
RN420	1400#	800	725	320
RN410H740	1200#	740	720	320
RN410	1000#	700	715	320
RN400	910#	600	715	320

说明 Explanation:

坩埚可以根据客户需求做如下要求:

Crucibles can be made as below requirrnents

1、预留定位孔。以便定位。直径为100mm，深度为12mm

Setrecess to facilitate the positioning groove positioning.Diameter is 100mm,Depchs is 12mm

2、要求在坩埚上口安装浇嘴

Install pouring nozzle in the top of the crucible as required.

3、增加测温孔

Pyrometer hole in the wall is available



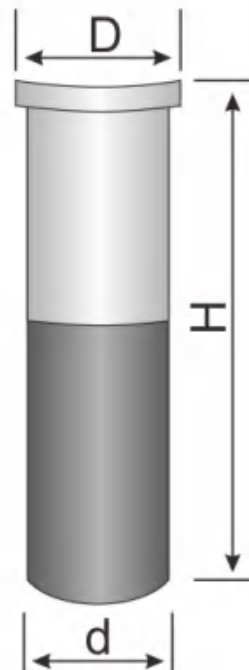
型号	代号	高度H	上口外径OD	底部直径BD
CC1300X935	C800#	1300	650	620
CC1200X650	C700#	1200	650	620
CC650X640	C380#	650	640	620
CC800X530	C290#	800	530	530
CC510X530	C180#	510	530	320



浸入式辐射管规格型号:

Specification and model of radiant tube:

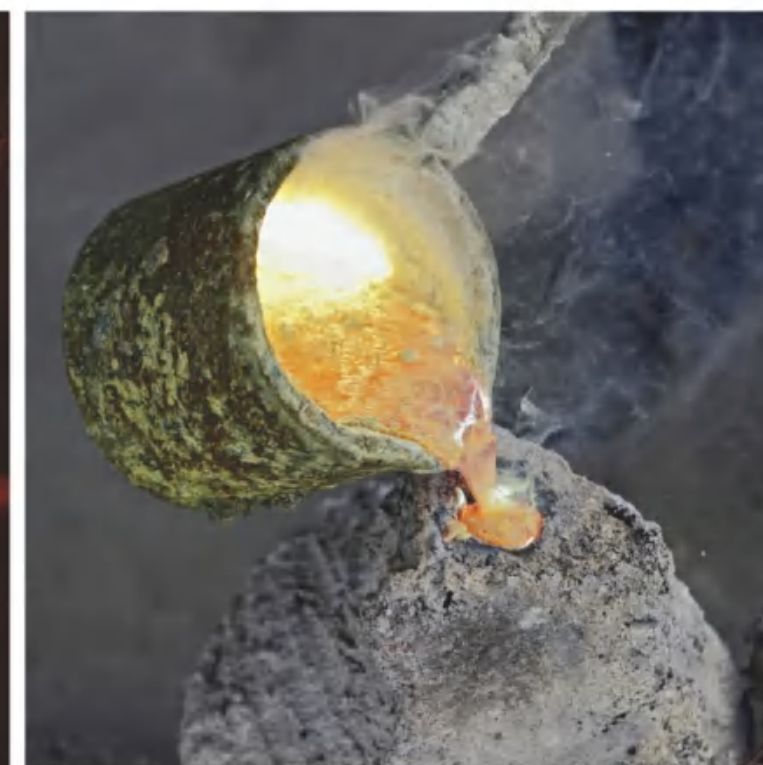
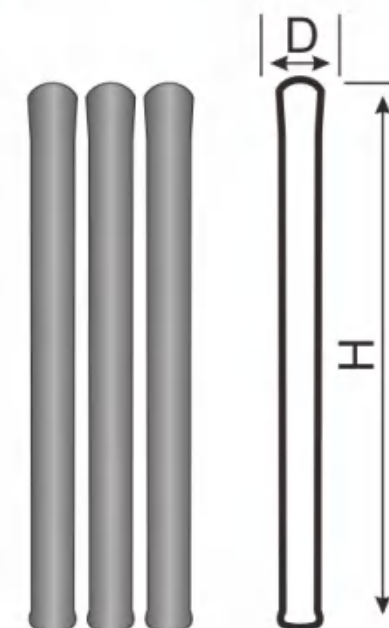
型号	外径	高度	内径
H850	153	855	90
H850B	233	855	160
H850C	253	855	160
H850D	273	855	200
H950	263	955	180
H950D	273	955	200
H1000	273	1005	200
H1030	273	1035	200



测温管保护套规格型号:

Specification and model of temperature measuring tube protective sleeve:

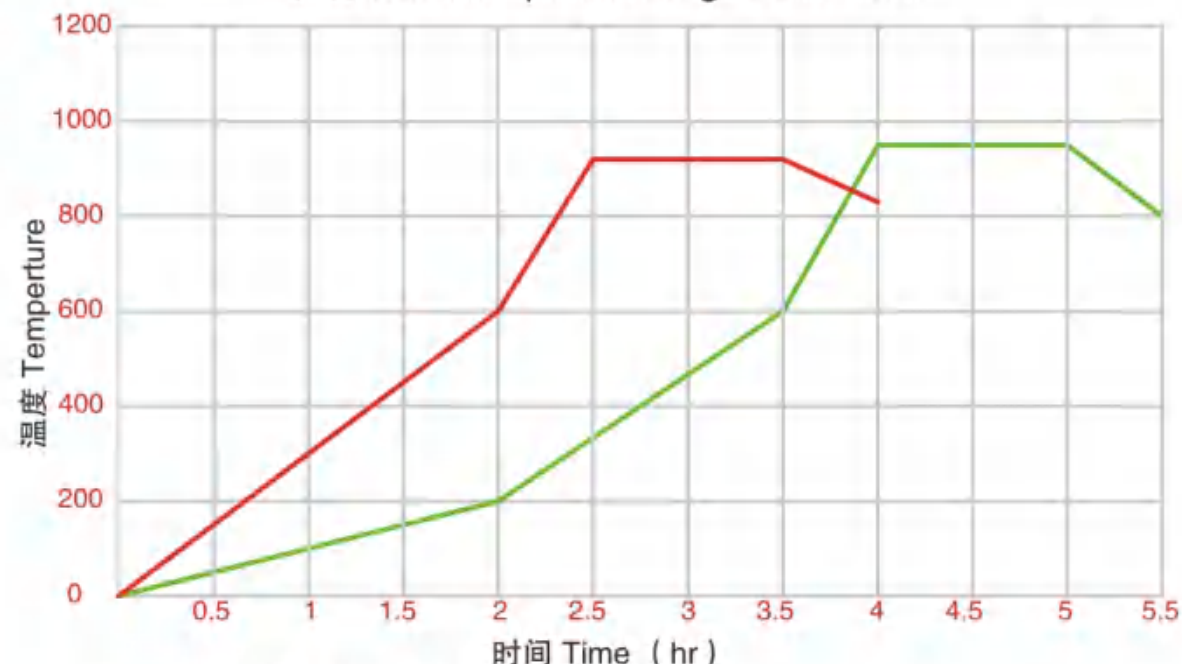
型号	外径	长度
350	35	350
460	40	460
500	50	500
550	55	550
600	55	600
700	55	700
800	55	800



产品详情 中冶坩埚预热说明

Crucible Heating Recommendation

中冶坩埚预热 preheating Procedure



— 坩埚首次使用预热曲线 (First Preheat)

— 坩埚冷却之后再次使用预热曲线 (After First Preheat)

首次使用坩埚的预热步骤如下:

- 1、坩埚装入熔炉后, 将坩埚慢慢加热, 两小时后直到温度达到200度, 以除去坩埚中的湿气。
- 2、接着将中冶坩埚以小功率在1.5小时后加热到600度, 然后再采用全加热功率, 在半小时后使温度达到950度, 保温约1个小时。以此使釉层充分熔化提高抗氧化能力, 同时也保证了坩埚的最大使用寿命。
- 3、达到950度后可按照要求加料
- 4、曲线如图绿线所示

Preheating procedure for crucible first use

1. After installation in the furnace, the crucible should be heated up slowly to a temperature of 200°C (≈ 390°F) over a period of 2 hours, in order to eliminate any moisture that may be present.

2. Subsequently, the crucible should be heated up to 600°C (≈ 1100°F) on low power over a period of 1.5 hours. Finally, the full heating rate is used to reach 950°C (≈ 1750°F). The temperature of 950°C (≈ 1750°F) should be held for approximately 1 hour. This ensures thorough melting of the glaze with the additional anti-oxidation coating, which is essential to achieve the maximum possible crucible life.

3. Add ingot into crucible.

4. Preheating procedure as shown in the green line.

再次使用坩埚的预热步骤如下:

- 1、首先将坩埚慢慢加热, 两小时后直到温度达到600度, 以除去坩埚中的湿气, 同时使得坩埚表面的釉层和抗氧化涂层充分烧结防止氧化, 延长坩埚的使用寿命。
- 2、随后继续加热, 并在半小时后使温度达到950度, 保温约1个小时, 然后可按照要求加料。
- 4、曲线如图红线所示

Preheating procedure for crucible after first use

1. First, the crucible should be heated up slowly to a temperature of 600°C (≈ 1100°F) over a period of 2 hours, in order to eliminate any moisture that may be present. This ensures thorough melting of the glaze with the additional anti-oxidation coating, which is essential to achieve the maximum possible crucible life.

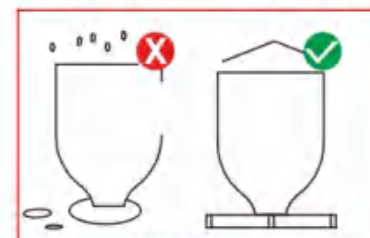
2. Subsequently, the full heating rate is used to reach 950°C (≈ 1750°F) over half an hour. The temperature of 950°C (≈ 1750°F) should be held for approximately 1 hour.

3. Add ingot into crucible.

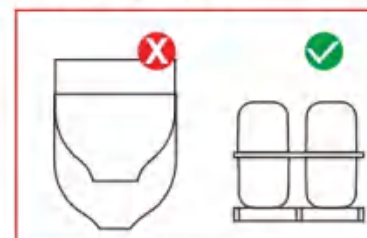
4. Preheating procedure as shown in the red line.

产品详情 中冶坩埚使用以及保养方法

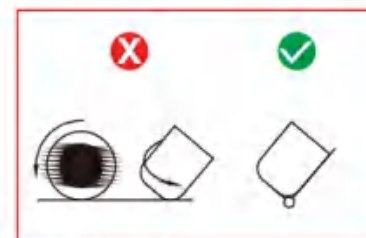
Crucible care and use



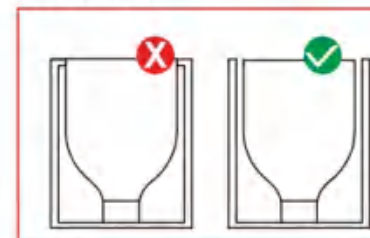
坩埚应存放在温暖干燥的场所
Store crucibles in a dry, warm place or wooden pallet



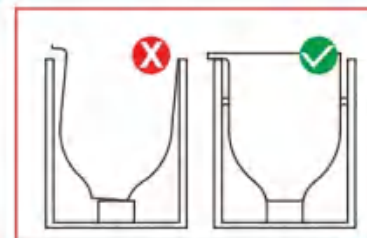
坩埚不能相嵌放置
Do not stock inside another



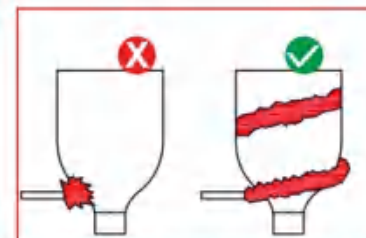
坩埚不能滚动搬运
Do not roll crucibles



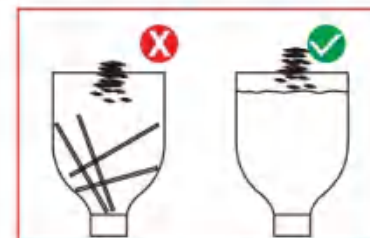
使用耐火毡密封, 坩埚两侧留有膨胀间隙
Use ceramic fiber blanket to seal, interspace of cover and sides of furnace



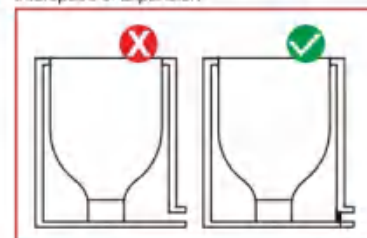
在倾斜炉中应使用定位砖块, 以利于坩埚受热膨胀
Use locating bricks in tilting furnaces, to interspace of expansion



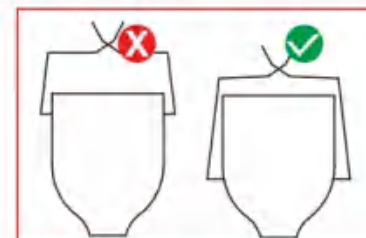
火焰加热应与坩埚壁呈切线方向, 环绕在坩埚周围
Tangential fire around crucible



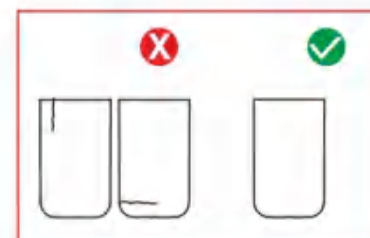
仅当金属熔化后方可添加添加剂
Add flux after metal is molten



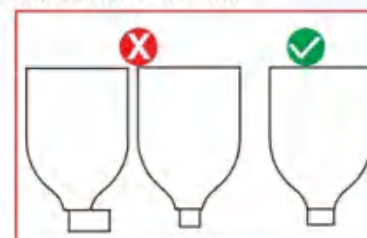
使用时确保紧急排放孔已经密封, 防止坩埚过早氧化而失效
Avoid premature crucible failure by ensuring that the furnace drain hole is sealed



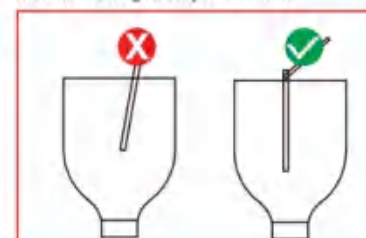
坩埚吊出时, 夹具应该夹在坩埚底部的 1/3 处, 且两侧均匀受力
For lift-out, tongs must be placed on lower third of crucible. Fit tongs evenly on both side



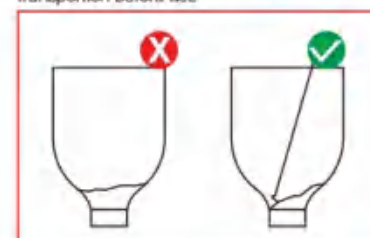
使用前仔细检查有无裂纹, 和运输过程中造成的其他形式的损坏
Check for cracks or other damage during transportation before use



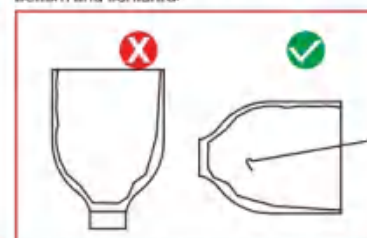
坩埚底座应平整, 略大于坩埚底部直径, 且安装必须对中
Base block must be flat, larger than crucible bottom and centered.



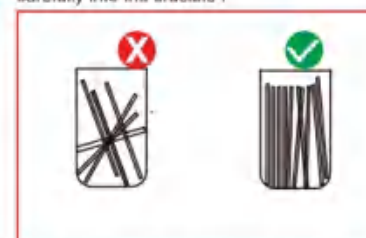
加料时应该使用夹具轻拿轻放, 避免直接将料直接抛入坩埚内部
Use tongs and ingots should be placed carefully into the crucible.



坩埚从炉中移出前必须将金属液体清空, 切勿使金属液体在坩埚内部凝固
Empty crucible before removing from furnace. Do not let metal solidify in crucible



应每日趁热将坩埚内部清理干净
Clean carefully everyday while crucible still hot



先加入一些小块的废料, 在将锭料垂直加入坩埚内
Put in returns scrap first, then add ingots vertically

产品详情 产品特点▶▶▶▶

Product introduction ▶▶

工艺先进: Advanced technology	采用等静压高压成型, 各向同性好, 密度和强度高, 密实均匀, 无缺陷。 "Crucibles are manufactured by the world's most advanced cold isostatic molding method, with isotropic properties, high density, high strength, dense uniform and defect-free."
品种齐全: Great variety of goods	公司生产粘土坩埚和树脂坩埚等。针对不同的客户提供不同的解决方案, 采用更适合的品种, 能满足不同需求, 提高使用寿命。 Produce resin bond and clay bond crucible, Provide the best solution for different customers, to extend the service life.
寿命长: Long life	较普通的粘土石墨坩埚的寿命长2-5倍 Crucible life is 2-5 times longer than ordinary
抗腐蚀: Resistance to chemical attack	先进的配方和优质的材料, 有效的抵抗化学侵蚀。 Advanced materials and glaze recipes, effectively resistance to chemical erosion.
导热快: High thermal conductivity	采用了高导热材料, 等静压成型后组织致密, 显气孔率低导热速度快。 Using natural graphite materials and isostatic pressing, thin crucible wall, fast heat conduction
耐高温: Resistance to high temperature	坩埚的使用温度范围是400-1600℃, 不同范围任选 Crucible temperature range 400 - 1400℃
节能 Energy-saving	导热快可以降低能源消耗, 减少废弃排放。 Crucible made of high thermal conductivity material can bring a large number of energy savings for users in the production process.
污染少: Less pollution	所选用的无机非金属材料纯度较高, 在金属熔融的过程中不带入有害杂质 Because of the choice of high purity inorganic material, little or no harmful impurities into products in the metal melting process.
抗氧化: Good oxidation resistance	先进的配方和进口抗氧化材料的使用, 提升了坩埚的抗氧化能力。 The appearance of a crucible has multi-special glaze layers, coupled with the molding material compact, greatly improving the corrosion resistance of the product, and extending the life of the crucible.
质量稳定可靠: Stable and reliable quality	主要的原料都来源于国外著名公司品牌, 所有材料都经过严格检验; 生产过程中每道工序都经过严格检验才能流入下一工序。 Part of the main raw materials of foreign well-known brands used, glazes mainly using imported raw materials. The quality is stable and reliable.

产品详情 常见问题分析

The Common Problem Analysis

A: 坩埚导热慢

- 1、未按照规范程序对坩埚预热。
- 2、坩埚内壁粘附残渣。
- 4、坩埚达到使用寿命。

A: Slow Heat Conduction

1. Not preheating according to the standard procedure.
2. Slag influences heat conduction.
4. The crucible has reached its service life.

B: 坩埚腐蚀

- 1、金属未曾完全熔化时加入溶剂或者过量使用熔剂。
- 2、某些熔剂具有强烈的腐蚀性。
- 3、使用的燃料含有腐蚀性物质。
- 4、长期非正常高温环境, 会导致坩埚釉层出现类似于腐蚀的熔化情况。

B: Crucible corrosion

1. Adding flux before metal is molten or excessive use of flux.
2. Certain fluxes contain corrosion substances.
3. Fuel containing corrosive substance.
4. Abnormal high-temperature operation may result in glaze layer smelting resembling corrosion.

C: 坩埚口部问题

- 1、坩埚上口在投料时被反复碰撞, 导致缺釉氧化。
- 2、口部积渣未经清理, 导致积渣过厚或填充于坩埚与上盖之间。
- 3、坩埚与炉盖间距小, 导致加热膨胀空间不足。
- 4、上口温度过低。
- 5、口部与导热系数较大的金属等物体相接触。
- 6、装炉时偏心, 一侧间距过小。

C: Top problems

1. Repeatedly top impacted on top area cause oxidation.
2. Slags accumulated around the top area or between the top area and the furnace cover.
3. Small gap between the top and the furnace cover.
4. Low temperature on top area.
5. Contacting with some metals with larger heat exchanging coefficients.
6. Eccentric installation cause not enough space between the top and furnace.

D: 氧化过快

- 1、炉膛中火焰直接冲击坩埚。
- 2、坩埚上口的温度过低。
- 3、坩埚使用温度过高。
- 4、吊装过程中破坏了釉层。
- 5、紧急排放孔未关闭。

D:Excessive oxidation

1. Flame in furnace against the bottom of the crucible directly.
- 2.Low temperature in the top area .
- 3.Overheated working temperature.
- 4.Hoisting or moving improperly damages glaze layer.
- 5.The emergent drain hole is open.

E: 坩埚炸裂

- 1、坩埚运输存贮不当而受潮后升温速度过快。
- 2、加热未按照预热程序执行，升温过快。
- 3、工作中加入的金属材料未完全干燥。

E:Explosion

- 1.Heating rapidly while the crucible has damped during transportation or storage.
- 2.Over rapid heating-up during preheating procedure.
- 3.The added materials are not completely dried.

F: 坩埚中部或者底部开裂

- 1、运输过程中或者安装过程中的碰撞。
- 2、坩埚安装不良，应该保持水平，和上盖留有合适的间隙。
- 3、未使用合适的底座。
- 4、炉膛中温差较大。
- 5、金属锭横放或斜放于坩埚之中。加料过满。
- 6、坩埚内部存有大量积渣。

F:Middle or bottom craks

- 1.Impacted during transportation or installation.
- 2.Crucible should be placed in the middle of the furnace stack smoothly and stably.
- 3.An improper graphite stand is used.
- 4.The existence of great thermal difference in the furnace.
- 5.Matel ingots in the crucible filled horizontally or diagonally.Metal materials overfilled.
- 6.Leftover slag or molten matal in the crucible.

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