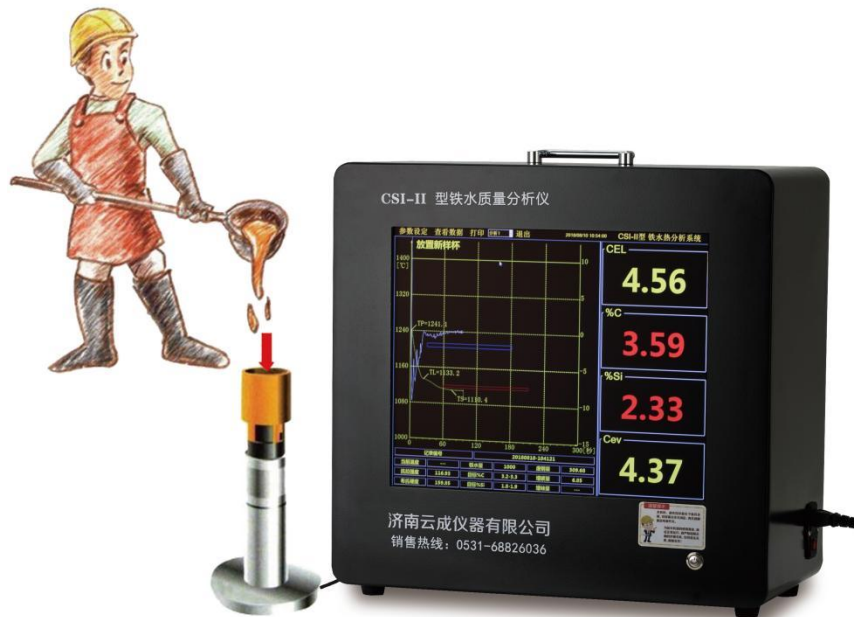# CSI-II Intelligent Carbon-Silicon Analyzer

➤ Overview of Applications：

CSI-II Intelligent Carbon-Silicon Analyzer enables rapid determination of carbon equivalent, carbon content, silicon content, spheroidization rate, tensile strength, and hardness assessment for raw molten iron such as gray iron, malleable iron, ductile iron, and vermicular iron at the furnace front. Featuring simple operation, high measurement accuracy, and excellent stability, this instrument is widely used in metallurgy, foundry, and machining industries.

➤ Key Features：

（1） 17-inch LCD display with large fonts for simultaneous display of cooling curves and measurement data, providing clear and intuitive readability.

（2） Built-in industrial-grade computer with ultra-long lifespan, stable performance, and strong anti-interference capabilities, effectively ensuring prolonged equipment operation.

（3） Self-developed industrial control operating system, never crashes during power outages, with built-in data protection; proprietary analysis software featuring innovative curve trend charts. Lifetime free upgrades available.

（4） China's first-of-its-kind "multi-channel curve mode" allows users to choose their preferred

settings.

（5）Features a proprietary multi-channel high-precision (0.1°C) temperature acquisition module with robust anti-interference capabilities. Provides up to 3000V DC opto-isolation to prevent damage to peripheral equipment from high voltage on lines, ground loops, or oscillations. Supports 100ms high-speed sampling to meet high-speed response and high-precision requirements. Compatible with RS-232 and long-distance RS-485 communication protocols.

（6）USB data interface for communication with computers, enabling functions such as data storage, database queries, and data output.

（7）Up to 8 distinct detection lines can be configured to accommodate various application scenarios.

（8）Simple operation: automatically calculates the required additions of carbon additive, ferrosilicon, and scrap steel based on measured composition levels, preset molten iron volume, and target composition, enabling rapid adjustments at the furnace front.

（9）Features a top-tier Taiwanese brand "Meanswell" voltage regulator for enhanced reliability.

➢ Technical Specifications：

Measurement Parameters：Measure C, Si, CEL, ΔT, ΔTM; calculate tensile strength Rm, hardness HB, quality factor R/H, agglomerate count MEG, graphitization factor K.

Measurement Range：C% value: 2.1–4.2% Si% value: 0–20% CE value: 2.5–5.0% Spheroidization rate: 40–100%
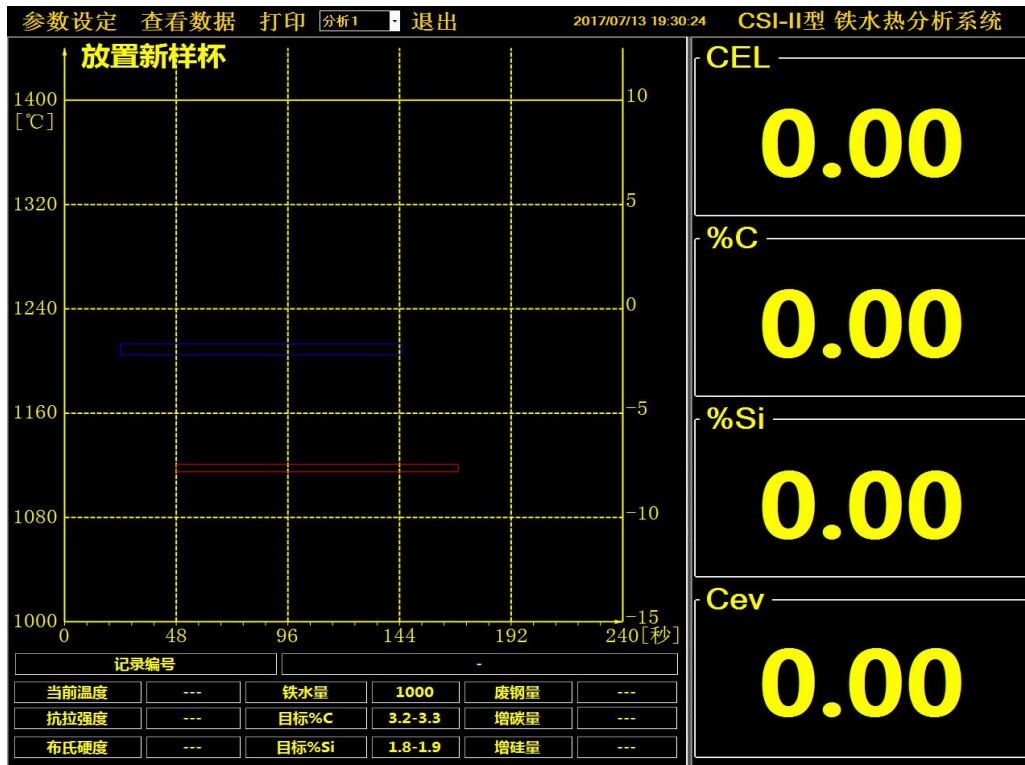
Measurement time：≤3min

Resolution：0.1℃

External Dimensions（L*H*W）：400*400*230mm

Outer packaging dimensions：550*320*490mm（（L*W*H）

Weight：24kg

➢ **Software Overview：**

（1）During system operation, the display reads (Place new sample cup).

参数设定　查看数据　打印 分析1 ▾ 退出　　2017/07/13 19:30:24　CSI-II型 铁水热分析系统

放置新样杯

CEL 0.00

%C 0.00

%Si 0.00

Cev 0.00

记录编号		-		
当前温度	---	铁水量	1000	废钢量	---
抗拉强度	---	目标%C	3.2-3.3	增碳量	---
布氏硬度	---	目标%Si	1.8-1.9	增硅量	---

（2）After inserting the sample cup, the display shows (Ready to measure).

参数设定　查看数据　打印 分析1 ▾ 退出　　2017/07/13 19:41:57　CSI-II型 铁水热分析系统

准备测量

CEL 0.00

%C 0.00

%Si 0.00

Cev 0.00

记录编号		-		
当前温度	40.3	铁水量	1000	废钢量	-
抗拉强度	-	目标%C	3.2 - 3.3	增碳量	-
布氏硬度	-	目标%Si	1.8-1.9	增硅量	-
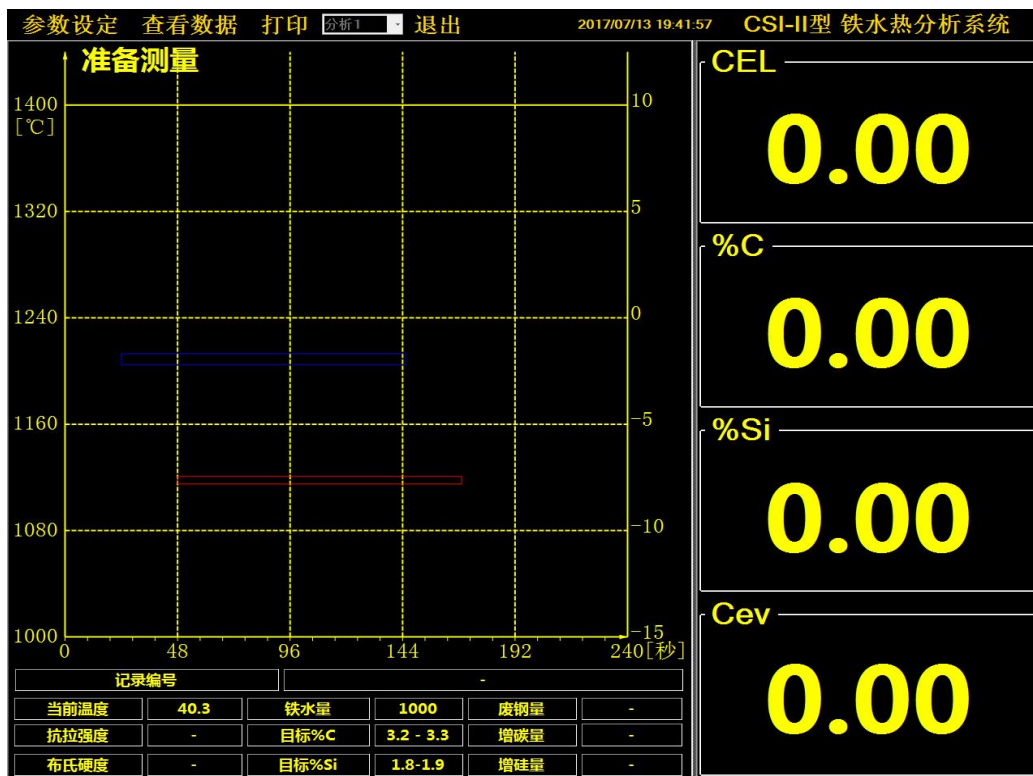
（3）Settings: Tap Settings, enter the settings password, and confirm to access the settings interface (initial password: "1111").

参数设定　查看数据　打印　HT350　退出　　2017/07/17 18:32:56　CSI-II型 铁水热分析系统

放置新样杯

CEL

0.00

参数设置

通讯编号	1	通讯名称	通讯一	通讯串口	COM1
通道1 ☑ K		通道2 ☐ 无		通道3 ☐ 无	
开始时间	0	结束时间	300	通讯默认值	
温度上限	1400	温度下限	1000		
参数分组	1	分组名称	HT350	温度修正	0
分析类型	标准	开始温度	0	有效过热	0
TL精度	1.5	TL带宽	3	TS精度	1
目标%C	3.2	至	3.3	TS带宽	5
目标%Si	2.8	至	2.9	切换参数	
CEL调整	0	C调整	0.5		
RM调整	0	HB调整	0	Si调整	-0.5
增碳剂%C	98	硅铁Si	75	密码	
铁水总量	1000	废钢%C	0.2	废钢%Si	0.3
Nd.f1	110	Nd.f2	-5.5	样杯类型	圆形1
保存		保存并关闭		取消	

0.00

0.00

Cev

0.00

记录编号　　　　-

当前温度	---	铁水量	1000	废钢量	---
抗拉强度	---	目标%C	3.2-3.3	增碳量	
布氏硬度	---	目标%Si	2.8-2.9	增硅量	---

（4）View History: Click to view the history pop-up, where you can browse previously measured data by date or ID number.

参数设定　查看数据　打印　分析1　退出　　2017/07/13 19:39:48　CSI-II型 铁水热分析系统

放置新样杯

20170713-193722分析1.t
20170713-193447分析1.t

CEL

3.85

%C

3.22

%Si

2.22

TP=1265.1
TL=1191.1
TS=1111.3

Cev

3.96

记录编号　　　　-

当前温度	---	铁水量	1000	废钢量	238.71
抗拉强度	224.71	目标%C	3.2 - 3.3	增碳量	8.59
布氏硬度	207.10	目标%Si	1.8-1.9	增硅量	-
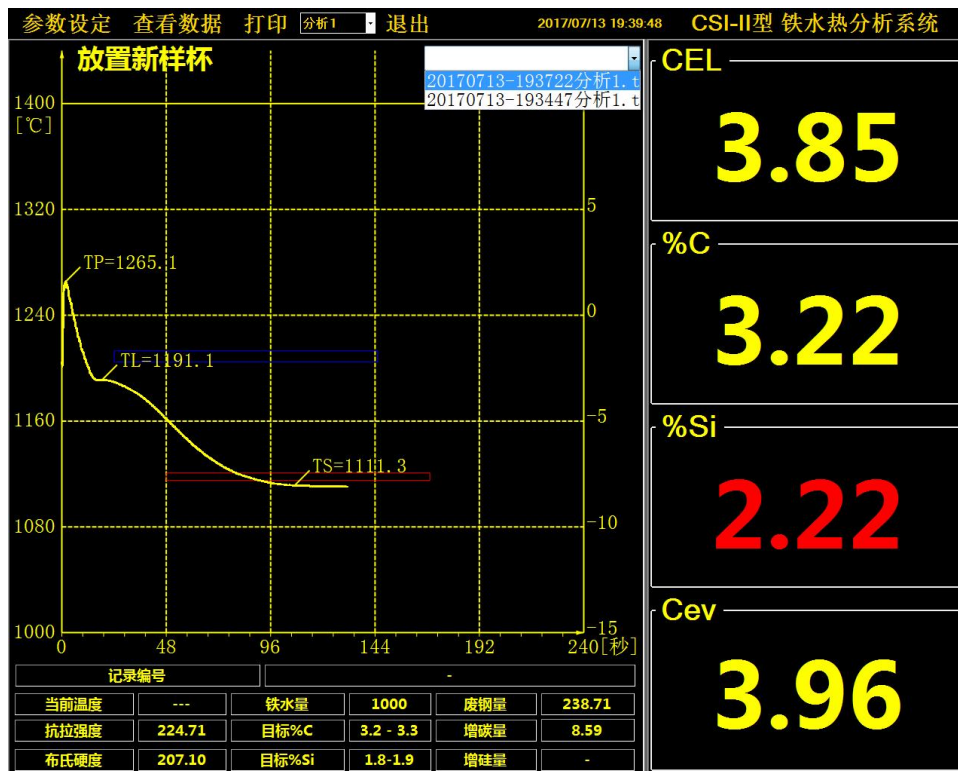
➢ **Random Standard Configuration：**

序号	名称	规格	数量	备注
1	Host	CSI-II	1PCS	
2	Sample Cup Base	Square or round	1PCS	
3	Power cord		1PCS	
4	Temperature measurement line		3M	Mounted on the sample cup base
5	Fuse		1PCS	Plug into an electrical outlet
6	Wireless Mouse and Keyboard		1PCS	Includes receiver
7	Sampling spoon		1PCS	
8	Packing List		1PCS	
9	Product Manual		1PCS	
10	Certificate of Conformity		1PCS	
11	Product Warranty Card		1PCS	