

研发用高效冰箱测试分析设备的介绍



中标能效科技（北京）有限公司

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1

Re/genT B. V. 简介

2

冰箱制冷系统研发现状

3

高效冰箱测试分析设备

基本信息

- 成立于 1993
- 地址: 荷兰海尔蒙德市
- 专注于
 - 冰箱
 - 空调
 - 热泵

测试

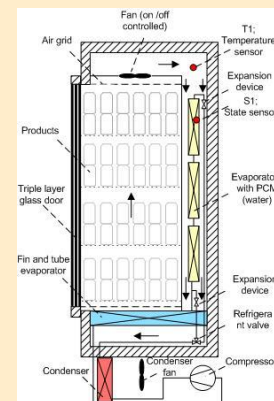
- 有11个环境实验室
- 家用电冰箱的测试IEC-62552-1-2-3:2015和其他标准通过 ISO 17025 认证



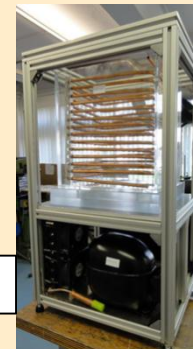
研发

- 基于客户的项目
 - 产品的改进
 - 元器件/系统的研发
- EU 项目, 像:
 - Rapid Cool
 - iCool
 - 等

节能75 %

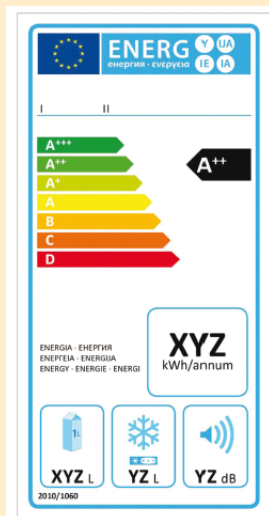
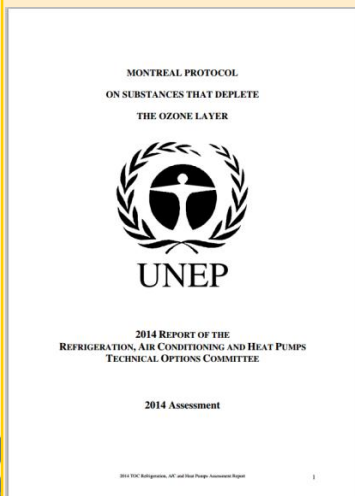


40s之内冷却



咨询

- 为欧洲电器制造商协会CECED做咨询工作
- 为 UNEP做咨询工作 (是蒙特利尔技术方案委员会成员)
- 标准制定工作
 - IEC-SC59M / MT2 (召集人)
 - CEN (商用冰箱)



制造测试装置

- 压缩机量热计



2个压缩机

5 (W) to 400 W
制冷能力

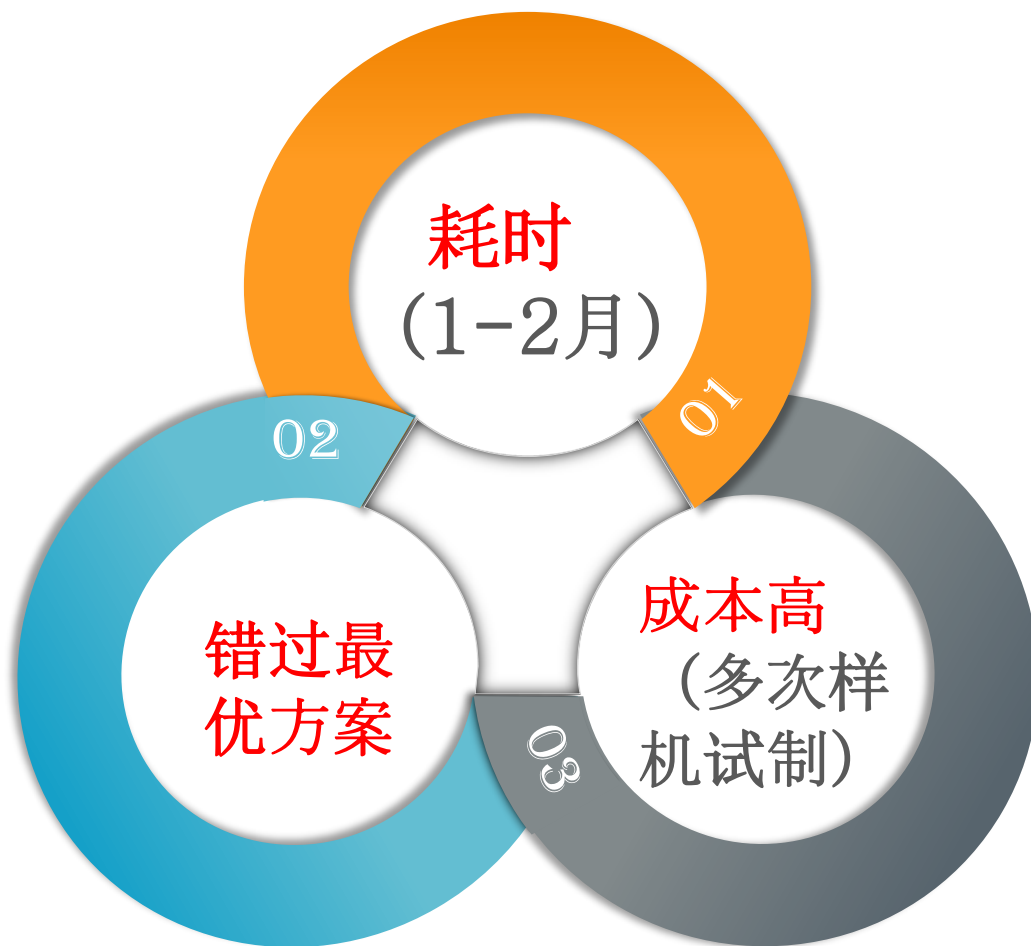
- 冰箱测试分析设备

自动充注制冷剂和毛细
管匹配
控制研究



- 其他测试设备 (压缩机启/停装置, 可靠性装置, 等)



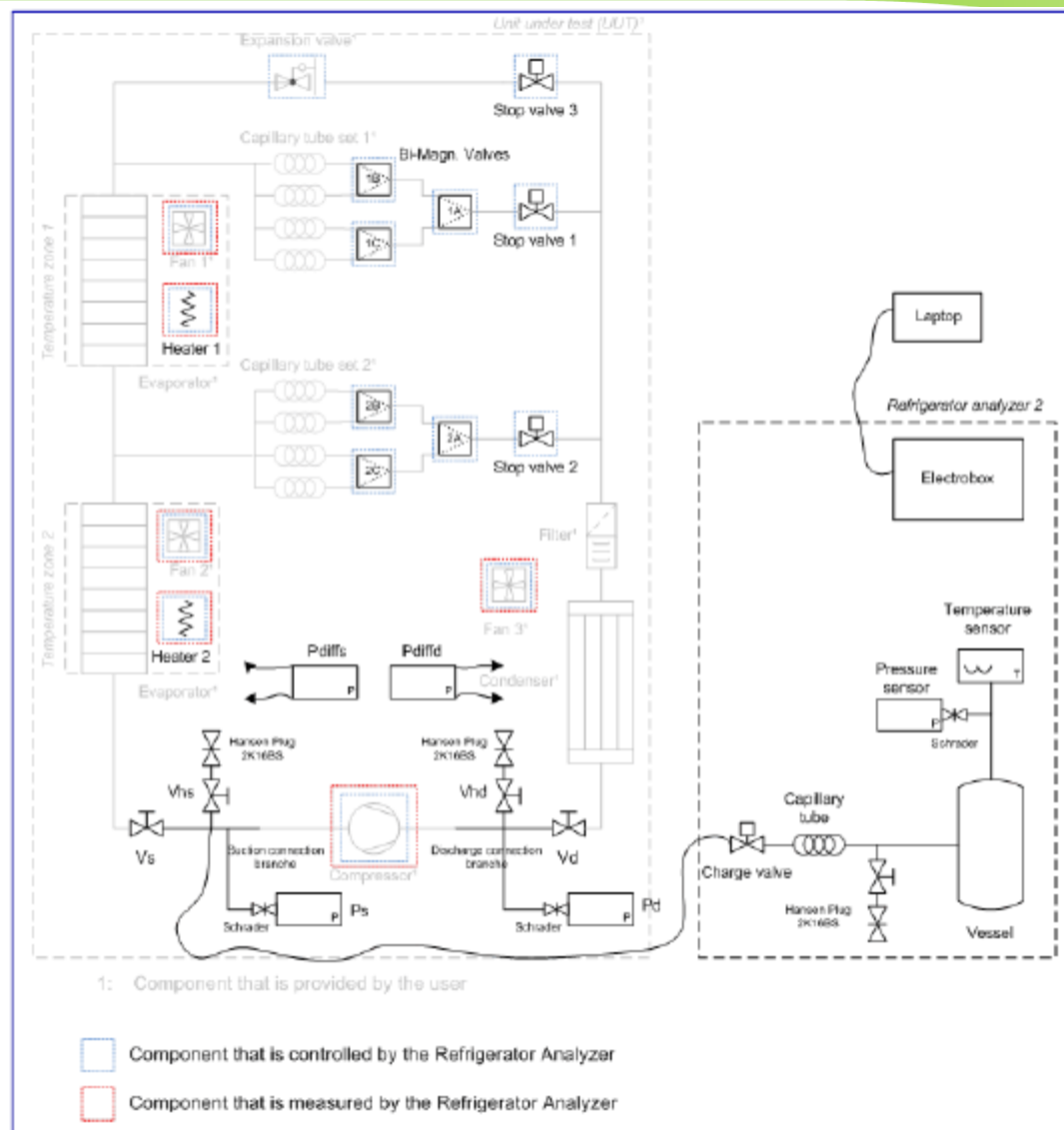


简介

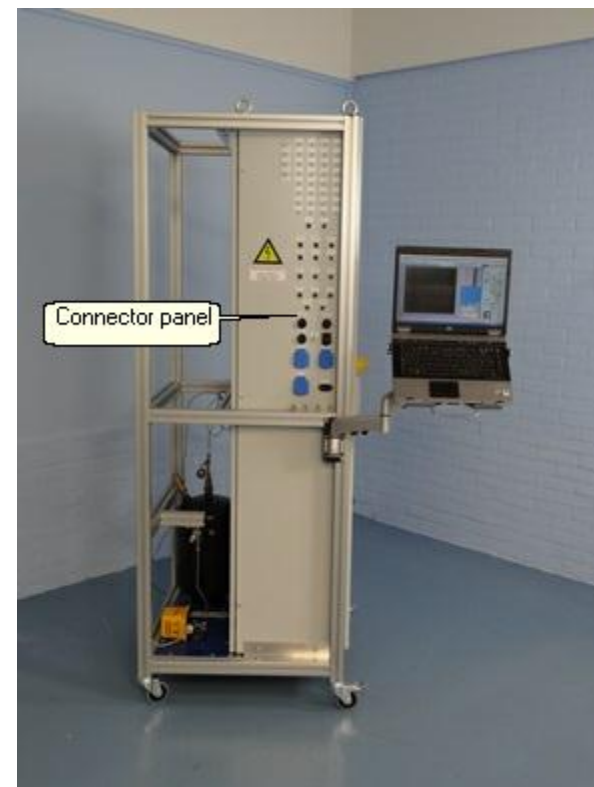
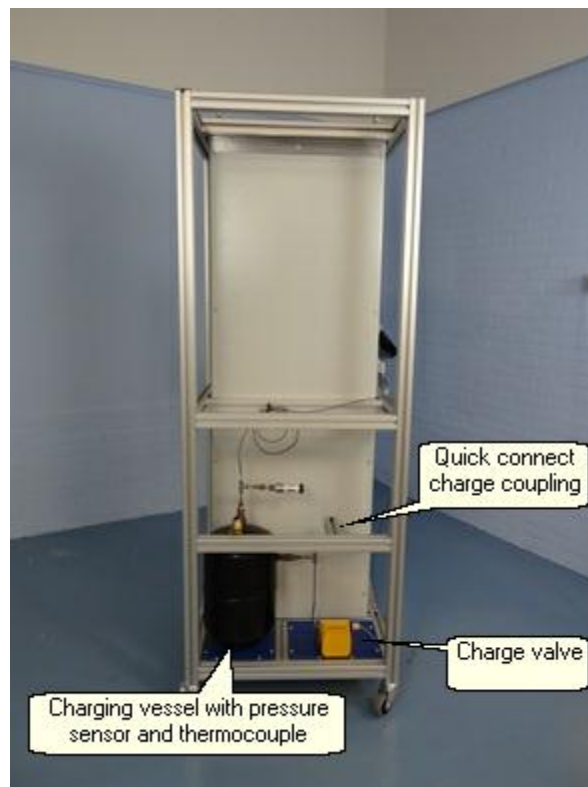
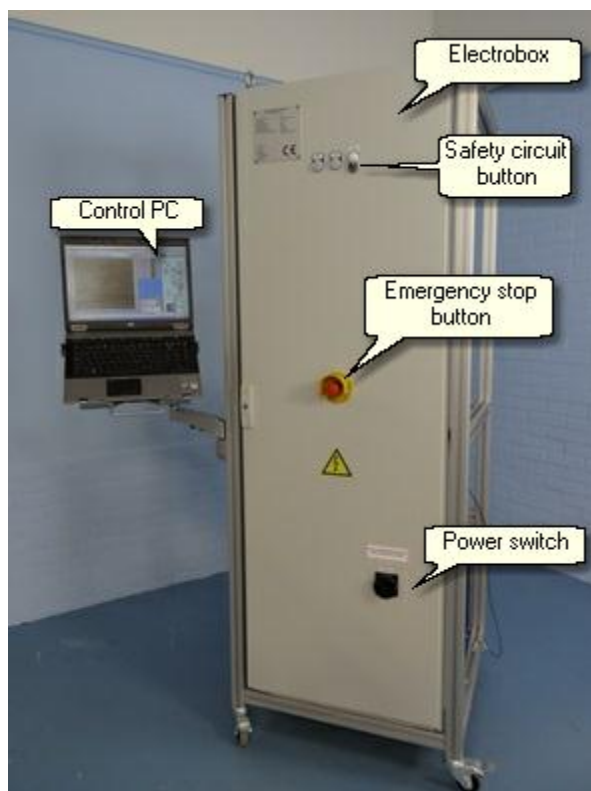
- 1、测试处于研发阶段产品的耗电量
适用于带有不同部件的样机
- 2、用于系统优化：
 - 制冷剂充注量；
 - 毛细管选择；
 - 压缩机频率；
 - 风门设定；
 - 风扇的设定；
- 3、自动完成各项测试
- 4、性能分析：热流分析、震动分析



系统简图



产品图



测试顺序

连接

- 连接被测机与分析设备（制冷管路和电气元件）

设置参数

- 规定测试中需要改变的参数、并为每个参数进行设置

测试

- 稳定后系统以测试表格形式保存数据

调整参数

- 系统调整下列参数后开始的测试

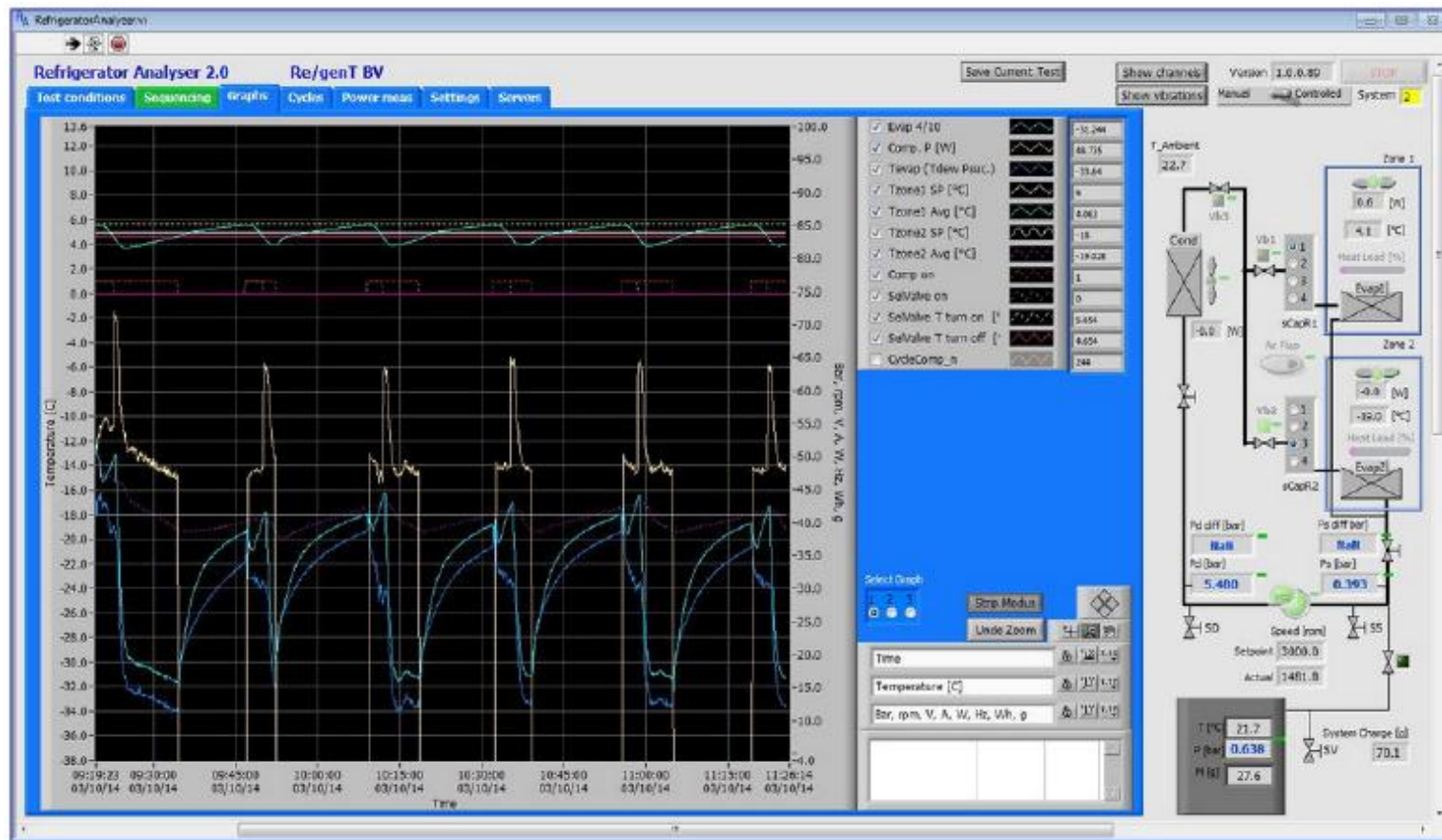
最优设计

- 充注量、毛细管匹配、风扇转速等

设置参数

[illegible]

测试



测试

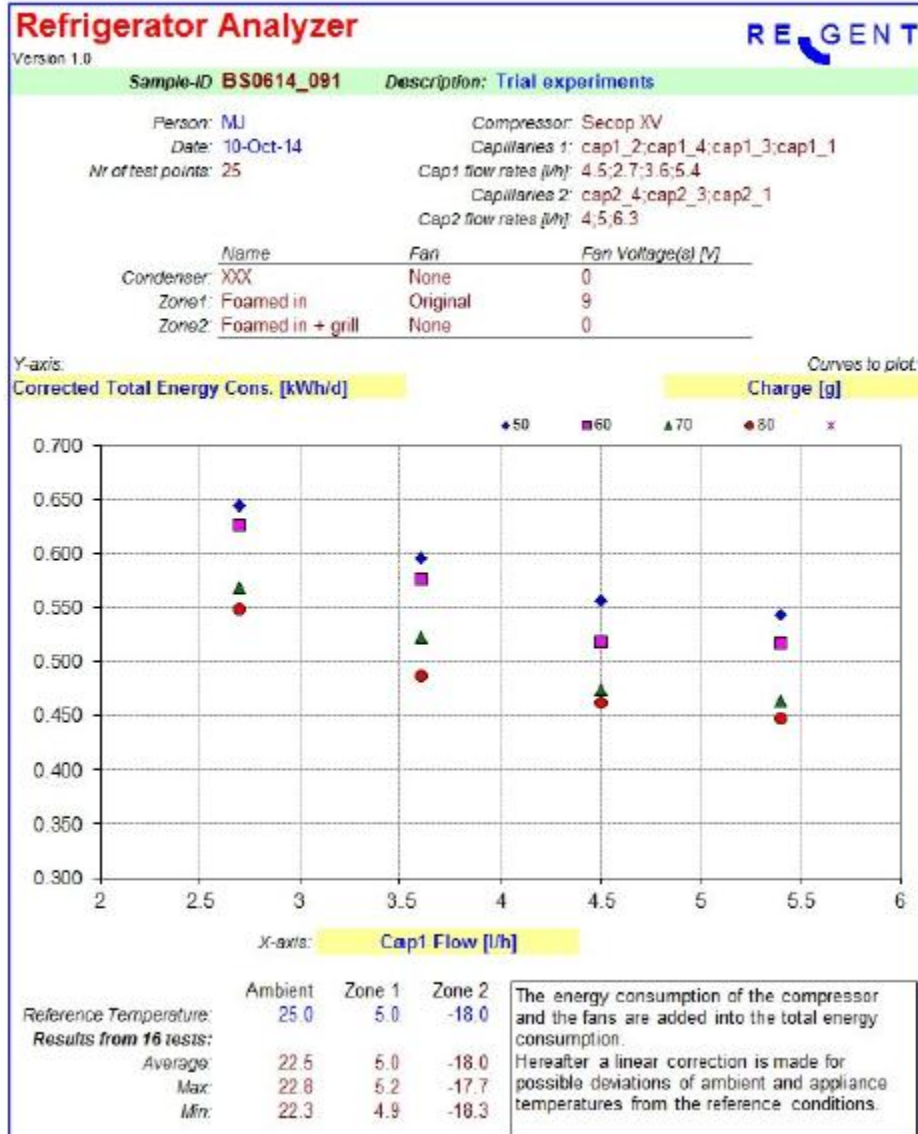
	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S								
1	Refrigerator Analyzer 2.0										RE GENT															
2	Version 1.0																									
3	Performance Data																									
4																										
5											You can load measurement data in this program by selection an empty cell in t and pressing the insert button. The selected measurement data file(s) will be lo worksheet for each of them. You can use the delete button to eliminate a measurement data file (the workst measurement data file will be retained. You can press the up and down button to change the order of the test points in After loading a number of measurement data files an error may throw up (this i															
6	go to		Sample ID: B50614_091																							
7	insert																									
8	delete																									
9	up																									
10	dow																									
11																										
12	Notes																									
13	(an) =averages value taken over on-cycle only																									
14	Main Settings										Average Temperatures				Compressor											
15		Cap. Zone 1	Cap. Zone 2		Condens	Zone 1	Zone 2	Comp. Speed	Comp. Speed	Stop			Conden	Evaporat		Speed	Voltage	Current								
	TestPoint	Flow	Flow	Charge	er fan	Fan	Fan	Zone 1	Zone 2	Valve		Ambie	(on)	ion (or	Zone 1	Zone 2	(on)	(on)	(on)							
16	145	4.5	4.0	50.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	35.6	-29.0	4.9	-17.8	2699	240.2	0.294							
17	141	2.7	5.0	50.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	35.2	-27.2	5.1	-18.1	2456	232.0	6.477							
18	142	3.6	5.0	50.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	35.4	-26.4	5.0	-18.0	2544	237.9	0.298							
19	139	4.5	5.0	50.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	35.7	-25.0	5.0	-18.0	2578	239.4	0.323							
20	144	4.5	5.0	50.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	35.6	-26.8	5.0	-18.1	2628	238.8	0.313							
21	138	5.4	5.0	50.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.5	36.1	-24.2	5.1	-17.7	2610	239.3	0.334							
22	141	2.7	5.0	50.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	35.2	-27.2	5.1	-18.1	2456	232.0	6.477							
23	149	2.7	5.0	60.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.8	37.4	-26.9	5.2	-18.1	1482	239.2	0.291							
24	148	3.6	5.0	60.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	37.7	-26.0	5.1	-18.1	2563	239.6	0.318							
25	147	4.5	5.0	60.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	37.9	-24.6	5.0	-18.0	2593	237.3	0.341							
26	146	5.4	5.0	60.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	38.1	-24.2	4.9	-18.0	2625	239.5	0.347							
27	142	3.6	5.0	50.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.3	35.4	-26.4	5.0	-18.0	2544	237.9	0.298							
28	151	4.5	5.0	60.0	0.0	9.0	0.0	2300.0	3000.0	1,used		22.5	37.5	-24.3	5.0	-17.8	1482	239.5	0.334							
29																										

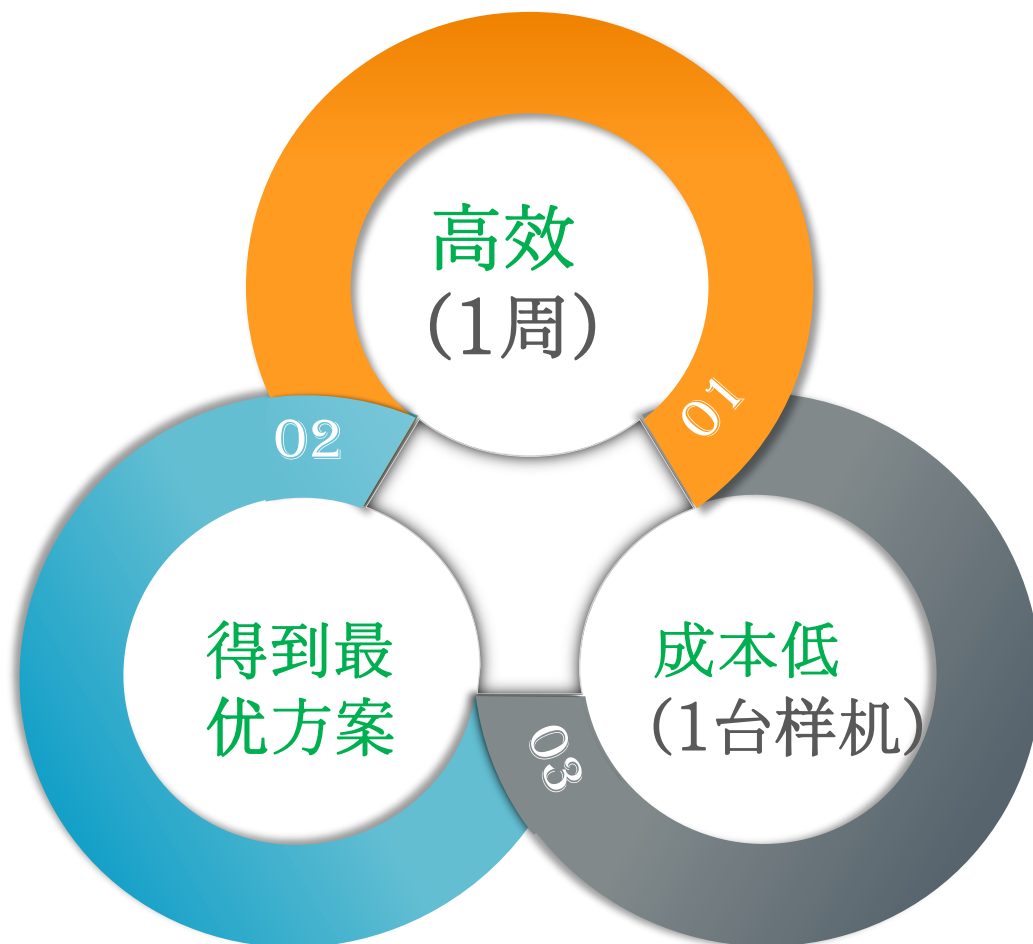
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You can press the up and down button to change the order of the test points in After loading a number of measurement data files an error may throw up (this i

结果分析







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