FLUKE®

Hart Scientific

9938 MET/TEMP II

Chinese Report Add-on User's Guide

Rev. 540501

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Rev. 540501

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1 Introduction

1.1 What is the Chinese Report Add-on for MET/TEMP II?

The Chinese Report Add-on for MET/TEMP II is a custom reporting tool that uses data collected by MET/TEMP II to generate reports for 100Ω PRT and thermocouple probes. The reports meet the verification requirements used by many Chinese companies.

1.2 Requirements

You must install MET/TEMP II version 4.2 or later before attempting to install the Chinese Reports. The Chinese Reports setup will not run if MET/TEMP II v 4.2 or later is not found on your computer.

Info: *You can find the MET/TEMP II version by selecting the About option in the MET/TEMP II Help menu.*

You can only print Chinese reports with data collected by MET/TEMP II version 4.2 or later. Data collected by previous versions of MET/TEMP II do not have all of the information required to print the Chinese Reports.

The Chinese Report Add-on requires Windows® 98/NT4/2000/XP. The Chinese Report Add-on will not install on a computer running Windows® 95.

If you are using a version of Windows® other than Chinese, make sure the Simplified Chinese language option is installed on your computer using the

Regional and Language Options settings in the Control Panel. You may be required to insert your Windows® CD-ROM! Refer to Figure 1.

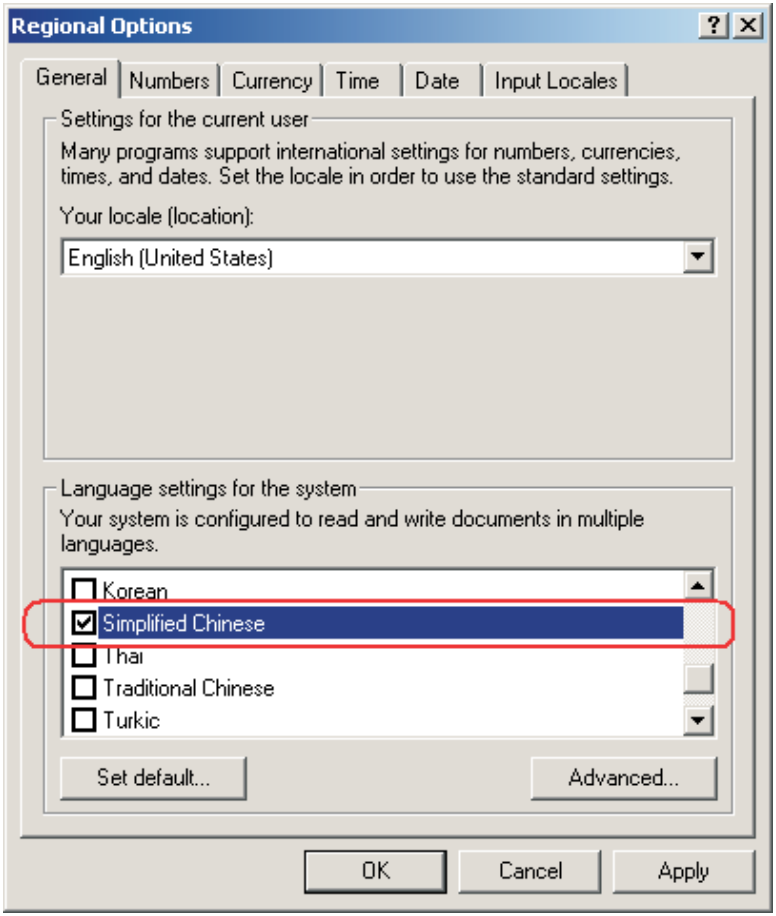


Figure 1 *Regional Options dialog - Simplified Chinese language settings*

1.3 Installation

Important*: When installing the Chinese Report Add-on on a computer that is running Windows® NT/2000/XP, you must log on with Administrator rights.*

Important: *Before installing the Chinese Report Add-on, you must install MET/TEMP II version 4.2 or later.*

1. Insert the Chinese Report Add-on CD-ROM into your CD-ROM drive. The Setup program should run automatically.
2. Follow the on-screen instructions to install the Chinese Report Add-on.
3. The setup program will automatically detect if MET/TEMP II version 4.2 or later is installed on the computer.
4. When the installation is complete, the computer may need to be re-started. If prompted to do so, restart the computer to complete the installation.

Once the installation is complete, proceed to Section 2, Collecting Data Using MET/TEMP II, for information on collecting data using MET/TEMP II to print reports.

2 Collecting Data Using MET/TEMP II

2.1 Setting Up MET/TEMP II

You will need to set up MET/TEMP II to collect the required data for the Chinese Reports. You do this on the Test tab of the MET/TEMP II Defaults dialog (File menu | Defaults option). You must make these changes before starting a test. Refer to Figure 2.

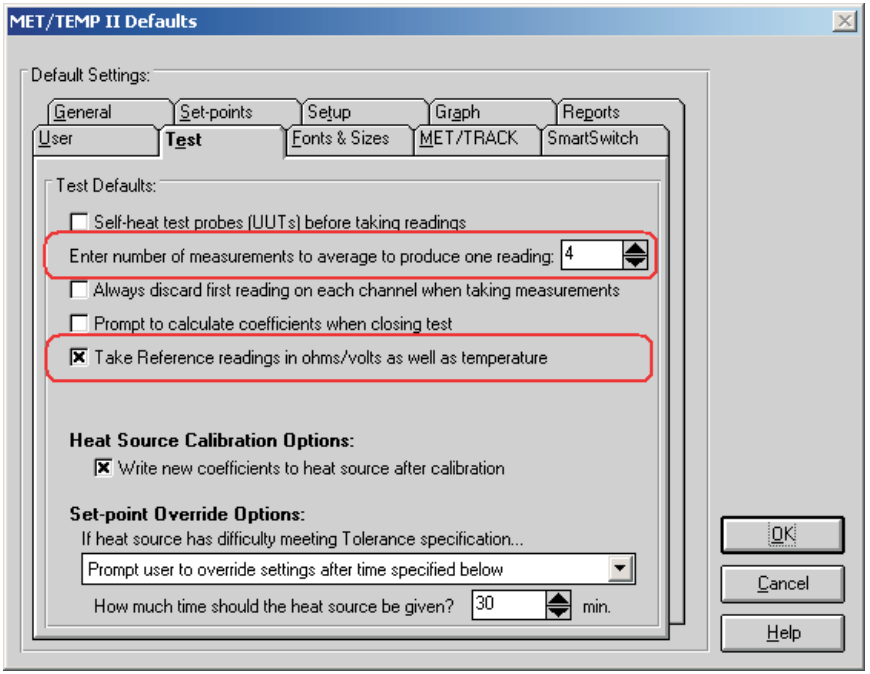


Figure 2 *MET/TEMP II Defaults dialog – Test tab*

By default, MET/TEMP II averages multiple measurements at any given point to produce a single reading. The Chinese Reports print each measurement taken at any given set-point. Enter the number of measurements you want to print on the Chinese Reports in the *Enter number of measurements to average…* box.

Important: *When calibrating platinum probes, you must take data at set-points of 0°C and 100°C in order to use the Chinese Reports. The RTD/PRT report only prints data taken at these two temperatures (refer to Section 3.1, Entering Chinese Report Values, on page 9).*

The Chinese Reports require that the reference probe readings be taken in ohms for a RTD/PRT or voltage (EMF) for a thermocouple. By default, MET/TEMP II only collects reference probe readings in temperature. Checking the *Take Reference readings in ohms/volts as well as temperature* checkbox causes MET/TEMP II to collect the reference probe readings in both temperature and ohms or voltage. You must check this checkbox to use the Chinese Reports.

2.2 Launching the Chinese Report Add-on

After MET/TEMP II completes a test, select the *Close Test* option in the *File* menu to close the test. A Chinese report can then be printed by selecting the *Print Report* option in the *File* menu. This displays the *Print Test Report* dialog.

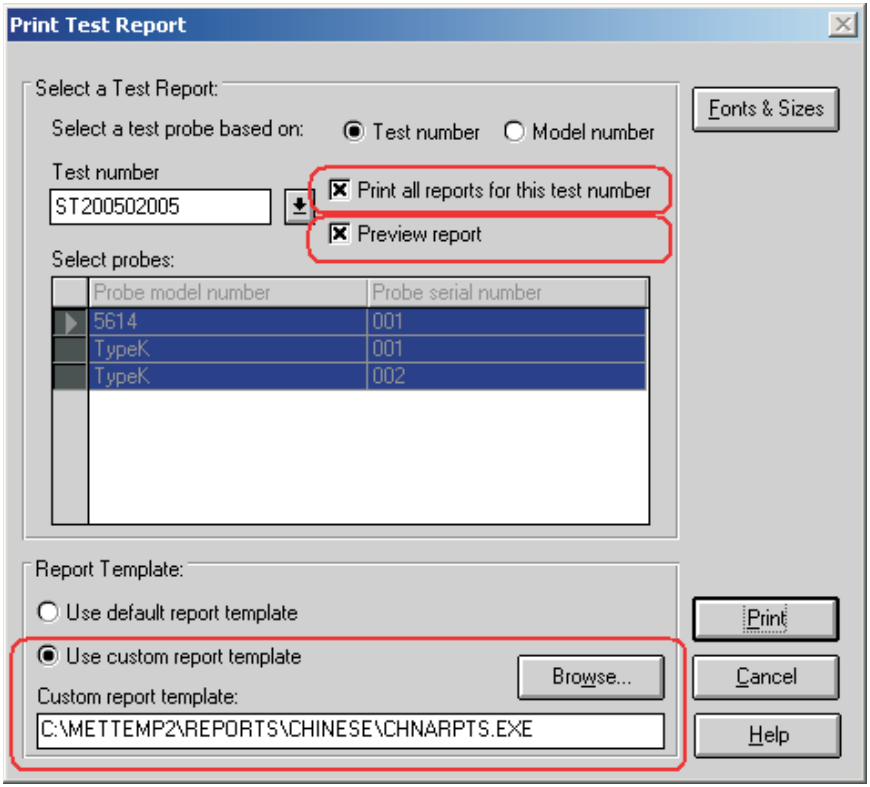


Figure 3 *Print Test Report dialog*

Select the appropriate test number using the *Test number* drop-down list. By default, the last test performed will be selected.

Select the test probe you want to print by selecting it from the list displayed in *Select probes* list.

If you would like to print a Chinese Report for all the probes associated with the test number, check the *Print all reports for this test number* checkbox.

Note: *If the* Print all reports for this test number *checkbox is checked, the Chinese Report Add-on will print all the test probes for that test number. Otherwise, it will print only the selected test probe. If you select multiple test probes in the* Select probes *list, only the report for the first selected probe will be printed.*

If you would like to preview the Chinese report before you print it, check the *Preview report* checkbox.

In the *Report Template* section, select the *Use custom report template* option. The *Custom report template* box and the *Browse* button are enabled. If needed, click the *Browse* button and select the CHNARPTS.EXE file. This file should be located in the \METTEMP2\REPORTS\CHINESE folder.

Click the *Print* button to launch the Chinese Report Add-on.

Select *Cancel* to close the *Print Test Report* dialog when you are done.

3 Printing Chinese Reports

3.1 Entering Chinese Report Values

Not all of the data required for a Chinese report can be collected by MET/TEMP II. This means that you will need to enter some report-specific values before the report can be printed. The first time that you print a Chinese report for a probe, the *Edit Data* dialog will be displayed. Refer to Figure 4 on page 9. If a Chinese Report has already been printed, the *Edit Report* dialog will be displayed.

After entering the values required for the report, select the *OK* button to save this information to the database and print or preview the report. These values are recorded in the database but can be edited later if desired.

Select the *Cancel* button to abort the editing process. Any values you have entered will be lost and the report will not be printed.

Note: *When editing previously entered or saved report-specific values selecting* Cancel *will abort the editing process and any changes you have made to the report-specific values will be lost. The report will be printed or previewed using the previously saved report-specific values. (Refer to Section 3.3, Editing Chinese Report Values, on page 14.)*

3.1.1 Edit Data Dialog – RTD/PRT Probes

You will have to enter information about both the reference probe and the test probe. The model and serial number for each probe is shown on the appropriate tab. This information is not editable.

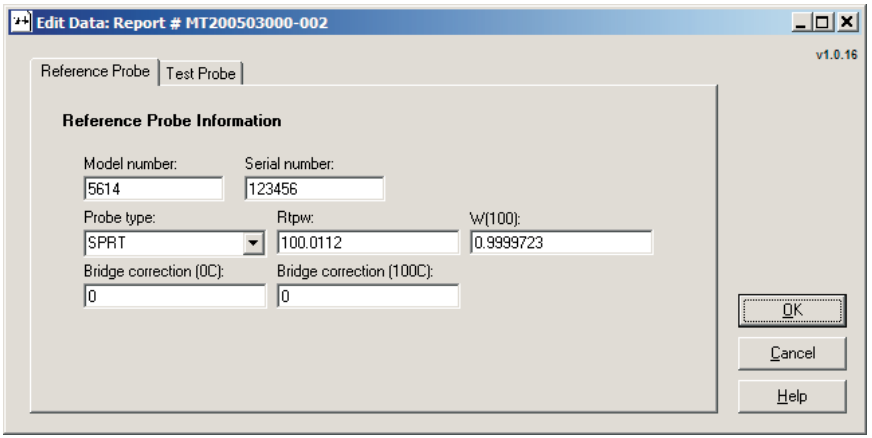


Figure 4 *Edit Data Dialog – Reference Probe tab for RTD/PRT probes*

The following is an explanation of the fields on the *Reference Probe* tab.

- *Model number* and *Serial number:* These fields cannot be edited. They are shown for your reference only.
- *Probe type:* Select the type of reference probe from the *Probe type* drop down list. You may also enter a new reference probe type by typing its name into the field.
- *Rtpw:* This is the resistance of the reference probe at the triple point of water (0.01°C).
- *W(100):* This is the ratio of the reference probe at 100°C.
- *Bridge correction (0C):* This is the correction value at 0°C of the readout device used to read the reference probe.
- *Bridge correction (100C):* This is the correction value at 100°C of the readout device used to read the reference probe.

Note: *If you have already filled in the* Bridge correction (0C) *and the* Bridge correction (100C) *fields on the* Test Probe *tab, those values are also filled in on this tab. You may change them if desired.*

Note: *All fields on this tab must be filled in before you can print the report.*

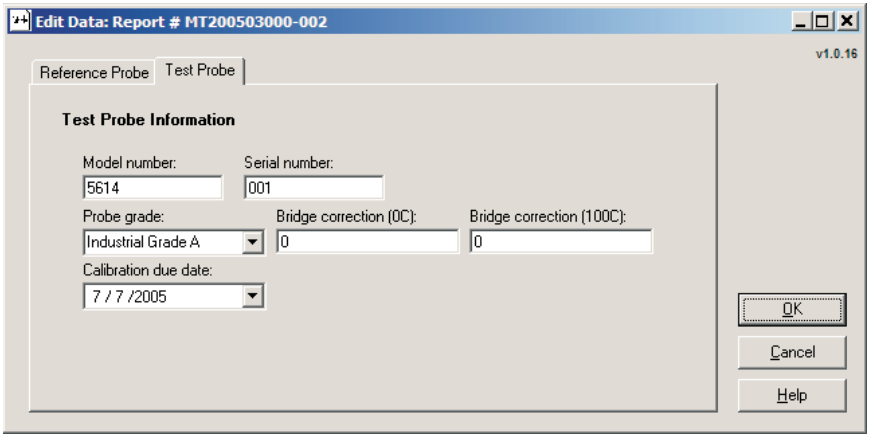


Figure 5 *Edit Data dialog – Test Probe tab for RTD/PRT probes*

The following is an explanation of the fields on the *Test Probe* tab.

- *Model number* and *Serial number:* These fields cannot be edited. They are shown for your reference only.

- *Probe grade:* Select the test probe grade from the *Probe grade* drop down list. You may also enter a new test probe grade by typing its name into the field.
- *Bridge correction (0C):* This is the correction value at 0°C of the readout device used to read the test probe.
- *Bridge correction (100C):* This is the correction value at 100°C of the readout device used to read the test probe.

Note: *If you have already filled in the* Bridge correction (0C) *and the* Bridge correction (100C) *fields on the* Reference Probe *tab, those values are also filled in on this tab. You may change them if desired.*

- *Calibration due date:* This field is filled automatically with data entered into MET/TEMP II. It is the calibration date plus the calibration interval. You may change the calibration due date by selecting the calendar drop down and choosing a new date. You must enter in a future date.

Note: *All fields on this tab must be filled in before you can print the report.*

3.1.2 Edit Data Dialog – Thermocouple Probes

When printing a Chinese report for a thermocouple probe, there is no additional information you need to enter for the reference probe.

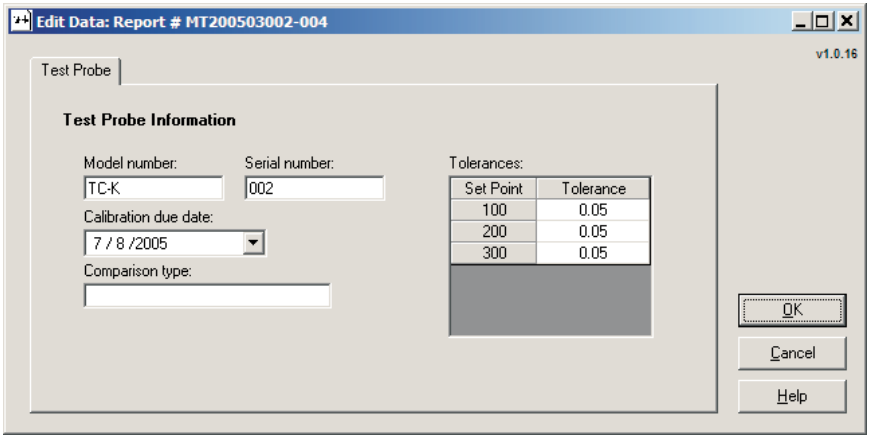


Figure 6 *Edit Data dialog – Test Probe tab for thermocouple probes*

The following is an explanation of the fields on the *Test Probe* tab.

- *Model number* and *Serial number:* These fields cannot be edited. They are shown for your reference only.
- *Calibration due date:* This field is filled automatically with data entered into MET/TEMP II. It is the calibration date plus the calibration interval. You may change the calibration due date by selecting the calendar pull down and choosing a new date. You must enter in a future date.
- *Comparison type:* This field is optional. What you enter here prints on the report.
- *Tolerances:* The values entered into the *Tolerance* column are used to calculate the high and low limits at each set-point. You should enter in a value for each set-point. If you choose to leave a *Tolerance* field empty, a value of 0 will be assigned.

3.2 Previewing and Printing a Chinese Report

If you have chosen to preview the Chinese report by checking the *Preview report* checkbox on the *Print Test Report* dialog in MET/TEMP II (refer to Figure 3 on page 6), the *Report Preview* dialog (refer to Figure 7 on page 13) will be displayed and the Chinese report for this test probe will be displayed.

The controls on the *Report Preview* dialog allow you to

- Send the report to a printer
- Refresh the report's data
- Zoom in or out on the report's preview
- Move forward or backward through the report's pages

You exit the *Report Preview* dialog by clicking the  in the upper right hand corner of the dialog.

Note: *If you have chosen not to preview the Chinese report, the report is sent directly to the printer. The Windows®* Print Setup *dialog appears and you can select a printer and other printing options.*

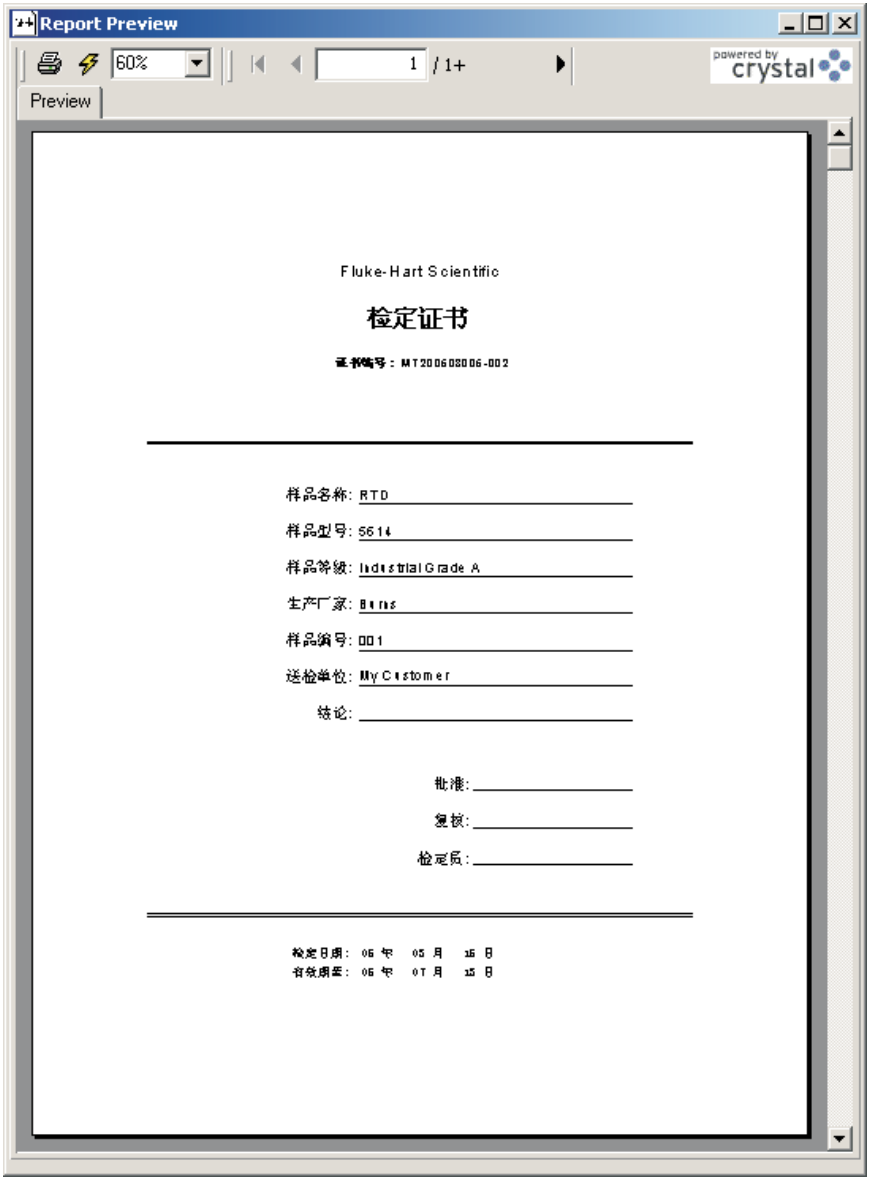


Figure 7 *Report Preview dialog*

3.3 Editing Chinese Report Values

If a Chinese report has already been printed for a set of data for a test probe, the *Edit Report* dialog is displayed.

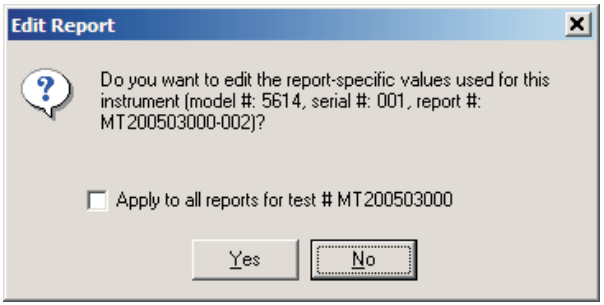


Figure 8 *Edit* report *dialog*

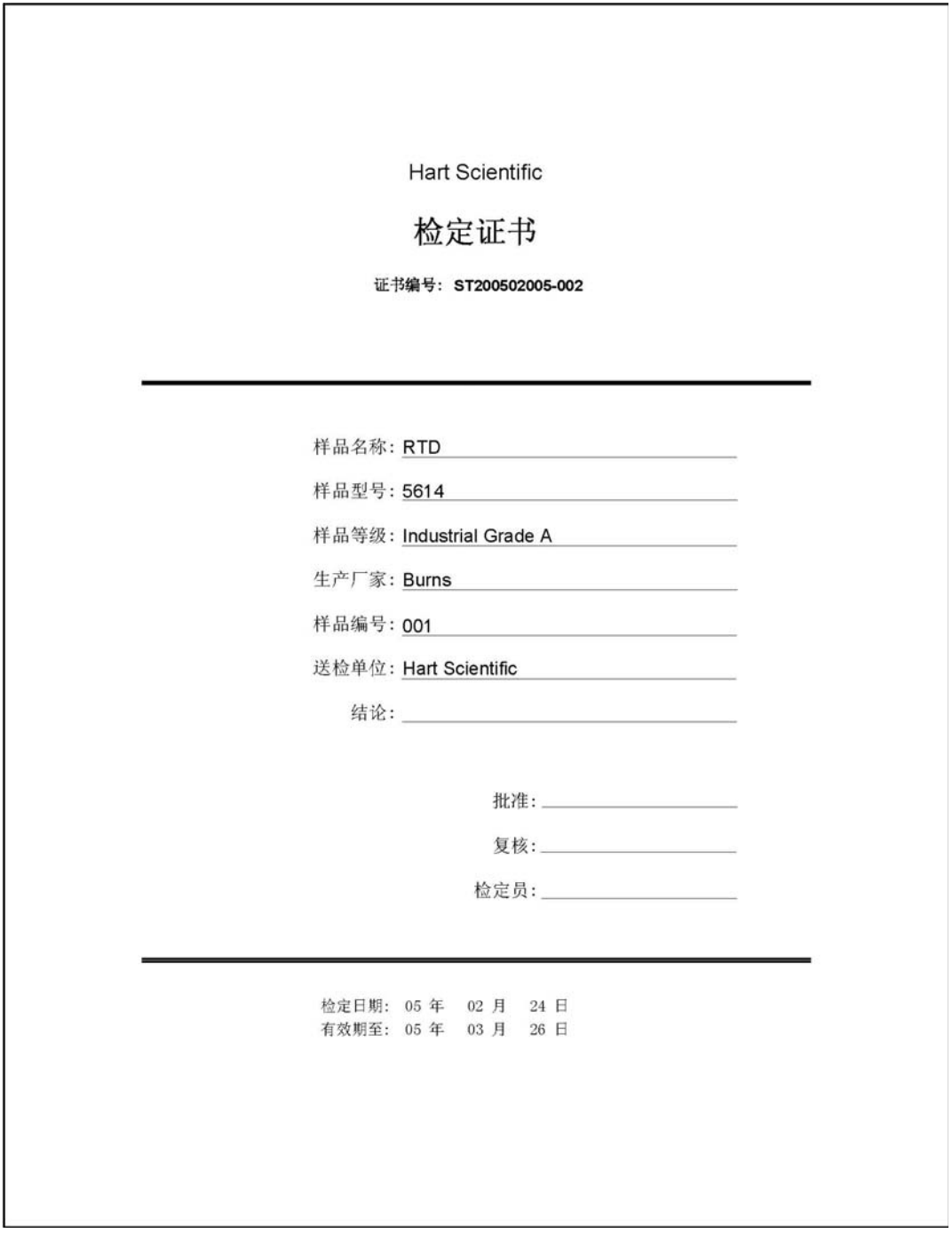
Select the *Yes* button to edit the report-specific values, or the *No* button to print or preview the report.

If you have chosen to print all the reports for the selected test number by checking the *Print all reports for this test number* checkbox on the *Print Test Report* dialog in MET/TEMP II (refer to Section 2.2, Launching the Chinese Report Add-on, on page 6), the *Edit Report* dialog also allows you to choose to either edit or not edit the values for every other test probe associated with the selected test number. By checking the *Apply to all reports for test #…* checkbox, you will not be asked this question again and your decision will be used on all subsequent test probes.

If you choose to edit the values, the *Edit Data* dialog is displayed as when you first printed the report for this test probe (refer to Section 3.3, Entering Chinese Report Values on page 9). All the fields are filled in with the values you entered previously and you may change them as needed.

3.4 Sample Reports

The following illustrations show sample reports for RTD/PRT and thermocouple probes.


Hart Scientific

检定证书

证书编号：ST200502005-002

样品名称：RTD

样品型号：5614

样品等级：Industrial Grade A

生产厂家：Burns

样品编号：001

送检单位：Hart Scientific

结论：

批准：

复核：

检定员：

检定日期：05 年 02 月 24 日
有效期至：05 年 03 月 26 日

Figure 9 *RTD/PRT report – front page*

5614 工业铂电阻检定记录单

标准仪器		被检样品	
标准热偶测量仪器:	1529(test)	送检单位:	Hart Scientific
仪器类型:	SPRT	样品名称:	RTD
仪器型号:	5614	样品型号:	5614
仪器编号:	testref	样品编号:	001
仪器名称:	Probe, Secondary Standard	生产厂家:	Burns
环境温度:	22.0C	样品等级:	Industrial Grade A
环境湿度:	20 %RH	仪器状态 检定前:	
检定地点:	Hart Scientific	仪器状态 检定后:	
R*(tp):	100.00124 Ω	证书编号:	ST200502005-002
W(100C):	1.23560		

测量值		标准		被检样品	
		@ 0°C	@ 100°C	@ 0°C	@ 100°C
读数 (Ω)	1	99.9702	139.2693	100.1182	139.1005
	2	99.9705	139.2701	100.1198	139.1023
	3	99.9707	139.2704	100.1200	139.1049
	4	99.9713	139.2703	100.1202	139.1069
	5	99.9707	139.2711	100.1208	139.1085
	6	99.9716	139.2722	100.1213	139.1109
	7	99.9709	139.2723	100.1214	139.1129
	8	99.9715	139.2728	100.1221	139.1141
平均值 (Ω):		99.9709	139.2711	100.1205	139.1076
电桥修正 (Ω):		0.00200	0.00220	0.00200	0.00220
修正后的平均值 (Ω):		99.9729	139.2733	100.1225	139.1098
修正后的电阻值 (Ω):				100.1463	123.7231
修正后的温度调整 (C):		-0.0610	40.5983	0.3742	40.5983
α:				0.0023542	
Δα:				-0.0014968	
绝缘电阻 (MΩ):				128.00	

结论:

检定员: _____ 复核: _____ 检定日期: 05 年 02 月 24 日

Figure 10 *RTD/PRT report – data page(s)*

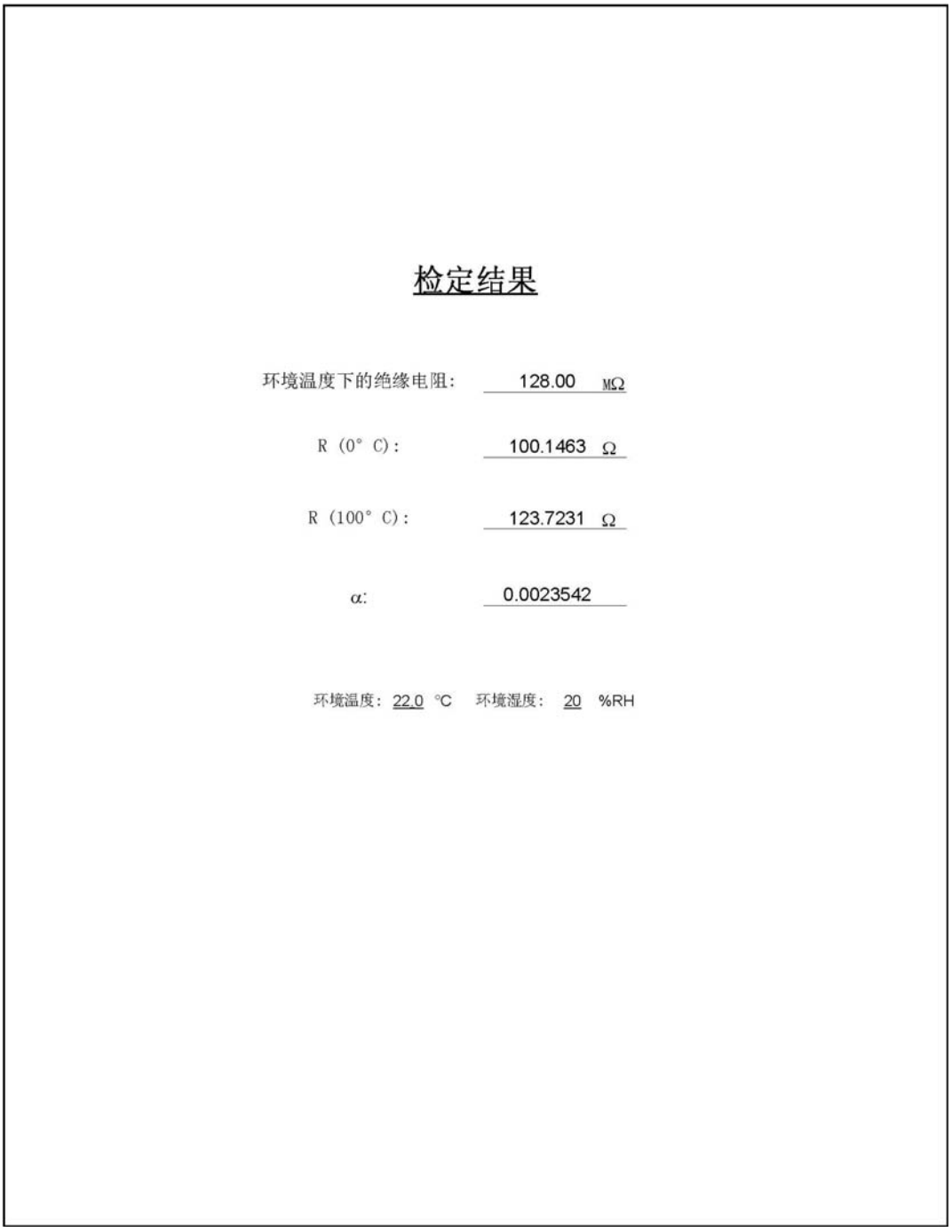
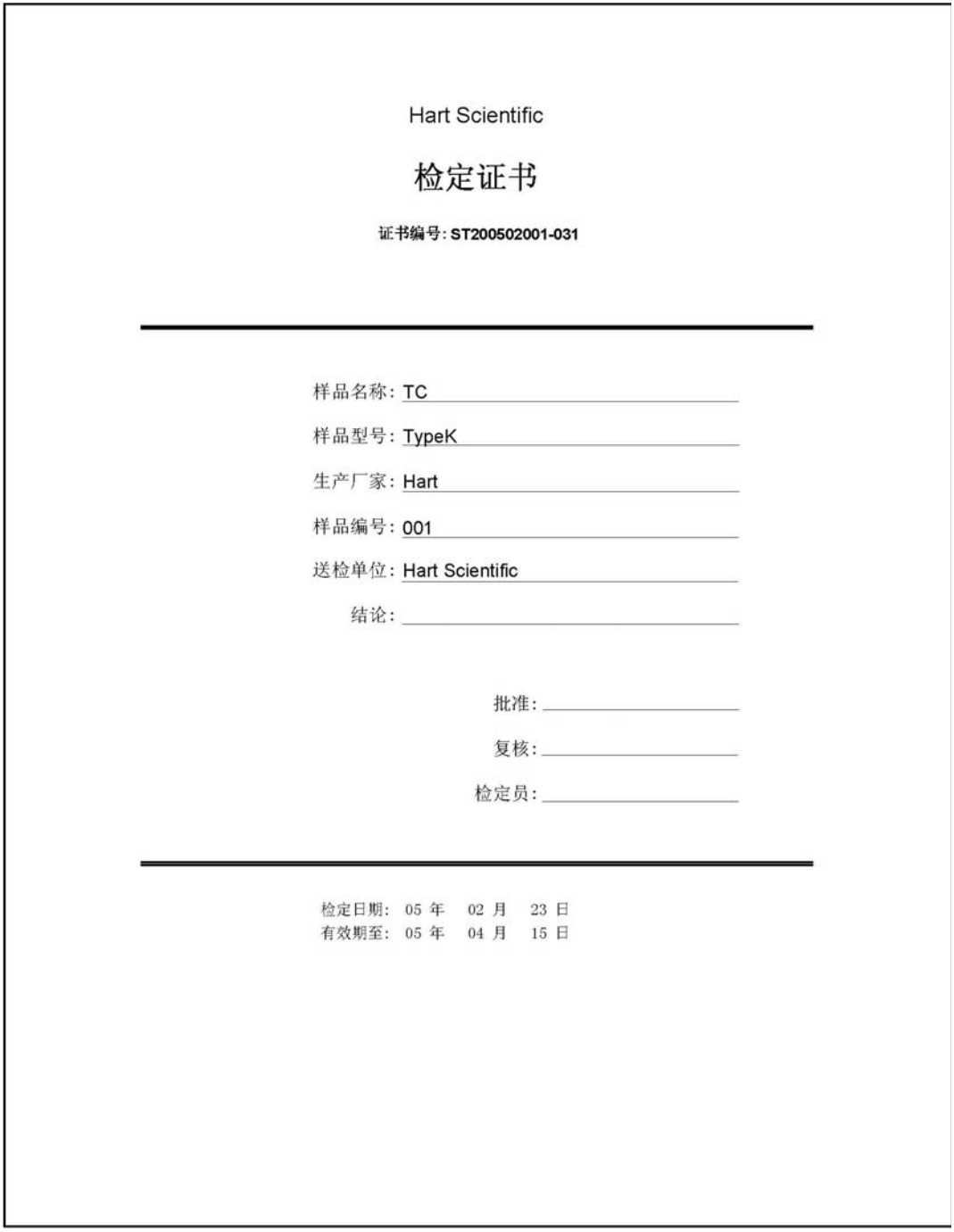


Figure 11 *RTD/PRT report – summary page*



Hart Scientific

检定证书

证书编号: ST200502001-031

样品名称: TC

样品型号: TypeK

生产厂家: Hart

样品编号: 001

送检单位: Hart Scientific

结论:

批准:

复核:

检定员:

检定日期: 05 年 02 月 23 日
有效期至: 05 年 04 月 15 日

Figure 12 *Thermocouple report – front page*

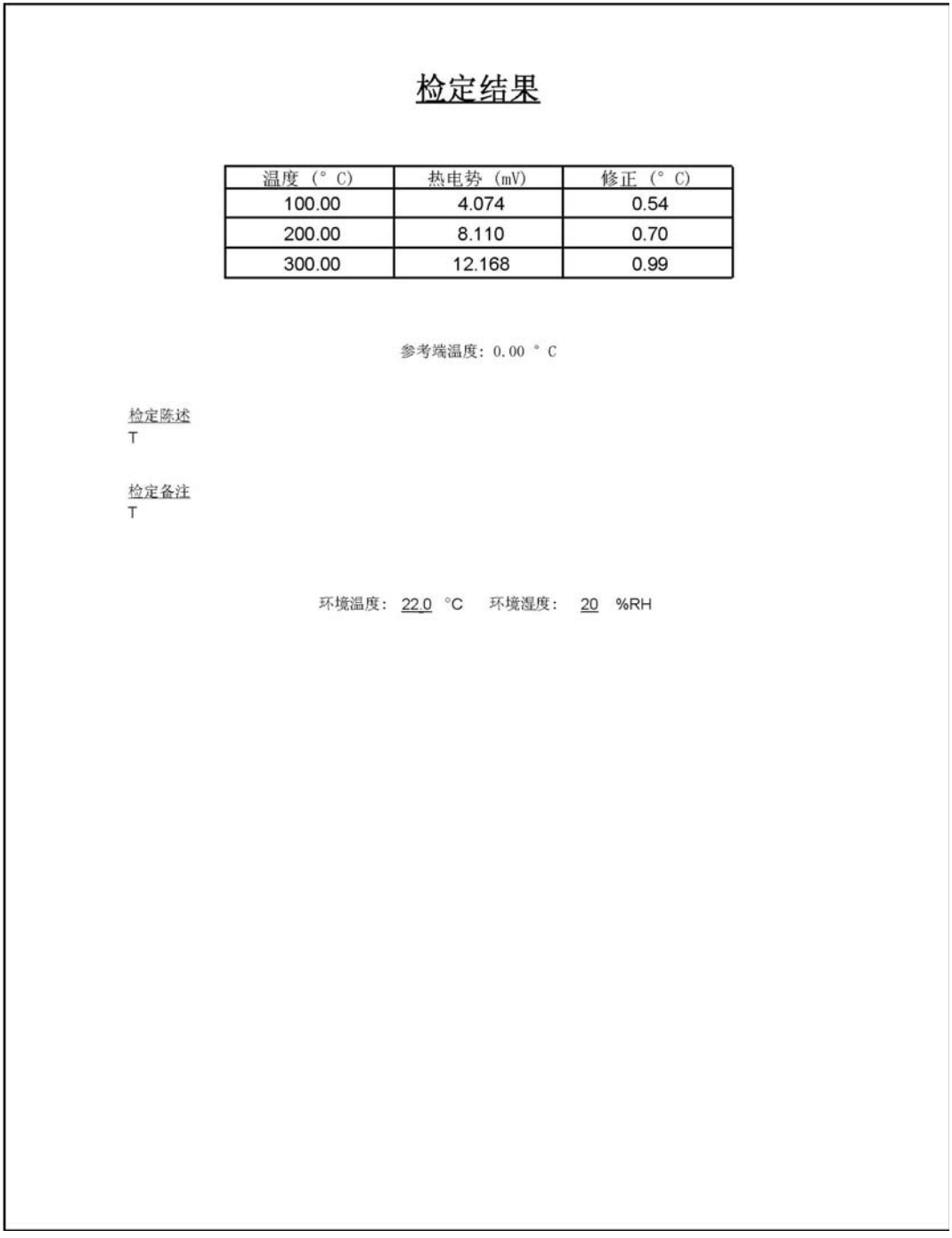
热电偶检定记录

温度设定点 (° C)	标准热电偶热电势 (mV)	标准热偶测量仪器: 1560(test);2565(test) 标准热偶编号: Type K Thermocouple 标准热偶型号: TypeK 标准热偶类型: 002			送检单位: Hart Scientific 被检热偶类型: TC 被检热偶型号: TypeK 被检热偶编号: 001	
		读数	标准	被检		
100.00	4.09623	1	2.99120	2.96890		
		2	2.99130	2.96870		
		3	2.99140	2.96850		
		4	2.99180	2.96900		
		5	2.99100	2.96900		
		平均	2.99134	2.96882	检定温度=99.9106 ° C	炉温变化=0.00288 ° C
参考端温度(C)	27.5200	补偿电势(mV)	1.10246	1.10246	S(标准)=41.369 uV/° C	S(被检)=41.369 uV/° C
与检定点之差(uV)=(标准热电偶热电势(mV)-(平均+补偿电势(mV))*S(被检)/S(标)			0.00249	0.00249	e(被检)=4.096 mV	允许误差=± 0.065 mV
实际值=平均+补偿+允许误差				4.07380	允许下限=4.031 mV	允许上限=4.161 mV
误差(mV)= 实际值-e(被检)				-0.02243		
误差(°C)=误差(uV)/S(被检)				-0.54228		
200.00	8.13847	1	7.01550	6.98700		
		2	7.01530	6.98750		
		3	7.01530	6.98780		
		4	7.01570	6.98740		
		5	7.01580	6.98770		
		平均	7.01552	6.98748	检定温度=199.5028 ° C	炉温变化=0.00614 ° C
参考端温度(C)	27.4900	补偿电势(mV)	1.10124	1.10124	S(标准)=39.965 uV/° C	S(被检)=39.965 uV/° C
与检定点之差(uV)=(标准热电偶热电势(mV)-(平均+补偿电势(mV))*S(被检)/S(标)			0.02166	0.02166	e(被检)=8.138 mV	允许误差=± 0.102 mV
实际值=平均+补偿+允许误差				8.11042	允许下限=8.036 mV	允许上限=8.240 mV
误差(mV)= 实际值-e(被检)				-0.02805		
误差(°C)=误差(uV)/S(被检)				-0.70186		
300.00	12.20857	1	11.10750	11.06650		
		2	11.10930	11.06770		
		3	11.10950	11.06880		
		4	11.11040	11.06920		
		5	11.10950	11.06880		
		平均	11.10924	11.06820	检定温度=299.9204 ° C	炉温变化=0.03040 ° C
参考端温度(C)	27.2600	补偿电势(mV)	1.09190	1.09190	S(标准)=41.446 uV/° C	S(被检)=41.446 uV/° C
与检定点之差(uV)=(标准热电偶热电势(mV)-(平均+补偿电势(mV))*S(被检)/S(标)			0.00739	0.00739	e(被检)=12.209 mV	允许误差=± 0.131 mV
实际值=平均+补偿+允许误差				12.16759	允许下限=12.078 mV	允许上限=12.340 mV
误差(mV)= 实际值-e(被检)				-0.04098		
误差(°C)=误差(uV)/S(被检)				-0.98884		

结论: Test

检定员: 复核: 检定日期: 05 年 02 月 23 日

Figure 13 *Thermocouple report – data page(s)*



检定结果

温度 (° C)	热电势 (mV)	修正 (° C)
100.00	4.074	0.54
200.00	8.110	0.70
300.00	12.168	0.99

参考端温度：0.00 ° C

检定陈述
T

检定备注
T

环境温度： 22.0 °C 环境湿度： 20 %RH

Figure 14 *Thermocouple report – summary page*