Calibration Report: Pyrometer (Infrared Radiation Thermometer) S/N: 1414

1 September 2010

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Summary

Calibration date: 1 Sep 2010 Next Calibration date: 1 Sep 2011

A collection, analysis and calibration of data from a Heitronics Pyrometer (Infrared Radiation Thermometer or IRT), S/N: 1414, has been completed. The calibration was performed by Wintronics, Inc. These data were collected by Wintronics on 1 September 2010.

Model: KT19.85
Serial Number: 1414

The test data presented in table format is displayed on the next page. The deviation in degrees Celsius was within tolerance “as received” and “outgoing”. Since this IRT will be used as a sea surface temperature measurement device, the numbers of most value are between 0-40 degrees C (273.15-313.15 Kelvin). It is determined an offset(y-int) of +0.2 degrees C (0.20 Kelvin) will be applied to instrument data. Wintronics, Inc. quality program is registered to ISO 9001:2000. Traceability is achieved through calibrations to NIST (National Institute of Standards and Technology) or compared to consensus standards.

The following pages provide more detail into the calibration process and results.

Application: Standard Campbell datalogger program for KT19.85 pyrometer.

Wintronics, Inc.
50 Division Avenue
Millington, NJ 07946
Phone: (908) 647-0144 Fax: (908) 647-8379

Certificate of Calibration

ANSI/NCSL Z540-1-1994

Certificate No.: J0086044

Manufacturer: **Heitronics**	Description: **Infrared Thermometer**
Model No: **KT19.85**	Serial No: **1414**

Customer: SSAI
Customer PO: PO-0000271
Customer Asset No:

Temperature (C): 23
Humidity (%): 38
Procedure: W60985

Technician: PLW
Date Cal: 9/1/2010
Date Due: 9/1/2011

The manufacturer's specifications of the above instrument have been confirmed by comparison to standards which are regularly calibrated using accepted values of natural physical constants, ratio type self-calibrating techniques, comparison to standards which are traceable to NIST, or compared to consensus standards. Wintronics' calibration procedures comply with ANSI/NCSL Z540-1 & MIL-STD-45662A. Wintronics' Quality program is registered to ISO9001:2000.

As received condition: In Tolerance
As shipped condition: In Tolerance
Type of Calibration: Normal

Calibration Standards

Manufacturer	Model	Description	Asset #	Calibration Date	Date Due	Cert. No.
Hart Scientific	5610-9	Thermistor Probe	W195	4/13/2010	4/13/2011	J0084324
Hart Scientific	2563	Module, Thermistor	W143	8/18/2010	8/18/2011	J0086252

Peter Winter
President

Wintronics, Inc. Calibration Report

Wintronics, Inc., P.O. Box 337, Millington, NJ 07946 (908) 647-0144

Job: [illegible]

Company: SSAI	Mfg: Heitronics	Model: KT19.85(-II)	Date: 09 [illegible]
S/N: 1414	Cust. Asset #		Tech: PLW

Function or Range	Nominal Value or Cal Range K	As Received K	Outgoing K	Tolerance	TUR
Degrees C	0.0°C	+0.6	+0.2	±0.71°C	
	10.0°C	10.6	10.3	±0.64°C	
	20.0°C	20.4	20.4	±0.57°C	
	30.0°C	30.5	30.5	±0.50°C	
	40.0°C	40.1	40.1	±0.57°C	
	50.0°C	50.0	50.2	±0.64°C	
	60.0°C 333.15	60.0	60.3	±0.71°C	
	70.0°C	70.2	70.5	±0.78°C	
	80.0°C	80.1	80.6	±0.85°C	
	90.0°C	90.3	90.8	±0.92°C	
	100.0°C	100.3	100.8	±0.99°C	
	Cal Factor	1890	1910	No Tolerance	

Additional Comments: Any Test Uncertainty Ratio (TUR) that is less than 4:1 will appear under the "TUR" heading. If the TUR meets or exceeds 4:1, the field is left blank.

Standards listed used to monitor temperature of Mester ME20.03 Blackbody Calibration Source.