SOUTHWEST RESEARCH INSTITUTE®

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Institute Quality Systems
Institute Calibration Laboratory
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ACCREDITED
Certificate #
0972-01

Certificate of Calibration

Submitted By: DIV20
Address: B57
Contact: DON BANNON
Manufacturer Model: OMEGA Type K
Description: THERMOCOUPLE
Serial No: 11118
Asset No: 011118
Procedure: THERMOCOUPLE GENERAL, JAN/03

Work Order: 303065175
Date Issued: Jul 26, 2005
Calibration Date: Jul 26, 2005
***Calibration Due:** Jan 26, 2006
Calibration Location: Bldg. 64
Environment: Temp. 70.0°F Hum. 50 %RH
****Data Type:** FOUND-LEFT

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 1999, ANSI/NCSL Z540-1-1994 and relevant requirements of the ISO 9000-2000 standard. This certificate shall not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. This certificate shall not be used to claim product endorsement by Southwest Research Institute, American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government. Results of this calibration relate only to the instrument described above at the time of calibration and does not imply any long term stability of the instrument.

*Determined by the customer, does not imply the instrument will remain within tolerance as any number of factors may cause an out-of-tolerance condition before this date. **Found/Left = adjustment and/or repair was not required, As Left = adjusted and/or repaired was required. The client has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance. See Remarks or attached Measurement Report with the same Work Order number for data.

Reported uncertainty calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM) and represents an expanded uncertainty with a coverage factor of k=2 to approximate a 95% confidence level.

Remarks: Cal'd at 900, 1000, and 1100 Deg C

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
010329	7949003	FLUKE	525A	TEMPERATURE/PRESSURE	Sep 24, 05
010813	9287	HART SCIENTIFIC	5650	THERMOCOUPLE	Dec 06, 05
010814	A44625	HART SCIENTIFIC	1529	THERMOCOUPLE THERMOMETER	Apr 20, 06

Approved by: Walt Hill
Manager

Measurements by: Joe Greagrey
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303065175	Mfr:	OMEGA	Technician:	JRG
Asset No:	011118	Model:	TYPE K		
Serial No:	11118	Type:	THERMOCOUPLE	Cal Date:	26-Jul-05
Remarks:					

Limits are based on ASTM E230-02

Function/Range	Test Point	TI Reading	Difference	+/-Limits	+/-Uncertainty	Found/Left
TEMPERATURE	°C	°C	°C	°C	°C	Result
	898.534	898.85	-0.32	6.7	2	Pass
	997.814	997.38	0.43	7.5	2	Pass
	1098.080	1096.07	2.01	8.2	2	Pass

END OF REPORT