



# SOUTHWEST RESEARCH INSTITUTE®

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

## Certificate of Calibration

**Cost Center:** DIV20

**Mail Stop:** B51

**Customer:** DON BANNON

**Manufacturer/Model:** FLUKE / Type K

**Description:** THERMOCOUPLE

**Serial Number:** 10639

**Asset Number:** 010639

**Procedure:** TEMPERATURE PROBES - 5 JUN 06

**Work Order:** 303084863

**Date Issued:** 12-Dec-2008

**Date Calibrated:** 12-Dec-2008

**\*Date Due :** 12-Dec-2009

**\*\*Results:** FOUND-LEFT

**Temperature:** 74°F

**Humidity:** 40 %

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, 2005, 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 customer 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** Calibrated at ambient only

### Standards Used

<u>Asset #</u>	<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Cal Date</u>	<u>Due Date</u>
009414	HART SCIENTIFIC	1502A	TEMPERATURE READOUT	14-Oct-2008	14-Apr-2009
010692	HART SCIENTIFIC	5618	RTD	14-Oct-2008	14-Apr-2009
010814	HART SCIENTIFIC	1529	THERMOCOUPLE THERMOMETER	17-Nov-2008	17-Nov-2009

Reviewed By: (J) srk ( ) mar ( ) wgh

Laboratory Quality Manager

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Calibrated By: Bob Trollinger

Metrology Technician

Southwest Research Institute  
 Calibration Laboratory  
 Measurement Report

Work Order:	303084863	Mfr:	Fluke	Technician:	blt
Asset No:	010639	Model:	Type K		
Serial No:	10639	Type:	Thermocouple	Cal Date:	12-Dec-08
Remarks:	Limits taken from ASTM E230-02 and are based on brand new unused thermocouples.				

Function/Range	Test Point	TI Read	Difference	+/-Limit	+/-Uncertainty	Found/Left
Temperature	°C	°C	°C	°C	°C	Result
	78.627	78.30	0.33	2.2	0.23	Pass

END OF REPORT