SOUTHWEST RESEARCH INSTITUTE®

6220 Culebra Road, P.O. Drawer 28510
Institute Quality Systems
Institute Calibration Laboratory
Phone: 210-522-5215 Fax 210-522-4834

ACCREDITED
Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Cost Center / Customer: DIV20 / DON BANNON
Mail Stop: B51
Manufacturer/Model: STARRETT / 734M
Description: MICROMETER
Serial Number: 02437171
Asset Number: 010084
Procedure: MICROMETERS - 28 SEP 09

Work Order: 303092906
Date Issued: 22-Feb-2010
Date Calibrated: 22-Feb-2010
*** Date Due :** 22-Feb-2011
**** Results:** FOUND-LEFT
Temperature: 68.0 °F
Humidity: 39 %RH
Barometer: N/A

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. **Data type found in this certificate or attached measurement report must be interpreted as: Found-left - adjustment and/or repair was not performed, As-found - data is before unit is adjusted and/or repaired, As-left - data is after adjusted and/or repaired was performed. The customer has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance.

Measurement uncertainty calculated in accordance with the method described in the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM), for a confidence level of approximately 95 percent using a coverage factor of $k=2$.

Remarks: None

Standards Used

Asset #	Manufacturer	Model	Description	Cal Date	Due Date
006179	STARRETT	OFPS2	OPTICAL PARALLEL SET	24-Jul-2007	24-Jul-2010
011025	STARRETT	WEBBER 10	GAGE BLOCK WORKING SET	26-Aug-2009	26-Aug-2010

FOR Walt Hill
Laboratory Manager

Joe Greagrey
Metrology Technician

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Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303092906	Mfr:	Starrett	Tech:	JRG
Asset No:	010084	Model:	734M	Type Data:	Found-left
Serial No:	02437171	Type:	Micrometer 0-25.4 /.001mm	Cal Date:	22-Feb-10
Remarks:					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Result	%Limit
Flatness							
Anvil						Pass	n/a
Spindle						Pass	n/a
	mm	mm	mm	mm	mm		
Linearity	5.334	5.335	0.001	0.003	0.0011	Pass	33%
	10.668	10.667	-0.001	0.003	0.0011	Pass	33%
	15.367	15.368	0.001	0.003	0.0011	Pass	33%
	20.701	20.702	0.001	0.003	0.0011	Pass	33%
	25.400	25.400	0.000	0.003	0.0011	Pass	0%

END OF REPORT