

PROTOCOLO DE ENSAYO Y CERTIFICACION N°: 15936
INSTRUMENTOS

FECHA: 25/10/2021

CLIENTE: OIL ADDPER SERVICE S.R.L.

ORDEN DE COMPRA N°: Verbal

OT N°: 1636

PRODUCTO: Termómetro 0 -250°C - Marca: CENI - Caja 100 mm - Internos de Inox.

UBICACION: H-18

TAG:

CANTIDAD: 1

SERIE: CL 1,0

ENSAYO E INSPECCION FINAL

CALIBRACION

METODO DE CALIBRACION: SEGÚN PROCEDIMIENTO INTERNO

TEMPERATURA: 0 - 250°C

PATRON: Termometro digital fluke 2337-12-16

EQUIPOS UTILIZADOS: BLOQUE SECO DE TEMPERATURA

CODIGO INTERNO: I - 003

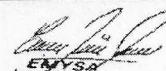
DESCRIPCION DEL MANTENIMIENTO: Calibración

FECHA SUGERIDA DE RECALIBRACION: ☒ 25/10/2022

RESULTADO FINAL: APROBADO

APROBO: Fernández, Juan Carlos

ASEG. DE LA CALIDAD


EMYSA
Juan C. Fernández
OPERACIONES

Certificate of Calibration Fluke Park Laboratory

Description:	Field Metrology Well	Certificate Number:	B8131011
Manufacturer:	Fluke	Date of Calibration:	19 Jan 2018
Model:	9142	Date Due:	
Serial Number:	B81341	Temperature:	20.0 to 26.0 °C
Status:	As-Found: New As-Left: In Tolerance	Relative Humidity:	15 to 70 %RH
Calibration:	Full	Pressure:	95 to 103 kPa
Procedure:	HCT301 - 1	Issue Date:	31 Jan 2018
Customer:	VIDITEC SA BUENOS AIRES, AR		
PO Number:	IRV NO 1727		

This calibration is traceable to the SI through recognized national metrological institutes (NIST, PTB, NPL, NIM, NRC, etc.) radiometric techniques, or natural physical constants and is in compliance with ISO/IEC 17025:2005 and ANSI/NCSL Z540.1. The calibration has been completed in accordance with the Fluke Corporate Quality System document QSD 111.0. Calibration certificates without identification of the authorizing person are not valid. This certificate applies to only the item identified and shall not be reproduced other than in full, without the specific written approval by Fluke Corporation.

This calibration certificate may contain data that is not covered by the Scope of Accreditation. The unaccredited test points, where applicable, are indicated by an asterisk (*), or confined to clearly marked sections. This certificate shall not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Measurement uncertainties at the time of test are given where applicable. They are calculated in accordance with the method described in the ISO Guide to the Expression of Uncertainty in Measurement. The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95 %.

Comments:



Approved Signatory

Amacy Rico
Authorized Signatory

Standards Used

Description	Serial Number	Due-Date
1560 Thermometer, "Black Stack" Base Unit	B31609	NCR
1560 Thermometer, "Black Stack" Base Unit	B4C815	NCR
2502-II Precision Digital Thermometer	85201	13-May-2018
2562-H Precision Digital Thermometer	B14111	17-Dec-2018
5628 Platinum Resistance Thermometer	1390	20-Nov-2018
5628 Platinum Resistance Thermometer	2842	07-Nov-2018
Field Metrology Well Test Station	13	NCR

Quality Manuals

This calibration has been completed in accordance with:

The Fluke Corporate Quality Manual, QSD 111.00, Revision 121, Dated July, 2017 and/or

The Fluke 17025 Quality Manual, QSD 111.41, Revision 005, Dated Sept. 2014

The instrument described herein was calibrated by direct measurement of generated temperatures using the pertinent reference standards listed in the "Test Equipment" section of this report. The calibration was performed using test insert Model 914x-INST as described in the user manual. This insert is similar to insert "C" but is designed to accommodate the test PRTs and aid in the performance of the axial gradient calibration. The calibration data, internal calibration constants, and uncertainties are shown on the following page(s) of this report. The temperature accuracy test is self-explanatory. The axial differential temperature test is more complex. Due to the nature of the axial differential temperature characteristic and the influence of the test equipment on the test result, this test utilizes tolerances which do not precisely match the instrument specification. However, the unique tolerances used are intended to determine the axial differential temperature tolerance status based on the published specifications. The temperature observations were performed in both increasing and decreasing directions.

The calibration uncertainties are shown at a coverage factor of 2 ($k=2$). All known significant sources of uncertainty have been considered. Any limitations or remarks pertaining to this instrument and/or calibration are shown below. Additionally, out of tolerance indications, if any, are identified along with the corresponding data on the data pages of this report. Calibration uncertainties have been taken into account in the determination of tolerance status using risk analysis algorithms. When using the instrument in a calibration process, it is recommended that the instrument specifications be used as the contribution of the instrument rather than the calibration uncertainties. The instrument tolerances are shown on the report at a confidence interval of 95%.

The sections labeled Temperature Stability, Axial Differential Temperature and/or Maximum Hysteresis contain data that are not covered by the NVLAP Scope of Accreditation.

Certificate of Calibration

Model: 9142

Serial No.: B81341

Certificate No: B8131011

As Found Data

No As Found Data Required

As Left Data

Data ID: B8018131702957

Calibration Constants

TEMP 1	-0.165
TEMP 2	-0.315
TEMP 3	-0.513
GRAD 1	-0.020
GRAD 2	0.002
GRAD 3	0.014

Temperature Accuracy

Set-point °C	Actual °C	Error °C	Tolerance °C	Uncertainty	Pass/Fail
-25.000	-24.985	0.015	±0.200	±0.025	P
0.000	-0.018	-0.018	±0.200	±0.025	P
50.000	49.994	-0.006	±0.200	±0.025	P
100.000	100.016	0.016	±0.200	±0.030	P
150.000	149.994	-0.006	±0.200	±0.030	P

Temperature Stability

Control Constants	Set-point °C	Observed °C (2 Sigma)	Tolerance °C	Uncertainty	Pass/Fail
TEMP PB 2.0	-25.000	0.002	±0.010	±0.0040	P
TEMP INT 30.0	150.000	0.002	±0.010	±0.0055	P
TEMP DER 1.0					

Axial Differential Temperature

Set-point °C	Target °C	Actual °C	Error °C	Tolerance °C	Uncertainty	Pass/Fail
-25.000	0.000	0.001	0.001	±0.040	±0.020	P
50.000	0.000	-0.003	-0.003	±0.040	±0.020	P
100.000	0.010	0.013	0.003	±0.040	±0.025	P
150.000	0.010	0.018	0.008	±0.040	±0.030	P