Trescal CALIBRATION | SOLUTIONS TO | IMPROVE | YOUR | PERFORMANCE

Certified firm ISO 9001:2008 VCA*/ LSC*

CONSTAT DE VERIFICATION

1805-15900

Renseignements client

Client	: Plastic omnium auto inergy services
Contact	:
Adresse	: 165 Rue des Hureaux 60280 venette France
Référence client	:
Référence Trescal	: 201811451/7

Renseignements sur l'instrument

Marque / type	: AMETEK / DS/50/G
Description	: Displacement transducer
Etendue de mesure	: 0 .. 50 mm
N° de série	: MSD0507SZ03AJ20-09 / 573AJ20509
N° d'identification	: CSCR0486
Erreur maximum tolérée	: 0,1 mm

Date de vérification : 14 June 2018

Méthode d'étalonnage

P1-02-G.005 Calibration of linear gauges
The calibration of displacement transducers such as dial gauges, levers, etc. consists of a visual examination of the instrument and series of measurements. Firstly, we examine the state of the transducer, e.g. its running qualities and the readability of its indicator, the functionality of the zero and tolerance boundaries, the solidity of the hands/indices. Secondly, we measure the repeatability, the reversibility and the total deviation.

Caractéristique sur l'environnement (limites pendant les mesures)

Température ambiante	: 20 °C ± 1 °C
Humidité relative	: 45%rh ± 20%rh

Moyens de vérification utilisés

Tous les moyens de vérification sont traçables aux standards nationaux et/ou internationaux.

R2868/18	Length measuring machine	Cert.180312423

Conclusion*

L'instrument est déclaré aux points mesurés.
~~CONFORME~~. NON CONFORME.

* Sans considérer les incertitudes.

Date d'émission: 15 June 2018

Technicien
Koen Groffen

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Note

Measured with Orb Measure Lite software V1.1.2.0
* Marked ranges or values are out of tolerance.
The instrument was out of tolerance and can't be adjusted in our care, so the results are both 'as found' as 'as left'.

Visual inspection	OK / NO	Remark
Readability	OK	Digital
Tentacle (shape)	OK	
LED-segments	-	
Spindle movement	OK	
Wear & Tear / corrosion	OK	

	Reference value	Instrument value	Difference	Tolerance ±	Uncertainty ±	Units	
1	0,000	0,000	0,000	0,100	0,003	mm	
2	4,770	4,749	-0,021	0,100	0,003	mm	
3	9,410	9,381	-0,029	0,100	0,003	mm	
4	18,500	18,430	-0,070	0,100	0,003	mm	
5	22,800	22,736	-0,064	0,100	0,003	mm	
6	25,000	24,924	-0,076	0,100	0,003	mm	
7	27,140	27,051	-0,089	0,100	0,003	mm	
8	31,740	31,668	-0,072	0,100	0,003	mm	
9	40,570	40,466	-0,104	0,100	0,003	mm	*
10	45,380	45,270	-0,110	0,100	0,003	mm	*
11	50,000	49,899	-0,101	0,100	0,003	mm	*
12	45,380	45,273	-0,107	0,100	0,003	mm	*
13	40,570	40,469	-0,101	0,100	0,003	mm	*
14	31,740	31,668	-0,072	0,100	0,003	mm	
15	27,140	27,051	-0,089	0,100	0,003	mm	
16	25,000	24,924	-0,076	0,100	0,003	mm	
17	22,800	22,736	-0,064	0,100	0,003	mm	
18	18,500	18,430	-0,070	0,100	0,003	mm	
19	9,410	9,378	-0,032	0,100	0,003	mm	
20	4,770	4,742	-0,028	0,100	0,003	mm	
21	0,000	-0,006	-0,006	0,100	0,003	mm	

Si indiqué, l'incertitude est définie comme l'incertitude type de mesure multipliée par un facteur d'élargissement k=2, en accordance avec EA-4/02.
Pour une distribution normale ça correspond à un niveau de confiance d'environ 95%.

CALIBRATION CERTIFICATE

1805-15900

Customer information

Client	: Plastic omnium auto inergy services
Contact	:
Address	: 165 Rue des Hureaux 60280 venette France
Reference client	:
Reference Trescal	: 201811451/7

Instrument information

Make / type	: AMETEK / DS/50/G
Description	: Displacement transducer
Range	: 0 .. 50 mm
Serial number	: MSD0507SZ03AJ20-09 / 573AJ20509
Identification number	: CSCR0486
Accuracy	: 0,1 mm

Date of calibration : 14 June 2018

Method of calibration

P1-02-G.005 Calibration of linear gauges
The calibration of displacement transducers such as dial gauges, levers, etc. consists of a visual examination of the instrument and series of measurements. Firstly, we examine the state of the transducer, e.g. its running qualities and the readability of its indicator, the functionality of the zero and tolerance boundaries, the solidity of the hands/indices. Secondly, we measure the repeatability, the reversibility and the total deviation.

Environmental conditions (limits during measurements)

Ambient temperature	: 20 °C ± 1 °C
Relative humidity	: 45%rh ± 20%rh

Used reference

The equipment used is traceable to National and/or International standards.

R2868/18	Length measuring machine	Cert.180312423

Note

Measured with Orb Measure Lite software V1.1.2.0
The instrument is measured but not adjusted, so the results are both 'as found' as 'as left'.

Issue date: 15 June 2018

Technician
Koen Groffen

Head of the laboratory
Luc Van Pelt

CALIBRATION CERTIFICATE

1805-15900

Visual inspection	OK / NO	Remark
Readability	OK	Digital
Tentacle (shape)	OK	
LED-segments	-	
Spindle movement	OK	
Wear & Tear / corrosion	OK	

	Reference value	Instrument value	Difference	Tolerance ±	Uncertainty ±	Units	
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The stated uncertainty is that of the entire set-up including the object under test.

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95% .
The uncertainty is calculated following EA-4/02 in accordance with the requirements of the ISO/IEC 17025.