



NATIONAL PHYSICAL LABORATORY

Teddington Middlesex UK TW11 0LW Telephone +44 20 8977 3222

# Certificate of Calibration



0478

STAGE MICROMETER  
CS3355

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FOR  
Pyser-SGI Ltd  
Fircroft Way  
Edenbridge  
Kent  
TN8 6HA

For the attention of N Worley

DESCRIPTION  
A scale formed on a glass disc approximately 15 mm in diameter inset on a metal microscope slide 75 mm × 25 mm × 1 mm. The scale is 0.1 mm long subdivided to 0.002 mm and numbered every tenth line from 0 to 100.

DATE (S) OF  
CALIBRATION  
24 January 2011

IDENTIFICATION  
The scale is labelled CS3355  
Type S12 made by Pyser-SGI

Reference: 2011010452

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Date of issue: 26 January 2011

Signed:

(Authorised Signatory)

Checked by: *LP Nimishokar*

Name: Bruce Duncan

on behalf of NPLML

# NATIONAL PHYSICAL LABORATORY

Continuation Sheet

## MEASUREMENTS

Intervals on this stage micrometer have been measured using a microscope with a travelling stage. The displacement of the stage was measured by means of a helium-neon laser interferometer, the frequency of the laser having been determined using an iodine-stabilised reference laser.

The distances between the lines were measured along the longitudinal axis of the scale. The scale was viewed using reflected light, the slide being placed so that the main inscriptions were uppermost.

The measurements were taken in a room with temperature maintained to  $20\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ .

## RESULTS

Numbering of Interval	Length of interval in mm at $20\text{ }^{\circ}\text{C}$
0 to 20	0.019 9
0 to 40	0.040 0
0 to 60	0.060 0
0 to 80	0.079 9
0 to 100	0.099 9

## UNCERTAINTIES

The expanded uncertainty in the interval measurements is  $\pm 0.000\ 5\text{ mm}$ .

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k = 2$ , providing a level of confidence of approximately 95 %.

The uncertainty valuation has been carried out in accordance with UKAS requirements.

NOTE: The results and uncertainties refer to on the day values and make no allowance for subsequent drift.

Reference: 2011010452

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Checked by: *L P Singh*