



**Fraunhofer**

**TESTED<sup>®</sup>  
DEVICE**

SAMICK PRECISION IND  
LME25UU-STEEL  
**Report No. SA 1105-551**

DUPLICATE

Statement of  
Qualification

# Statement of Qualification

**Customer:** SAMICK PRECISION IND. CO., LTD.  
925-2, Wulam-Dong, Dalseo-Gu  
704-833 Daegu  
South Korea

**Test results:**  
(according to ISO 14644-1)

The linear bushing LME25UU-STEEL is suitable for use in cleanrooms fulfilling the Air Cleanliness Class 4.

## Component tested:

Category: Automation Components  
Subcategory: Transfer Systems and Bearings  
Type: Linear bushing LME25UU-STEEL

## Random check measurements of particle emission (airborne) at representative points

Test procedure: According to VDI 2083 Part 9.1

Measuring instruments being used: Optical Particle Counter:  
Model LasAir II 110 manufactured by PMS with measuring channels of  
 $\geq 0.1 \mu\text{m}$ ,  $\geq 0.2 \mu\text{m}$ ,  $\geq 0.3 \mu\text{m}$ ,  $\geq 0.5 \mu\text{m}$ ,  $\geq 1.0 \mu\text{m}$  and  $\geq 5.0 \mu\text{m}$

Test parameters of the test environment:

- Cleanroom of Air Cleanliness Class: .....ISO Class 1  
.....(according to ISO 14644-1)
- Air flow velocity: .....0.45 m/s
- Air flow guidance: .....vertical unidirectional air flow from ceiling to floor
- Temperature: .....22 °C  $\pm$  0.5 °C (71.6 °F  $\pm$  0.9 °F)
- Relative humidity: ..... 45 %  $\pm$  5 %

Test parameters of the test execution:

- Travelling distance: .....s=500 mm
- Velocity: .....  $v_2 = 0.5 \text{ m/s}$
- Acceleration: ..... $a_2 = 1.0 \text{ m/s}^2$

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The measuring equipment used for the qualification is regularly calibrated and is based on national and international standards. In the case where no national standards exist, the measuring procedure used corresponds with technical regulations and norms valid at the time of the measurement. The documents drawn up for this procedure are available for viewing.

The validity of this certificate applies only to the mentioned product in this particular condition for a duration of 5 years.  
Further information: [www.tested-device.com](http://www.tested-device.com).


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Stuttgart, August 2, 2011

Place, Date

  
i. A.   
Project manager