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DEVICE

FANUC Europe Corporation
LR-Mate 200iD/7LC
Report No. FA 1404-700

Statement of
Qualification

Particle Emission

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Statement of Qualification

Customer:

FANUC Europe Corporation
Zone Industrielle
6468 Echtemach
Luxembourg

Component tested

Category: Automation Components

Subcategory: Automation Components / Robotics

Product name: LR-Mate 200iD/7LC (manufacturing date: 11/2013; color: white; serial number: A05B-1142-B321)

Random sampling of particle emissions (airborne) at representative sites

Standards/Guidelines: VDI 2083-9.1; ISO 14644-1
The norms stated refer to the relevant editions applicable at the time of the tests.

Test devices: Optical particle counter:
LasAir II 110 with measuring ranges ≥ 0.1 µm, ≥ 0.2 µm, ≥ 0.3 µm, ≥ 0.5 µm, ≥ 1.0 µm und ≥ 5.0 µm

Test environment parameters:

- Cleanroom Air Cleanliness Class (according to ISO 14644-1): ISO 1
- Airflow velocity: 0.45 m/s
- Airflow pattern: Vertical laminar flow
- Temperature: 22 °C ± 0.5 °C
- Relative humidity: 45 % ± 5 %

Test procedure parameters:

- Attached payload: 0.0 kg
- Operation of each axis: separately
- Speed: 40 % and 80 %
- Pause between cycles: 0 s

Test result / Classification:
(in acc. with ISO 14644-1)

The robot LR-Mate 200iD/7LC is suitable for use in cleanrooms fulfilling the specifications of the following air cleanliness classes:

Parameter	Air Cleanliness Class
40 % of maximum speed	6
80 % of maximum speed	6
Overall result	6

The measuring devices used for the qualification tests are calibrated at regular intervals; their results can be traced back to national and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

For further information about the test environment and parameters, please refer to the Fraunhofer IPA test report.

Fraunhofer Institute for
Manufacturing Engineering and Automation IPA

Department of Ultraclean Technology
and Micromanufacturing

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Stuttgart, May 2, 2014
Place, date of first document issued

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Place, current date

i. A.
Frank Bürger, Project Manager Fraunhofer IPA

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