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Your ref.:

Yours of:

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Date: **22. Juli 2016**

Re: Calibration of the CMM Reference Sphere

Dear Sir or Madam,

The reference sphere is a component of every ZEISS coordinate measuring machine (CMM). The CMM measuring accuracy can only be guaranteed when using the sphere radius and measurement software provided by ZEISS.

The qualified sphere radius will already be configured in the measuring software received from ZEISS. Any subsequent adjustment of the sphere radius must only be carried out by ZEISS Field Service or by ZEISS authorized service partners.

To ensure the conformance to original manufacturer specifications of the CMM, it is recommended to have only ZEISS Authorized Service perform the recommended maintenance and calibration.

The traceability of the CMM (all machine components including the reference sphere) is established after calibration through the utilization of measurement standards that are traceable to the International System of Units (SI) through an unbroken chain of calibrations.

For this reason, an autonomous cyclical dimension inspection (calibration) of the reference sphere is unnecessary when using the CMM for its intended purpose.

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We recommend only one regular, event-driven inspection (e. g. after a collision); visual inspections of the reference sphere using a magnifier or a Stereo microscope might be necessary.

While not recommended because of the critical relationship of this sphere to the integrity of the CMM, if the reference sphere is used as a measuring standard for other testing purposes (not on the CMM), the user must have the sphere calibrated according to their requirements for the specific application (i.e. size or roundness, traceable and/or accredited).

Best regards,



i.V. Juergen Gassmann
Quality Manager



i. V. Ralf Bernhardt
Senior Manager Method System Laboratory