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Compatibility of non-evaporable ZAO®-based getter pumps with particle-sensitive vacuum applications

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Many vacuum applications, such as accelerators, optical chambers, superconducting cavities, SEM/TEMs, are particularly sensitive to dust and require an ultra-clean working environment. Non evaporable getter pumps with porous sintered elements are already extensively used in UHV and XHV particle-sensitive systems as well as in industrial applications, laboratories and large R&D facilities. In order to assess the compatibility of NEG pumps with ultra-sensitive devices in vacuum applications, in terms of particle release, SAES research team has been focusing on the development of optimized methods which allow to check, in a controlled and repeatable way, the deep level of cleanliness of a getter pump. In particular, the development of a robust method for particle counting is presented: the main challenges are given by the minimization of background effects and the detection of extremely low levels of counts.

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Footnotes

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Yes

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