Information Notice

Introduction

- This Information Notice forms part of the European open Tender procedure for SEM + FIB published on 03-04-2026, under TNO reference number WS2640013718 .
- This Information Notice provides a record of the questions submitted by the Tenderers up to and including the date of publishment of this Informaton Notice with the answers provided by TNO.
- If Tenderers have asked questions of similar nature, all such questions have nevertheless been included in this Information Notice and answered separately. This may result in repetition of information.
- Where a company name was mentioned in a question, it has been replaced by another word or term to anonymize the questions.
- TNO advises you to read the entire Information Notice.
- All information in the Information Notice is classified as Confidential and may only be used for the purpose of submitting a Tender for this procurement.
- The Information Notice will be made available on TenderNed through publication at www.tenderned.nl and added as a document.

The Information Notice serves to provide any additions/changes to the Tender Documents and to communicate announcements from TNO.
Where further clarification of the requirements is provided, this must be taken into account when answering Annex A04 at the time of when compiling the tender. If, for example an alternative is accepted in the Information Notice, Annex A04 will not be revised. The tenderer can answer the question for compliancy with "yes" in both cases (compliancy to the original requirement or compliancy to the alternative). In case a requirement no longer applies, leave the check box in Annex A04 on " select".

Nr	Subject	Question	Answer
1	Annex A04	R-1300-010: Can a 130mm - 130mm X-Y stage be accepted? The outer 10mm of the wafer can still be reached using rotation.	Yes, this is acceptable.
2	Annex A04	FIB resolution: The industrial standard for FIB resolution measurement is based on the smallest edges that can be detected in an FIB image rather than the smallest features can be milled. The reason is rooted from the the milling nature of ion beam; we request to change the requirement below to reflect the FIB resolution: Ion beam resolution at coincident point • 4.0 nm at 30 kV using preferred statistical method • 2.5 nm at 30 kV using selective edge method, the resolution is defined as the smallest edge (in nm) that can be measured in a FIB image R-1100-030 FIB resolution The equipment shall provide a FIB column with a resolution of 4.0 nm (or lower) at 30kV. The resolution is defined as the smallest possible beam spot size (diameter) that can be achieved on the sample surface, which determines the precision of site-specific material removal.	The industrial standard to which you refer can be applied. Requirement R-1100-030 is to be understood as follows: The equipment shall provide a FIB column that can produce images with a resolution of 4.0 nm (or lower) at 30kV. Tenderers are asked to take this into account when answering Annex A04.
3	Annex A04	It is noted that there are many cleanroom requirements in Annex 4, the tool in offer is designed for Lab environment and although the tool can be placed in a cleanroom, we cannot commit to cleanroom material/particle requirements	Compliance with the requirements may be achieved by implementing additional measures that have demonstrated successful performance in comparable applications at other customer installations. Such compliance will be accepted, subject to verification. The tenderer shall provide supporting documentation and references.
4	Annex A04	Based on experience, Cleanroom environment can affect tool performance such as acoustic noise, vibration and potential EMI, we have the addition equipment/components to cancel those adverse effects at extra cost, those considerations were not reflected in the current tender.	Please state these (equipment/components as options in Annex A03 tab 3 P1.

5	Pr. Guide6.2	Is 800K EUR estimated budget fixed? It is difficult to meet the budget with the tool in consideration, the tool price range (configuration dependent) were communicated in the earlier market research response.	The budget is indeed fixed. See also our answer on question nr 3.
6	Annex A04	R-1000-005 The wafer thickness varies more than usual. Standard deviation for the 150mm wafer is +/-20 um. Anyway, an appropriate holder can be supplied. What about the warp, is it 50 um? There is no unit mentioned.	In InP the wafer thickness may vary a bit more than standard 150 mm Silicon. Maximum warp and bow is indeed 50 µm.
7	Annex A04	R-1000-010 We can offer an 8" wafer load lock. It requires a modified chamber. The Pumptime without Load lock and using a standard chamber is <3.5 minutes. Is that good enough for your needs or will the load lock be needed?	A pump time < 3.5 minutes is acceptable. Please state a load lock and modified chamber as an option in Annex A03 tab 3.P1. State also the reduction in pump time that can be achieved with this option.
8	Annex A04	R-1000-030 What calibration is meant here exactly, an entire instrument certification or e.g. SEM resolution?	The SEM shall have the capability to do measurements of certain features of sample wafers. This measurement capability of the relevant (components of) the equipment shall be callibrated on certain certified dimensions of these features.
9	Annex A04	R2200-010 Can you comment on how the wafer could be damaged? Those 50 um is some layer or what cannot be damaged?	The wafer holding mechanism shall not damage the wafer more than 50 µm. Usually this is the edge of the wafer, but any other place on the wafer shall also not be damaged more than 50 µm to prevent wafer breakage.

10	Annex A04	R-2300-020 do you require - a list of materials used for the instrument manufacturing?	A remark besides your question: The correct definition of R-2300-020 is: The equipment shall not contain nor use the following materials: • PVC material for piping or exhaust applications; • Silicone parts; • Materials that do not comply to the FM4910 norm; • Oil based (vacuum) pumps. In answer to your question: This requirement is complementory to R-2300-05, -020, -025 and states the substances, known to TNO, that can contribute to flaking or particle shedding. We do not need a list of materials used in manufacturing the equipment. Instead, it must be clear that non-compliance to requirements, as it appears in the stage of testing or operating the equipment, shall be resolved on the account of the vendor.