Information Notice

Reference: WS2568657247 Metal / Backend-Sputter tool

Introduction

- This Information Notice forms part of the European open Tender procedure for Metal Backend Sputter tool published on 13-04-2026 under TNO reference number WS2568657247.
- 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- Where a company name was mentioned in a question, it has been replaced by another word or term to anonymize the questions.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	TNO shall apply the following payment terms and conditions: • 70% upon delivery at location of TNO; • 30% after commissioning and Site Acceptance Test (SAT) including test periods, approved by TNO, Management Technology and Procurement. Are different payment terms with a down payment secured by a bank guarantee permitted?	As an alternative to the conditions stated in our Tender, and contrary to your proposal, we can accommodate you as follows: -30% upon order, after receipt of a bank guarantee covering 30% of the total contract amount; -50% upon delivery at TNO Eindhoven, High Tech Campus 12 (cleanroom); -20% after installation and commissioning on-site, and approval of the Site Acceptance Test (SAT) by TNO Management (PIX Europe) and Procurement. The Tenderer to whom the Contract will be awarded shall provide an unconditional, irrevocable and on demand bank guarantee in favour of TNO, issued by a reputable bank established in the EU/EEA and subject to prudential supervision. The bank guarantee shall cover at least seventy percent (70%) of the total Contract Price and shall secure all present and future claims of TNO under the Contract. The bank guarantee shall remain valid until the Site Acceptance Test (SAT) has been approved by TNO and all secured obligations have been duly fulfilled. The issuing bank and wording of the bank guarantee are subject to TNO's prior written approval. All costs related to the bank guarantee shall be borne by the Tenderer.
2	Annex A04	R-3000-020 Do you accept different payment terms? e.g. 30 days net, plus statutory VAT. 50% upon order placement, against submission of a bank guarantee, order confirmation, and invoice. 40% upon delivery. 10% upon acceptance, or 60 days after delivery if acceptance is delayed by the customer.	See question/answer nr 1.
3	Annex A04	R1200-035 is it sufficient to keep the wafer temperature in the expected temperature range?	R1200-035 mentions the substrate temperature that can be set. R1200-070 gives the maximum temperature excursion during processing.

4	Annex A04	R3000-020 Would be a possible to have the following payment terms: 30% at order, 60% after delivery and 10% after final sign off (30 days net)?	See question/answer nr 1.
5	Annex A04	R3000-040 Is DAP acceptable?	No, that is not acceptable. Payment of import duties can be arranged with the equipment carrier (or a local customs broker). The Terms of Delivery are stipulated in our Procurement Guide (paragraph 1.4).
6	Annex A04	R 1200 050 — Ti/Au thickness vs. time For Ti deposition, is the priority on achieving the thickness within 40 s, or on keeping wafer temperature below the specified limit?	The wafer temperature is most important.
7	Annex A04	R 1200 065 — SpD power range Is it acceptable to exceed the nominal power limits if needed to meet thickness time and uniformity requirements?	This is acceptable as long as the temperature does not exceed 75°C.
8	Annex A04	R 1300 030 — Mechanical stress of Ti/Au stack On which wafer type and measurement method (e.g. wafer bow, curvature radius, ex situ metrology) should the −200 to +200 MPa stress specification be verified?	Wafer bow
9	Annex A04	R 1300 035 — Step coverage Can you specify the trench width, depth, and sidewall profile for the 1:1 aspect ratio structure used to evaluate the >20 % Ti/Au step coverage requirement? What is the exact defintion of this 20% threshold?	Typical structure is between 1.5..5 µm deep and wide with straight sidewalls. Side wall deposition thickness shall be 20% of bottom deposition thickness. To be evaluated by cross-section SEM.
10	Annex A04	R 2100 005 — Particle requirements Which inspection system/method is considered for measuring compliance?	Particle density will be evaluated pre- and post-handling using an industry standard non-patterned defectivity detector based on laser scanning.
11	Annex A04	R 2200 010 — Software reliability What qualifies as a “software failure” in this context: any abnormal restart, or only events that interrupt wafer processing or require operator intervention?	A failure that requires rebooting (re-start of the software application) during operation.

12	Annex A04	R 3000 005 — Critical Design Review Which process specific details (e.g. erosion models, thermal simulations, wafer temperature data) are expected to be finalized and reviewed at CDR?	The CDR is predominantly used to finalize and configuration options and to align on facility interfaces/requirements.
13	Annex A04	Point R-3000-020, payment terms: We suggest these payment terms: - 30% of the equipment price at order, after receipt of a bank guarantee covering that amount - 50% of the equipment price on delivery - 20% of the equipment price after installation and commissioning on-site and performing the Site Acceptance Test including test periods	See question/answer nr 1.
14	Annex A04	Points R-1300-005 to 020 In order to get a +- value, uniformity equation should be calculated as 100 x (max-min)/(2*Average). Please confirm that this is the equation which will be used for the FAT/SAT.	This is correct
15	Annex A03	There is a formatting error in Annex A03, where the unit price of the equipment is not included in the total Price P1	Thank you for noticing. A revised price sheet has been published.
16	Annex A02	Core competence 1: can it be accepted that the reference project are using other materials than Au?	No, it cannot.
17	Annex A04	Point R-1200-065 The estimated powers seem quite low. By calculations, 200W sputtering power for Ti would be insufficient to reach a sputtering rate of up to 1.25 nm/s. Are higher powers accepted? Just for clarification: it is power and not power density that is mentioned in the requirement?	This is power, not power density. Higher powers are allowed, as long as the wafer temperature does not exceed 75C.
18	Annex A04	Point R-1200-070 Is it correctly understood that wafers should not exceed 75 degreeC after 25 consecutive wafer runs, and that the wafers are essentially allowed to have a temperature varying from 25 to 75 degreeC across 25 wafers when doing consecutive runs? Please clarify this point.	Correct.

19	Annex A03	R-3000-020 Do you accept different payment terms? e.g. 30 days net, plus statutory VAT. 50% upon order placement, against submission of a bank guarantee, order confirmation, and invoice. 40% upon delivery. 10% upon acceptance, or 60 days after delivery if acceptance is delayed by the customer.	See question/answer nr 1. The alternative for payment upon acceptance is not accepted.
20	Annex A03	R-1200-050 Ti 10 - 200 W, 10 - 50 nm in 40 s after our sputtering calculation we wondering if 40 s could be a "typo"? Please confirm or adjust.	We understand that 40s can be challenging with this power range. Please provide the settings that can reach the target thickness of max 50 nm without exceeding the maximum temperature requirements of 75℃
21	Annex A03	R-1200-065 Ti 10 - 200 W, 10 - 50 nm we wondering if 40 s (as requested in R1200-050) somewhere could be a "typo"? Please confirm or adjust. (power , time and/or thickness)	We understand that 40s can be challenging with this power range. Please provide the settings that can reach the target thickness of max 50 nm without exceeding the maximum temperature requirements of 75℃
22	Annex A02	Could you please confirm whether Core Competence 1 strictly requires a reference project involving TiAu, or whether equivalent metal stacks with comparable process complexity would also be accepted? Given that Au-based metallization is less common in current industrial production, we would appreciate clarification on whether alternative metals may be considered.	See question/answer number 16.
23	Annex A02	If we are unable to disclose specific details for the required references in core competence due to contractual obligations, would this result in an automatic exclusion from the tender process?	We urge you to provide the requested information. In our view, we do not ask for highly confidential or commercial sensitive information. If there's still a problem, a non-disclosure agrement between TNO and your customer could help.

24	Annex C02	Is it possible to negotiate the contractual terms of this annex and, in particular, the subordinated Annex C03 or to deviate from them in the offer? Our company would like to participate in this tender, but could only do so with adaptations to provisions e.g. liability, termination, warranty and IP. Are alternative offers acceptable? If so, are there any provisions that cannot be changed?	We cannot answer this question, formulated in general terms.