

DKZ/95/2009

Date: Warsaw, 02.12.2009

Legal Grounds

This public tender is conducted according to Public Procurement Law of January 29, 2004 (position 1655 in Polish Journal of Acts No 223 of 2007 with later changes).

INSTYTUT TECHNOLOGII ELEKTRONOWEJ
Al. Lotników 32/46, 02-668 Warsaw, Poland

TERMS OF REFERENCE for:

**DELIVERY OF THE REFUBRISHED SYSTEM FOR PECVD (PLASMA ENHANCED CHEMICAL
VAPOUR DEPOSITION)**

CPV 31700000

**Proceedings are conducted according to open procedure for assessed value below
EUR 206 000,00**

1. Name (company name) and address of the Awarding entity.

This proceedings are conducted by Tender Committee of Instytut Technologii Elektronowej,
Al. Lotników 32/46, 02-668 Warsaw, Poland.
Web page: <http://www.ite.waw.pl>

2. Procedure for awarding the contract.

These proceedings are conducted in mode of open procedure according to Article 39 of Public Procurement Law of January 29, 2004.

The tenders submitted will be opened and evaluated by the Tender Committee according to the evaluation criteria.

From all tenders which have not been rejected, the one will be selected which receives the highest number of points calculated according to the evaluation criteria.

3. Description of the object of contract.

The object of the order is a delivery, installation, start up and testing of the refurbished **system for PECVD (Plasma Enhanced Chemical Vapour Deposition)**, hereinafter called "**device**".

Requirements and technical parameters of the object of the order are indicated in appendix No. 1 of this Terms of Reference.

4. Partial and variant tenders are not allowed.

5. Time limit for contract performance.

Deadline for completion of the tender including installation, start up and testing – maximally to 20 weeks after signing the Contract.

6. Description of the conditions for participation in the procedure and the description of the method refurbished for the evaluation of the fulfillment of those conditions:

Eligible to compete for a contract shall be economic operators who:

- 6.1. Fulfill conditions defined in article 22 paragraph 1 and are not being excluded from the proceedings pursuant to Article 24 paragraph 1 and 2 "Public Procurement Law".
- 6.2. Prove, that within the period of the last three years, or if being active in the business for shorter period – in this period, have completed at least 5 deliveries corresponding in terms of their type to supplies being the object of contract, with the indication of the buyers.

Evaluation of the above requirements will be performed according to the rule: "fulfil - not fulfil", on the basis of documents mentioned in point 7 of this Terms of Reference.

7. Information concerning declarations and documents to be provided by the contractor to confirm the fulfillment of the conditions for participation in the procedure:

- 7.1. Signed statement, which is enclosed to this Terms of Reference, about fulfillment of conditions defined in article 22 paragraph 1 Public Procurement Law [Appendix No. 2].
- 7.2. The list of the completed deliveries – mentioned in point 6.2 of the Terms of Reference.

These documents can be presented in the form of originals or photocopies and should be signed by Contractor or his authorised representative.

The lack of any of the above documents will cause the tender being rejected from further proceedings.

8. Information on the manner of communication between the awarding entity and the contractor as well as of delivery of declarations and documents, indication of persons authorised to communicate with the contractor.

The contact person in matters concerning the tender are:
Michał Urbanski MSc., e-mail: urbanski@ite.waw.pl

Please address all written correspondence, related to this tended proceedings, to:

Instytut Technologii Elektronowej
Al. Lotników 32/46
02-668 Warsaw, Poland.
building No VI, room 216

Fax: + 48 22 548 78 46.

9. Deposit requirements – we do not require.

10. Tender validation time – 30 days.

11. Description of the manner of the tender preparation.

The tender should include:

- a) Name and address of the Contractor,
- b) Date of preparation of the tender,
- c) Filled in Appendix No 1 to this Terms of Reference,
- d) Net price in PLN (The price in EUR, GBP or USD is allowed. In the case of submission of the tenders in EUR, GBP or USD, the price will be exchanged to polish zlotych PLN according to selling exchange rate of the National Bank of Poland dated on the day before of opening of the tenders),

- e) Signed statement of the Seller that the offered device wasn't purchased and financed from public funds in period of 7 years preceding date of sale [Appendix No. 3].
- f) Signed statement of the Seller defining the Seller of the offered device, place and date of purchase [Appendix No. 4].
- g) Indication of the component tasks of the order that will be assigned to subcontractors [Appendix No 3],

The tender should be signed by Contractor or his authorised representative.

Together with the offer the contractor is allowed to submit required documents defined at point 7 of this Terms of Reference, to confirm the fulfillment of the conditions for participation in the procedure.

In the case the contractor company is located outside Poland, it is approved to submit the tender as well as the documents required from the contractors as specified under point 7 of this Terms of Reference either in Polish or in English language.

The contractor is allowed to submit only one offer.

All costs of preparation of the tenders, regardless of the results of the tender, shall be covered by the Contractor.

12. Date and place of submission and opening of tenders.

The tenders should be submitted at the site of the Awarding Entity in Warsaw at Al. Lotników 32/46, building No VI, room 216, by 10⁰⁰ am, on 15th December 2009 (in working days from 9 am till 2 pm). **The tenders submitted after this deadline will not be considered.**

Opening of the tenders will take place on 15th December 2009 at 10¹⁵ am. at the site of the Awarding Entity: Warsaw, Al. Lotników 32/46 in the building No VI, room 120.

The Awarding Entity will open the tenders in accordance with its internal procedures but on occasion may hold a public opening which your representatives may attend.

The offers must be submitted in non-transparent and closed envelopes or packages. The envelope or package must be addressed as follows:

**Instytut Technologii Elektronowej
Al. Lotników 32/46
02-668 Warsaw
Building No VI, room 216
Do not open before 10¹⁵ am, on 15th December 2009.**

**OFFER FOR:
DELIVERY OF THE REFURBISHED SYSTEM FOR PECVD**

The envelope or package must include full name and address of the Contractor.

The Awarding Entity does not accept responsibility for consequence of contractors failure to keep the above requirements.

13. Description of the method of the price calculation.

The net price in PLN (EUR, GBP or USD) must include:

- a) the device according to requirements indicated in Appendix No 1 of this Terms of Reference,
- b) installation,
- c) start up,
- d) testing of the device,
- e) transport, unloading and positioning,
- f) delivery conditions DDP Warszawa,
- g) insurance.

14. Description of criteria which the awarding entity will apply in selecting a tender, specifying also the importance of particular criteria and method of evaluation of tenders.

The Awarding Entity will evaluate whether the tender meets requirements introduced in this Terms of Reference. If the tender is valid (meets requirements introduced in this Terms of Reference), it will be taken into consideration in choice of the best one.

Offer evaluation criteria:

- Price - 55%
- Quality of the device - 45%

Within each of the criteria, the evaluation will take place according to the following rules:

14.1 For the price: number of points in the price criteria will be calculated according to the following formula:

$$P_n = C_{\min} / C_n * 100 * W$$

- where: P_n – points in price criteria
 C_{\min} – the lowest price from all the offers
 C_n – the price from the offer of n-th bidder
 W – weight of the “Price” criteria”

Maximum number of points to be gained within the price criteria is 55.

14.2 For the quality of the device: number of points in the quality criteria will be calculated according to filled table (appendix No 1 to the Terms of Reference) and the following formula:

$$Q_n = \left(\sum_p (0, 3, 5)_p \right)_n / \max \left(\sum_p (0, 3, 5)_p \right)_n * 100 * W$$

- where: Q_n - points in quality criteria
 $(0, 3, 5)_p$ - values of points for the evaluation of the p-th parameter
p - number of evaluated parameters
n - number of the offer
W - weight of the “Quality” criteria.

Maximum number of points to be gained within the quality criteria is 45.

The sum of points received in all criteria makes aggregate evaluation of the tender.

15. Information concerning formalities which should be met following the selection of a tender in order to conclude a public procurement contract.

Contract with the winning Contractor will be signed within the deadline not shorter than 7 days from publication of the tender results, but not later than the date of tender validation.

16. Other important statements which will be included in the contract.

The following statements will be included in the contract:

16.1. Indemnity

- 1) In case of delay, caused by negligence, or poor performance of the Seller, the Seller will pay to the Buyer an indemnity of 0,1% of the value of the equipment delayed for each working day of delay up to 10% of it's value.
- 2) In case of delay in payment, the Buyer will pay to the Seller indemnity of 0,1% of the value of delayed payment for each day of delay up to 10% of it's value.

- 3) In case the Seller will cancel the Contract without reason caused by the Buyer, the Seller will pay to the Buyer penalty of the 10% of the total Contract value and the Seller will transfer back all the received payments for the subject of this contract to the Buyer account.
- 4) In case the Buyer will cancel the Contract without reason caused by the Seller, the Buyer will pay to the Seller penalty of the 10% of the total Contract value plus documentary evidence costs of materials and labour based on the following schedule:
 - a) in period shorter than 30 days from order placement - 20% of the contract value
 - b) in period shorter than 30 days before delivery and acceptance – 100% of the contract value
 - c) in period between mentioned in points a and b – percentage approximated by linear function.
- 5) In case of delay, caused by the Seller, in delivery longer than 3 months, the Buyer can cancel the Contract and the Seller will pay to the Buyer penalty of the 10% of the total Contract value and the Seller will transfer back all the received payments for the subject of this contract to the Buyer account.

16.2. Warranty

- 1) The Seller undertakes a warranty of correct operation and technical quality of the delivered equipment for “warranty period included in the offer” months, calculated from the date of the final acceptance protocol, but no longer than “warranty period included in the offer + 3 months from the date of delivery.
- 2) The Seller within warranty period covers costs of the repair or replacement of the defective goods and costs of their transport to the Buyer site after repair.
- 3) During the warranty period, in case of the necessity of the repair outside the Buyer site, the Seller has the obligation to make the repair or replacement within not longer than 12 weeks after the date of the written claim.
- 4) The warranty period will be increased by the time needed for the repair.
- 5) The replaced or repaired parts of equipment will be included a warranty of the Seller or the Producer.
- 6) During the warranty period, the Seller undertakes a maximal service response time within 2 working days after the date of the written claim.

16.3. Terms of payments

Payment will be effected in the following way:

1. 60% of the contract value – (the value from the offer) – payable at delivery by the bank transfer to the Seller’s account on the basis of an original invoice and shipment documents after performing the preliminary acceptance test at Seller’s site and signing the preliminary acceptance test protocol by both parties of the Contract.
2. 40% of the contract value – (the value from the offer) – payable by the bank transfer to the Seller’s account on the basis of an original invoice within 21 days after performing the final acceptance test at Buyer’s site and signing the final acceptance test protocol by both parties of the Contract.

The Buyer shall pay to the Seller due amount for the subject of this contract by transfer to the Seller’s account in:

.....

All bank charges in Poland are at the Buyer’s account and bank charges outside Poland are at the Seller’s account.

16.4. Delivery instruction

- 1) Subject of the Contract is to be shipped to the address below and placed at the disposal of the Buyer.

Shipping address: Instytut Technologii Elektronowej
Al. Lotników 32/46
02-668 Warszawa, Poland

- 2) The Seller advises to the Buyer about the dispatch by fax (No.+48 22 54-87-803).
- 3) The Seller will deliver CE certificate together with subject of the Contract.

16.5. Acceptance of the subject of the contract

1. The preliminary acceptance test of the subject of the Contract will be performed at the place of its origin in the presence of the Buyer and Seller representatives before dispatching the goods. The preliminary acceptance test procedure will be based on assessment of the results of the functional tests confirming technical parameters of the system according to technical specification and requirements indicated in this Terms of Reference as well as performing of processes of deposition and thin layers control SiO_2 i Si_3N_4 :
 - a) control of deposition layer thickness
 - b) layer deposition rate,
 - c) layer characteristic (elipsometric parameters).The results of the acceptance test must be accepted by signing by the Seller and the Buyer preliminary acceptance test protocol.
2. The final acceptance test will be performed after delivery, installation and start up of the subject of the Contract. The final acceptance procedure will be assessment of the results of the tests and processes mentioned in §16.5 item 1. The results of the final acceptance test must be accepted by signing by the Seller and the Buyer the final acceptance test protocol.
3. Substrates for both acceptance tests will be delivered by Awarding Entity.

16.6. Setting of disputes

All disputes arising from the present Contract, failing amicable settlement shall be resolved by the Arbitration Court of the Polish Chamber of Commerce in Warsaw in accordance with the rules of this Court.

17. Requirements concerning the security on due performance of the contract: we do not require.

18. Procedure for additional explanations.

Contractor is authorised to address only in written form the Awarding Entity (e-mail is also allowed) with request for additional information regarding the content of this Terms of Reference. The Awarding Entity will respond all the inquiries promptly, provided that such inquiries are submitted no later than 6 days prior to the deadline for submission of the tenders. The questions and the answers will be published on web site of the Awarding Entity.

19. Information on legal protection measures available to an the contractor during the contract award procedure.

Contractor's legal protection laws are included in Chapter VI of the Public Procurement Law of January 29, 2004 which is available on the Public Procurement Office (PPO) web site: www.uzp.gov.pl

20. Other matters.

For all matters not regulated in this Terms of Reference, the provisions of Public Procurement Law of January 29, 2004 will apply.

Zbigniew Poznański
Deputy Director ITE

Appendix No. 1

Requirements and technical parameters of the system for PECVD (Plasma Enhanced Chemical Vapour Deposition).

No	Parameter	Requirement	The column to the fulfilment by the Tender*	Points
1	2	3	4	5
1.	Model type		specify	
2.	Manufacturer of the system		specify	
3.	Country of manufacturer		specify	
4.	Manufacturer of the pumps		specify	
5.	Production year	Second-hand system a) ≤ 3 years, but no more than 5000 man-hours b) ≤ 6 years, but no more than 8000 man-hours	specify	5 points 0 points
6.	Types of processes	Deposition of thin layers SiO ₂ i Si ₃ N ₄ on heated substrate	confirm	
7.	Deposition of thin layers SiO ₂	a) temperature of deposition layer in minimum range T=200- 400°C or greater including this range b) rate of deposition layer in range $v \in [a,b]$, where : a=30nm/min, b ≥100 nm/min c) refraction index layer in range n=1.46 -1.49 d) dispersion of deposition layer thickness in substrates batch up to ± 3% e) repeatability of deposition layer processes up to ± 3% f) layer stress ≤ 200 MPa	specify temperature range specify rate range specify refraction index range specify dispersion of thickness deposition layer confirm specify stress value	
8.	Deposition of thin layers Si ₃ N ₄	a) temperature of deposition layer in minimum range T= 200-400°C or greater including this range b) rate of deposition layer in range $v \in [a,b]$, where: a=10nm/min, b ≥20 nm/min c) refraction index layer in range n=1.8 – 2.5 d) dispersion of deposition layer thickness in substrates batch up to ± 3% e) repeatability of deposition layer processes up to ± 3% f) layer stress ≤ 100 MPa	specify temperature range specify rate range specify refraction index range specify dispersion of thickness deposition layer confirm specify stress value	
9.	Process chamber	Aluminium process chamber for deposition layers on substrate a) wafers of diameter ≤ 4" b) wafers with size from 5mmx5mm as well as irregular shape wafers	confirm confirm confirm	

10.	Electrode	Heated electrodes with temperature controller a) $T \leq 600\text{ }^{\circ}\text{C}$ $T \leq 400\text{ }^{\circ}\text{C}$ b) accuracy of temperature adjusting $\pm 2\text{ }^{\circ}\text{C}$, or better	confirm specify temperature specify temperature specify accuracy of temperature adjusting	3 points 0 points
11.	Plasma generation	RF power source 13.56 MHz with automatic matching system; output power $\geq 300\text{ W}$.	confirm, specify output power	
12.	Variable frequency generator	Variable frequency generator in range 90kHz –450kHz; power $\geq 600\text{ W}$	confirm, specify frequency range, specify power	
13.	Dedicated vacuum system for the process chamber	Dual-stage pumping system for the process chamber: a) the pressure 5×10^{-4} mbar or lower, b) with oil filter, c) automatic pressure control system	confirm specify pressure confirm confirm	
14.	Gas supply system	a) min. five gas lines for $\text{SiH}_4/\text{N}_2(2\%)$, NH_3 , N_2O , $\text{CF}_4/\text{O}_2(20\%)$, N_2 b) equipped with valves and mass flow controllers (MFC)	specify number of gas lines confirm	
15.	PC computer for system control	PC computer with: Windows XP Pro DVD \pm RW drive Monitor LCD min 17", Keyboard, Mouse, network card.	confirm, specify computer parameters	
16.	Software	a) Software has to ensure processes and device control b) Control software and all special applications added to the device, have to run under Windows XP Pro System and have to be compatible with other standard programs of Microsoft Windows System	confirm	
17.	Exhaust gas treatment system (scrubber)	Ensured scrubber for gases mentioned in point 16.	confirm	

18.	Two-step acceptance test	<p>The preliminary acceptance test will be performed at Seller facility and will include confirming parameters of the system as well as processes of deposition and thin layers control SiO₂, Si₃N₄</p> <p>a) control of deposition layer thickness b) layer deposition rate, c) layer characteristic (elipsometric parameters).</p> <p>Final acceptance test will be performed at Awarding entity site after installation and start up of the system and will be the same as preliminary acceptance test.</p> <p>Substrates for both acceptance tests will be delivered by Awarding Entity</p>	confirm	
19.	Operating manual, programming instruction and technical documentation (in Polish or in English)	ensured	confirm	
20.	Consumables for the period of warranty	ensured	specify the list of consumables	
21.	Deadline for completion of the tender including installation, start up and testing	maximum to 20 weeks after signing the Contract	specify time of completion of the tender	
22.	Training	training of two persons held at the Awarding Entity site	confirm	
23.	Warranty period	minimum 6 months 12 months 9 months 6 months	specify warranty period	5 points 3 points 0 points
24.	Availability of spare parts	ensured within 5 years since installation time	confirm	
25.	Post warranty service	ensured within 5 years since installation time	confirm	
26.	Technical and process support	ensured within 3 years since installation time	confirm	
27.	Installation requirements	attach installation requirements: electrical, gases and other	specify installation requirements	

- **Imprecise or inaccurate fulfilment of the table in the column 4 will result in rejection of the offer.**

.....
address stamp of the contractor

.....
/date/

STATEMENT

DELIVERY OF THE REFUBRISHED SYSTEM FOR PECVD (PLASMA ENHANCED CHEMICAL VAPOUR DEPOSITION)

for Instytut Technologii Elektronowej
Al. Lotników 32/46, 02-668 Warsaw, Poland

Acting in accordance with the contract award procedure, we certify that we fulfill the requirements specified in Article 22 paragraph 1 of Public Procurement Law, which states that eligible to compete for a contract shall be economic operators who:

1. are authorised to perform specific activities or actions, if such authorisations are required by the law;
2. have the necessary knowledge and experience, and have at their disposal the technical potential and personnel capable of performing the contract; or present a written commitment of other entities where the technical potential and personnel capable of performing the contract is made available to them;
3. are in a financial and economic situation ensuring the performance of the contract;
4. are not liable to exclusion from the award procedure.

.....
/signature of authorised representative/

.....
address stamp of the Seller

.....
/date/

STATEMENT

DELIVERY OF THE REFUBRISHED SYSTEM FOR PECVD (PLASMA ENHANCED CHEMICAL VAPOUR DEPOSITION)

Acting in accordance with the contract award procedure, we certify that the device offered by us wasn't purchased and financed from public funds in period of 7 years preceding date of sale.

.....
/signature of authorised representative/

.....
address stamp of the Seller

.....
/date/

S T A T E M E N T

DELIVERY OF THE REFUBRISHED SYSTEM FOR PECVD (PLASMA ENHANCED CHEMICAL VAPOUR DEPOSITION)

Acting in accordance with the contract award procedure, we certify that the device offered by us:

1. purchased by company
(write in name and address of the company)

2. place and date of purchase
(write in place and date of purchase)

.....
/signature of authorised representative/

DELIVERY OF THE REFUBRISHED SYSTEM FOR PECVD (PLASMA ENHANCED CHEMICAL VAPOUR DEPOSITION)

for Instytut Technologii Elektronowej,
Al. Lotników 32/46, 02-668 Warsaw, Poland

List of the component tasks of the order that the Tender intends to assign to subcontractors

(in case no such tasks please fill in with dashes)

No.	The scope of contract, which the Tender intends to assign to subcontractors.
1.	
2.	
3.	
4.	
5.	

.....
/signature of authorised representative/