



THE SZEWALSKI INSTITUTE
OF FLUID-FLOW MACHINERY
POLISH ACADEMY OF SCIENCES
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Public procurement number: 21/PN/UB/2010

Terms of Reference (ToR)

In an open public procurement

for

***research service for the development of interfaces
for layers of piezoelectric transducers with the
delivery of the prototype***

valued under 193.000 EURO

.....
ACCEPTED

Gdańsk, June 2010



**INNOVATIVE
ECONOMY**
NATIONAL COHESION STRATEGY

UNIA
EUROPEJSKA



Project co-financed by the European Regional Development Fund under the Innovative Economy Operational Programme



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Natowski Kod Podmiotu Gospodarki Narodowej NCAGE: 0409H

I. NAME, ADDRESSES AND CONTACT POINT

THE SZEWALSKI INSTITUTE
OF FLUID-FLOW MACHINERY
POLISH ACADEMY OF SCIENCES
ul. Fiszera 14
80-231, Gdańsk

II. TYPE OF PROCEDURE

This public procurement is conducted in an open tender procedure under the Public Procurement Law from the 29th January 2004 (Journal of Laws of 2007 No. 223, item. 1655, as further amended).

III. OBJECT OF THE CONTRACT

1. DESCRIPTION:

Research service for the development of interfaces for layers of piezoelectric transducers with the delivery of the prototype

2. Common procurement vocabulary (CPV):

73120000-9; 93100000-3

3. Description of the contract or purchase:

1. development of interfaces for layers of piezoelectric transducers
2. the delivery of the prototype

Parameters of the prototype:

1. Total number of channels: 32.
2. Weight limit (without laptop): 3,5 kg
3. Dimensions limit (without laptop): 40 cm × 10 cm × 30 cm
4. Frequency range for excited signals from 10 kHz to 500 kHz, with selectable frequency of excitation with resolution 10 kHz or better.
5. Generated signal in the form of a wave package (sine with selectable modulation - Hanning, Hamming, triangle and rectangular window) with the total number of sine cycles 1-15.
6. Generated signals should be accurately repeated by the amplifier unit with a distortion that is less than 3%.
7. The prototype should allow generation of signals by 1 user defined channel and with user defined voltage amplitude.
8. Maximal peak to peak voltage for excitation of piezoelectric transducers: 120 V.
9. Voltage amplitude range from 5% to 100% of the maximal value; adjustable with software.

10. The prototype should work with piezoelectric transducers of capacity up to 10 nF.
11. Channel for signal generation can be chosen from all available channels.
12. The “zero” time associated with signal generation should repeatedly take place at the moment of generation: Acceptable time shift is 100 ns.
13. Frequency band of the prototype should allow precise registration of modulated sine signals with carrier frequency up to 500 kHz (frequency content of such signals spans over frequencies higher than 500 kHz).
14. Generating channel switch to registration mode at the same time as the generation starts.
15. Sequential registration in all 32 channels.
16. User can select the number of registering channels from 1 to 32.
17. Signal sampling frequency – 5 MHz minimum.
18. Resolution of analog to digital converter at least 12 bit.
19. Selectable number of sample points so that user can adjust the duration of signal acquisition.
20. Signals sent to a laptop through USB interface after measurements and saved as TXT files and MAT (MATLAB) files.
21. Prototype should have high signal to noise ratio.
22. Output connector as a male IDC connector.
23. Adjustable gain for registration channels.
24. Laptop for the data acquisition with WINDOWS XP operating system or newer.
25. This program installed on the laptop should allow to define all the generation and acquisition parameters mentioned in this specification and save the measurements in the TXT or MAT file.
26. Prototype should be accompanied with a description of the connection scheme in the IDC connector.
27. Prototype power supply AC 230V 50 Hz.

4. Other terms:

The Purchaser requires for the research results and the prototypes to be delivered to the Purchaser’s Office at the cost and risk of the Contractor. The Purchaser and Contractor will confirm receipt of the ordered equipment on a protocol. With the signing of the protocol, the prototype becomes the property of the Employer.

The Purchaser does not permit variants.

The Purchaser does not allow partial proposals.

IV. DEADLINE FOR THE COMPLETION OF THE CONTRACT

The Purchaser requires a delivery deadline of 30th November 2010 r.

V. CONDITIONS OF PARTICIPATION IN THE PUBLIC PROCUREMENT, AND EVALUATION OF THE DOCUMENTS

1. The contractor must meet the following conditions:
 - a) have the qualifications to carry out the activity or activities, if the law imposes an obligation to have these kinds of qualifications;
 - b) have the knowledge and experience;
 - c) have the necessary technical resources and personnel capable of executing the contract;
 - b) have a steady economical and financial status.
2. The Purchaser will evaluate these conditions on the basis of statements made by the Contractor and documents in accordance with the formula: meets / does not meet.
3. In the situations described in Article 24 of the Public Procurement Law, the Contractor shall be excluded from the proceedings and his offer will be rejected.

VI. REQUIRED STATEMENTS AND DOCUMENTS

1. For confirmation that the conditions set out in chapter V of this ToR, the Contractor must submit the following statements and documents:
 - 1) a statement of the conditions set out in Article 22, paragraph 1 of the Public Procurement Law (Annex 2 to the ToR). The declaration must be signed by the Contractor.
 - 2) The declaration of the absence of grounds for exclusion from the proceedings based on the Article 24, paragraph 1 of the Public Procurement Law (Annex 3 to the ToR). The declaration must be signed by the Contractor.
 - 3) List of at least ten services performed during the past 3 years prior to the initiation of the procurement (Annex 5 to the ToR).
 - 4) A document showing that the Company works legally and includes at least the name of the company, the current address and the signature of the governing body that gave the permission or registered this company In the district it has its headquarters.
2. The Purchaser does not allow electronic forms of documents and statements.
3. The documents submitted along with the tender, will not be returned after opening.
4. Documents not required by the Purchaser, and attached to the offer will not be taken into account when assessing tenders.

VII. PRINCIPLES FOR JOINT TENDERS BY CONTRACTORS

1. In accordance with Article. 23 of the Public Procurement Law, Contractors may jointly apply for a public contract.

2. Contractors jointly applying for the contract must appoint a representative to represent them in the proceedings.
3. The representation document must determine the scope of representation. In this document, all Contractors applying for the contract should be listed together. Authorized representatives of the Contractors must sign the document.
4. The tender must be signed by each of the Contractors occurring together or an authorized representative.
5. Contractors acting jointly take mutual responsibility for the improper fulfillment of obligations.
6. In the case of choosing the tender of Contractors starting together, before signing the contract, the Purchaser may request the cooperation agreement governing Contractors occurring together. The time for which an agreement was signed cannot be shorter than the period specified in the public procurement of the contract, together with the period of this warranty.

VIII. DESCRIPTION OF THE PREPARATION OF TENDERS

1. The tender should be prepared in accordance with the requirements of this ToR. Content of the tender must comply with the content of ToR.
2. The Contractor must submit a complete tender along with the documents listed below:
 - a) a document showing representation of all Contractors jointly applying for the contract (in the case a joint tender has been made);
 - b) a document stating the right to sign the tender, unless the right to sign the tender is stated in other documents submitted with the offer;
 - c) the statements and documents required to confirm the conditions for participation in the proceedings mentioned in chapter VI of this ToR.
3. The tender and other documents which the Purchaser identified in the form of annexes to this ToR, should be prepared in accordance with those forms, the contents and description of columns and rows.
4. The Tender must be submitted in written form, with a durable and legible technique.
5. In accordance with Article 9, paragraph 3 of the Public Procurement Law, the Purchaser accepts the submission of bids in the English language. Contractors will need to use the English version of the ToR.
6. The Purchaser does not allow tenders in electronic form.
7. Each of the documents which is included in the tender must be legible.
8. The tender must be signed by the Contractor. The Purchaser requires that the offer is signed in accordance with the representation set out in relevant documents such as the register or register of businesses.

9. All documents submitted with the tender may be submitted in original or photocopies certified as a true copy by the person entitled to make representations on behalf of the Contractor.
10. It is recommended that the pages of the tender were permanently connected to each other and numbered, and the number of pages was put down in the tender.
11. To prevent unfair competition, should the offer, statements or documents contain any information which is considered as the company confidential information, the Contractor, not later than the deadline for the submission of tenders, shall inform in the designated place in the tender, which part of the tender includes the company confidential information and cannot be disclosed.
12. Confidential information cannot include the information given at the opening of the tenders, that is the price, the contract period, the warranty period and terms of payment.
13. The Contractor shall submit an appropriate stipulation in the tender form, otherwise, the entire tender will be disclosed at the request of any party to the proceedings. The Purchaser recommends that confidential information was put in a separate inner enveloped marked "CONFIDENTIAL" or be stapled separately from other non-confidential aspects of the tender.
14. The tender must be submitted in one copy. Each contractor may submit only one tender.
15. The offer must be submitted in two (one in the other) envelopes, that will prevent accidental opening. The envelopes cannot be transparent. The outer packaging must be addressed:

Instytut Maszyn Przepływowych

im. Roberta Szewalskiego

Polskiej Akademii Nauk

OFFICE 113

ul. Fiszera 14

80-231, Gdańsk

Poland

And described: **„Przetarg nieograniczony na dostawę elastycznej matrycy z wbudowanymi przetwornikami piezoelektrycznymi – Nie otwierać przed 12.07.2010 r. godzina 12.05” – PLEASE COPY THE POLISH TEXT TO AVOID ACCIDENTAL OPENING!!!!**

The inner package should have the exact address of the Contractor, in order to allow returning the tender without opening it, in the case of a bid coming in after the deadline.

16. Before the tender submission deadline, the Contractor may make changes to the tender or withdraw it. Both the change and withdrawal must be received by the Purchaser in writing, before the tender submission deadline. The change or

withdrawal must be packaged and labeled as the tender and shall contain an additional indication of either "CHANGE" or "WITHDRAWAL".

IX. PLACE AND DEADLINE OF THE OPENING OF TENDERS

1. Tenders must be submitted at the premises of the Purchaser, or sent by courier to The Szewalski Institute of Fluid-Flow Machinery, Polish Academy of Sciences, Room 113, ul.Fiszera 14, 80-231, Gdańsk to the 12th July 2010 till 12.00 PM
2. Tenders received by the Purchaser after the submission deadline will be returned to contractors without opening, after the protest deadline.
3. The tenders will be opened at the premises of the Purchaser on the 12th of July 2010 at 12.05 PM
4. Opening of tenders will be public. Contractors may attend the public session of the opening.
5. Immediately before the opening of the tenders, the Purchaser will disclose the amount that will be allocated for financing the contract. During the opening of tenders the Purchaser will read the name and address of the Contractor, whose tender is opened and the information on the price, the date of implementation of the contract, the warranty period and terms of payment contained in the offer.
6. In the absence of Performers at the opening of tenders, the Purchaser will send the opening protocol at the written request of the Contractor.

X. INFORMATION ABOUT THE MEANS OF COMMUNICATION BETWEEN PARTIES, EXPLANATION OF THE TOR AND SUBMISSION OF DOCUMENTS.

1. Statements, applications, notices, inquiries and other information may be provided by the parties in writing, electronically (email) or by fax. In the case of communication via email or fax, each party, at the request of the other, must immediately confirm the reception of the fax. Statements, applications, notices, inquiries and other information should be directed to:
Instytut Maszyn Przepływowych
im. Roberta Szewalskiego
Polskiej Akademii Nauk
ul. Fiszera 14
80-231, Gdańsk
2. The contractor may request clarification of the ToR content. The Purchaser is obliged to provide clarification immediately, but no later than 2 days before the deadline for the submission of tenders, provided that the request for clarification of the terms of the contract is submitted to the contracting authority no later than half the time limit for submission of tenders.
3. The content of the inquiries together with the explanation will be sent to those Contractors, for whom the ToR was sent, as well as published on the Purchasers website, without revealing the source of inquiry.

4. In justified cases the Purchaser may, before the closing date, change the contents of this ToR. The changed ToR will be sent to all the Contractors who were given the ToR as well as the changes will be posted on the website on which the ToR is available.
5. If, as a result of changes in the content of the ToR, additional time to make changes in the tenders will be required, the Purchaser will extend the deadline for submission of tenders and will inform the Contractors to whom the ToR was given, as well as post this information on the website on which the ToR is available.
6. The Purchaser does not intend to convene meetings of all the Contractors in order to clarify inquiries concerning the content of ToR.
7. The Purchaser designates the following people to contact:
 - 1) Technical matters – Renata Opieka, Tel. +4858 6995 325 email: ropieka@imp.gda.pl
 - 2) Tender procedure - Jakub Sawicki, tel. +4858 6995 323 email: jsawicki@imp.gda.pl

XI. TIME IN WHICH THE CONTRACTOR IS BOUND WITH THE TENDER.

1. The contractor is bound with his offer for 40 days. The time starts with the day of the tenders being submitted.
2. The Contractor may extend that period by himself or at the request of the Purchaser. The Purchaser may only once, at least 3 days before the tender submission deadline, ask the Contractor for permission to extend the time limit for a defined period, but not more than 60 days.

XII. CRITERIA FOR SELECTING THE BEST TENDER

1. The evaluation of tenders will be carried out by members of the tender committee.
2. Only tenders not subject to rejection will be evaluated.
3. When choosing the most advantageous tender, the following tender evaluation criteria will be applied: **price - 100%**.
4. The tender with the lowest price which meets the requirements of the ToR and Public Procurement Law will be considered as the most advantageous one.
5. The most advantageous tender will receive the maximum number of points (100). The scoring of other tenders will be made according to the formula:

$$P_c = \frac{C_n}{C_b} \cdot 100 \text{ points}$$

where:

Pc – number of points awarded for the “price criterion”

Cn – the lowest price amongst the evaluated tenders

Cb – the price of the evaluated tender

6. The number of points will be calculated to two decimal places.
7. If there will be no possibility to choose the best offer on the grounds that tenders have been placed with the same price, the Purchaser will invite Contractors who submitted the tenders, to submit (within a period specified by the Purchaser) additional tenders. The price submitted in the additional tender cannot be higher than the one offered in the primary procedure.
8. If choosing a particular offer would lead to liability to tax, in accordance with the tax laws applicable in Poland, the Purchaser will evaluate such an offer and will add the current tax rates on goods and services, which would be paid in accordance with the applicable rules.
9. The Purchaser will correct obvious clerical errors, obvious errors with the accounting consequences and other errors involving the offer of non-compliance with the ToR, causing no significant changes in content - immediately notifying the Contractor, whose tender has been corrected.

The Purchaser will correct every mathematical operation in which the result is defective, assuming that the elements of the action are correct.

10. The purchaser does not predict an electronic auction.
11. Immediately after selecting the best tender, the Purchaser shall notify the Contractors who submitted tenders about:
 - 1) selecting the best bid, giving the Company name, registered office and address of the Contractor, whose tender is selected and the reason for its choice, and the name (company), headquarters and addresses of Contractors who submitted tenders, with a summary evaluation and comparison of bids containing scores awarded in the evaluation of tenders;
 - 2) Contractors whose tenders were rejected, stating the factual and legal grounds;
 - 3) Contractors, who were excluded from the tender procedures, giving the factual and legal grounds.
12. Immediately after selecting the best tender, the Purchaser shall post the information referred to in Paragraph 10 of Section 1 of this ToR, on the website and in a place accessible to the public at its head office (bulletin board).

XIII. INVALIDITY OF THE TENDER

1. The Purchaser will invalidate the tender only in cases mentioned in paragraph 93 art. 1 of the Public Procurement Law.
2. The Purchaser will inform all the Contractors who took part in the tender about the invalidity as mentioned in paragraph 93 article 3 of the Public Procurement Law.

XIV. AWARD OF THE PUBLIC PROCUREMENT.

1. The Purchaser shall provide the contract to the Contractor whose tender was not rejected and was chosen as the most advantageous price.
2. The Purchaser shall sign the contract within a period not less than 7 days from the date on the notice of the selection of the most advantageous tender, subject to Paragraph 94. Art. 1a of the Public Procurement Law.
3. The contractor, whose tender is selected as the most advantageous will be informed about the date and place of the signing of the contract. The Purchaser does not provide additional formalities for signing the contract.
4. A draft of the contract can be found in annex 4 to this ToR.

XV. DEPOSIT REQUIREMENTS

The purchaser does not require any deposits.

XVI. DESCRIPTION OF THE TENDER PRICE CALCULATION.

1. When calculating the tender price, the Contractor must take into account all the requirements referred to in this ToR. During the implementation of the contract the Purchaser shall not be accounted for any additional costs.
2. The tender price should be calculated by taking into account all the elements associated with proper and timely execution of the contract including shipment and any other costs that might be necessary for the proper fulfillment of the contract.
3. Tender price should be determined in the gross value of PLN or EUR, calculated to two decimal places. Foreign contractors may offer a net value, but the polish VAT will be added to compare the tenders.
4. If the tender will be submitted in EUR, the comparison will be made on the basis of the average exchange rate at the opening date of the tenders in accordance to the National Polish Bank average rates.
5. The tender price is the price indicated on the Tender form - Annex 4 to this ToR.
6. The tender price must be indicated in figures and words.

7. Employer does allow the possibility of settlements in EURO.

XVII. CONTRACT INSURANCE

The Purchaser does not require contract insurance

XVIII. SUBSTANTIVE PROVISIONS OF THE AGREEMENT

Significant changes to the provisions of that agreement in relation to the contents of the tender are prohibited.

XIX. TERMS OF WARRANTY

1. The Contractor shall provide a warranty for the delivered equipment for a period of not less than 12 months from the date on which the delivery protocol is signed. The delivery protocol shall be signed after receiving and testing the equipment.
2. The Contractor is obliged to attach any necessary warranty documents with the delivered prototypes.

XX. GENERAL INFORMATION

1. The Contractor must carefully read and refer to all of this ToR.
2. All attachments (annexes) are an integral part of the ToR.
3. Costs associated with the preparation, submission of the tender and participation in the proceedings shall be borne by the Contractor.
4. The purchaser will not provide reimbursement of the costs of participation in the proceedings.

XXI. NOTICE ABOUT THE LEGAL PROTECTION MEASURES.

1. Contractors, and others whose interest in obtaining the contract has suffered or may suffer harm as a result of a breach by the, are entitled to remedies provided for in Division VI of the Public Procurement Law.

Name of the Project: „System monitorowania stanu technicznego konstrukcji metoda analiz propagacji fal Lamba”

Number of Project: WND - POIG.01.03.01-22-078/09

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ATTACHMENTS

Annex 1 – Tender form

Annex 2 – Statement of the conditions set in par. 22 art. 1 of the Public Procurement Law

Annex 3 - Statement that no grounds for exclusion from the proceedings based on paragraph 24 article 1 of the Public Procurement Law occur.

Annex 4 – Contract draft

Annex 5 – List of services