

International Bidding for Mechanical and Electrical Products Bidding Document

(Book Two)

Project Name: X-ray Fluorescence

Spectrometer Procurement Project

Bidding Entity: Tianjin Heavy Equipment
Engineering Research Co., Ltd.

Bid No. : [5256-264TGJTB1213](#)

Tianjin Jiantong Engineering Bidding Consulting
Co., Ltd.

August 2026

Table of Contents

Book One

Chapter 1 Bidder's Instructions See the International
Bidding Documents for Mechanical and
Electrical Products (Volume I)

Chapter 2 General Contract Terms See International Bidding
Documents for Mechanical and Electrical
Products (Volume I)

Chapter 3 Contract Format See International Bidding
Documents for Mechanical and Electrical
Products (Volume I)

Chapter 4 Bid Document Format See International Bidding
Documents for Mechanical and Electrical
Products (Volume I)

Book Two

Chapter 5 Invitation to
Bid..... 3

Chapter 6 Bid Document
Form..... 8

Chapter	Seven	Special	Contract
Clauses.....			18

Chapter	8:	List	of	Goods	Requirements	and	Technical
Specifications.....							20

Chapter 5 Invitation to Bid

Date: August 11, 2026

Bid No. : 5256-264TGJTB1213

Project Name: X-ray Fluorescence Spectrometer Procurement Project

Tianjin Jiantong Engineering Bidding Consulting Co., Ltd., on behalf of Tianjin Heavy Equipment Engineering Research Co., Ltd., has issued a public international competitive bidding announcement for the following products and services on August 11, 2026. This tender will be conducted using the traditional bidding method, and qualified bidders are now invited to participate.

1. Bidding Requirements

1.1 Project Overview: Tianjin Heavy Equipment Engineering Research Co., Ltd. intends to pre-purchase one set of X-ray fluorescence spectrometer.

1.2 Funding availability or source confirmation: Funds have been secured.

1.3 Statement on the project meeting tendering conditions: This project has met the requirements for tendering.

2. Bidding Content

2.1 Project Implementation Location: No. 20 Haixing Street, Tianjin Economic-Technological Development Area

2.2 List of Bidding Products:

Serial Number	Product Name	Quantity	Delivery time	Delivery location	Note
1	X-ray Fluorescence Spectrometer Procurement	1 set	Six months after the contract is signed	CIP Tianjin	

	Project				
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2.3 Brief Technical Specifications:

2.3.1 This equipment includes the main unit, analytical software, stabilized power supply, cooling circulation water chiller, spare parts, auxiliary equipment, etc. Measurement range: elements from atomic number 8 (O) to 95 (Am) in the periodic table. Content range: 0.0001% to 100%.

2.3.2 Equipment manufacturing shall comply with national, American, European, and ISO standards for testing and instrumentation. Instruments and meters used must employ the International System of Units (SI) and come with valid metrological certification. Real-time data during testing shall be displayed in SI units, and equipment calibration and control methods must also meet the aforementioned standard requirements.

2.3.3 The equipment shall have sufficient strength, rigidity, reliable stability, and high precision to ensure the system has good dynamic performance.

2.3.4 The equipment shall be based on advanced and proven designs from recent years within the industry, manufactured using advanced processes, materials, and technologies, ensuring high reliability, excellent operability, and ease of maintenance, capable of long-term stable and continuous operation.

2.3.5 The equipment must comply with China's relevant environmental protection and safety standards.

For specific requirements, please refer to Chapter 8 "List of Goods Requirements and Technical Specifications" in this document.

3. Bidder Qualification Requirements

3.1 Qualifications or performance requirements for bidders:

1) Bidders must be manufacturers of X-ray fluorescence spectrometers or their authorized agents. If the bidder is a manufacturer, proof of manufacturing status must be provided. If the goods offered by the bidder are not manufactured by the bidder itself, the bidder must provide an official authorization letter from the manufacturer (format as specified in the "International Bidding Documents for Mechanical and Electrical Products" (Volume 1)). The tenderer will only accept authorizations issued directly by the manufacturer to the bidder, or authorizations issued by the manufacturer's trading company or general agent in China to the bidder.

2) Bidders must provide the original or a copy of the bank credit certificate issued by the opening bank of their basic account within three months prior to the bid opening date (if the credit certificate explicitly states that photocopies are invalid, the original must be provided; the tendering agency reserves the right to verify the original).

3) Performance Requirements: The bidder must have actual and successful experience in supplying X-ray fluorescence spectrometers to China, and shall provide supporting documents such as supply agreements demonstrating that the bidder was the supplier and clearly indicating the model numbers of the supplied products. The complete system configuration consisting of the product model and its corresponding functional accessories must have at least three supply contracts in China. Copies of these contracts must be submitted, with no parts obscured except for the contract price (the supplier in the contract may be either the manufacturer or an authorized agent of the product being bid).

*4) After-sales service: The product must have a **dedicated repair**

station or after-sales service center within China, with relevant certification provided by the manufacturer.

3.2 Acceptance of joint venture bids: Not accepted.

3.3 Potential bidders who have not registered with Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. and purchased the bidding documents shall not participate in the bidding.

4. Purchase of Bidding Documents

Bid document purchase start time: 09:00 a.m., August 11, 2026 (Beijing Time)

Bid document purchase deadline: 16:00, August 18, 2026 (Beijing time)

Bid document purchase location: Front desk of Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. (3rd Floor, Building 2, Optoelectronic Industry Park, No. 335 Jinjiang Road, Tanggu Ocean Science and Technology Park, Binhai New Area, Tianjin)

Is the tender document available for online sale? No

Method of obtaining the tender documents: on-site pickup or by email

Bid document price: 1,000 RMB / 148 USD

Other notes:

4.1 Bidders who have the capability to undertake this project and meet the specified qualification requirements shall provide the following documents as required:

4.1.1 Domestic Bidders: (1) Business license; (2) Proof of legal representative identity or a letter of authorization from the legal representative along with the ID card of the authorized person; (3) Documentation proving manufacturer or agent status. All documents must be submitted as copies stamped with the official company seal.

4.1.2 Foreign Bidders: (1) Valid and legal documents proving the company's legitimacy; (2) Company authorization letter; (3) Valid and legal identification documents of the authorized representative; (4)

Proof materials from the manufacturer or agent. All documents must be submitted as copies bearing the official company seal.

4.2 Time for obtaining the tender documents: from August 11, 2026 to August 18, 2026, daily from 9:00 AM to 11:30 AM and from 1:30 PM to 4:00 PM (Beijing time), excluding statutory holidays.

4.3 Obtain the tender documents by email or in person.

4.3.1 Bidders who are capable of undertaking this project shall obtain the tender documents by email. They must send color scanned copies of all documents required under 4.1 to the email address tjjtzbzx003@163.com and call 022-66595088 to obtain the "Bidder Registration Form" and bank account information for payment of the tender document fee.

4.3.2 Bidders who are capable of undertaking this project may obtain the tender documents in person by submitting all required paper materials as specified in Section 4.1 to the front desk of Tianjin Jiantong Engineering Tendering Consulting Co., Ltd. (Address: 3rd Floor, Building 2, Optoelectronic Industry Park, No. 335 Jinjiang Road, Tanggu Ocean Science and Technology Park, Binhai New Area, Tianjin) for registration and collection of the tender documents.

5. Submission of Bidding Documents

5.1 Bid submission deadline (bid opening time): 09:30 a.m., September 1, 2026 (Beijing time)

5.2 Bid submission location: Room 3, Building 2, Optoelectronics Industrial Park, No. 335 Jinjiang Road, Tanggu Ocean Science and Technology Park, Binhai New Area, Tianjin

5.3 Bid opening location: Room 3, Building 2, Optoelectronics Industrial Park, No. 335 Jinjiang Road, Tanggu Ocean Science and Technology Park, Binhai New Area, Tianjin

6. Media issuing the announcement

6.1 This announcement is simultaneously published on the China International Bidding Network and the China Bidding and Tendering Public Service Platform.

7. Contact Information

Bidding Entity: Tianjin Heavy Equipment Engineering Research Co., Ltd.

Address: No. 20 Haixing Street, Tianjin Economic-Technological Development Area

Contact: Zhang Yu

Contact: 022-58808796

Bidding Agency: Tianjin Jiantong Engineering Bidding Consulting Co., Ltd.

Address: 3rd Floor, Building 2, Optoelectronics Industrial Park, No. 335 Jinjiang Road, Tanggu Ocean Science and Technology Park, Binhai New Area, Tianjin

Contact: Zhang Xinhui

Contact: 022-25855230, 022-66595088

Email: tjjtzbzx003@163.com

8. This project operates on the China International Bidding Network. Bidders must complete registration on the China International Bidding Network prior to bidding. The winning bid results will be publicly announced on the "China International Bidding Network" and the "China Bidding and Tendering Public Service Platform."

9. Additional Notes

File fee remittance information

Account Name: Tianjin Jiantong Engineering Bidding Consulting Co., Ltd.

RMB Account Opening Bank: China Construction Bank, Tianjin
Guangzhou Road Branch

RMB Account Number: 12050167045200000254

Account Name: Tianjin Jiantong Engineering Bidding Consulting Co.,
Ltd.

Tianjin Jiantong Engineering Bidding Consulting Co.,Ltd
Foreign Currency (USD) Account Opening Bank: China Construction
Bank Co., Ltd. Tianjin Tanggu Branch

CHINA CONSTRUCTION BANKCORPORATION TIANJIN
TANGGU SUB-BRANCH

Foreign Currency (USD) Account: A/C: 12050167590000003788

Overseas (RMB) Account Opening Bank: China Construction Bank
Corporation, Tianjin Tanggu Branch

CHINA CONSTRUCTION BANKCORPORATION TIANJIN
TANGGU SUB-BRANCH

Offshore (RMB) Account: A/C: 12050167590000003787

Bank Address:

No. 1 Huanghai Road, Tianjin Economic-Technological Development
Area

No. 1 Huanghai Road, TEDA, Tianjin, China

SWIFT CODE:PCBCCNBJTJX

Tianjin Jiantong Engineering Bidding Consulting Co., Ltd.

Registered Address: Room 215, Building B, Beitan Construction
Development Building, No. 3 Quanzhou Road, Binhai-Zhongguancun
Science Park, Tianjin Economic and Technological Development Zone
Room 215, Block b, No.3 Quanzhou Road, Binhai Zhongguancun Science
Park, Tianjin Economic-Technological Development Area

Attachment:

Special Notice

To all potential bidders:

This project allows for obtaining documents either on-site or by email. Please note the following important instructions regarding the acquisition of bidding (procurement) documents/qualification review documents (hereinafter referred to as "bidding documents"):

(一) Online Registration: Potential bidders who wish to obtain the electronic version of the tender documents must complete registration on Bilingwang (<https://www.ebnew.com>) or the Electronic Trading Platform for Mechanical and Electrical Products Bidding and Tendering (<https://www.chinabidding.com>) before the deadline for purchasing the tender documents. Potential bidders need only register once, although multiple accounts may be created by different authorized personnel. The trading platform will verify the consistency between the bidder's registration information and the scanned copies submitted.

(二) Bidders capable of undertaking this project may obtain the tender documents by email. They are required to send color scanned copies of all required materials to the email address tjjtzbzx003@163.com and call 022-66595088 to obtain the "Bidder Registration Form" and bank account information for payment of the tender document fee. Alternatively, bidders may collect the tender documents in person by submitting all required hard copies to the front desk of Tianjin Jiantong Engineering Tendering Consulting Co., Ltd. (Address: 3rd Floor, Building 2, Optoelectronic Industry Park, No. 335 Jinjiang Road, Tanggu Ocean Science and Technology Park, Binhai New Area, Tianjin).

(三) Potential bidders may choose to obtain the tender documents either on-site or by email, but must still complete the free registration process.

(四) Other matters

1、 The Help Center on the trading platform's homepage provides user manuals, allowing potential bidders to download them and follow the instructions to register, log in, purchase and download electronic tender documents online, pay download fees, and apply for or collect invoices.

2、 For any platform operation issues, please call the unified service hotline of the trading platform: 400-0606-000. Hotline service hours are from 9:00 to 12:00 and 13:30 to 17:00 on weekdays.

Chapter 6 Bid Document Form

This Bid Document provides specific details regarding the procurement of goods, serving as a supplement and amendment to the Instructions to Bidders. In case of any conflict, this document shall prevail. For specific contents or terms not covered in this Bid Document, the corresponding provisions and clauses in the "Instructions to Bidders" of the International Bidding Documents for Mechanical and Electrical Products (Volume I) shall apply. The relevant selection options in this table shall be determined by marking a black "■" or a checkmark "√" within the "□".

Clause Number	Content
I. Introduction	
1.1	Bidding Entity: Tianjin Heavy Equipment Engineering Research Co., Ltd. Funding source: secured Bidder's phone number: 0086-22-58808796 Bidder's fax: / Bidder's email: / Bidder's Address: No. 20 Haixing Street, Tianjin Economic-Technological Development Area
1.2	Bidding Agency Name: Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. Bidding Agency Contact: Zhang Xinhui Bidding Agency Phone: 0086-22-25856848 Bidding Agency Fax: / Bidding agency email: tjjtzbx003@163.com

	Address of the bidding agency: 3rd Floor, Building 2, Optoelectronics Industrial Park, No. 335 Jinjiang Road, Tanggu Ocean Science and Technology Park, Binhai New Area, Tianjin (Postal Code: 300450)
1.3	Project Overview and Funding Nature: Tianjin Heavy Equipment Engineering Research Co., Ltd. plans to pre-purchase one set of <u>X-ray</u> fluorescence spectrometer. Project funding status: Funds have been secured.
II. Tender Documents	
5.2	■ The bidding documents for this project are prepared in Chinese or in both Chinese and English. When prepared in both languages, the two versions shall have equal validity; in case of discrepancies between the Chinese and English versions, the Chinese version shall prevail. ■ This project also provides an electronic version of the bidding documents. The electronic version has the same legal effect as the printed version; in case of any discrepancy, the printed version shall prevail.
6.1	If a bidder has any objections to the tender documents, they must be submitted to the tenderer or the tendering agency at least 10 days before the bid submission deadline.
III. Preparation of Bidding Documents	
8.1	Bid language: Bid documents must be written in Simplified Chinese. If supporting documents in other languages are included, the bidder shall provide a Chinese translation, and the Chinese version shall prevail during evaluation.

10.3	This tender does not accept alternative proposals.
11.2	• The bidder shall list the product supply list, itemized quotations, and total price on the bid itemized quotation form. • This project does not allow missing or incomplete items in the bid quotation; otherwise, the bid will be rejected.
11.5	The maximum bid limit for this tender is 2.6 million RMB. The maximum bid limit or calculation method for this tender: <u>Not applicable to this project.</u>
*11.6.1	1) Bid quotation (goods manufactured within the customs territory): <u>price delivered to the buyer's project site (including tax).</u> Related costs: <u>The bidder shall specify in the quotation form (including but not limited to) the factory price of goods (EXW), transportation costs, loading and unloading fees, insurance, installation and commissioning fees, training fees, third-party equipment calibration fees, and all other related expenses to the destination.</u> 2) Bid quotation (for goods already imported before the bid deadline): <u>selling price (including import duties and sales taxes).</u> Related Costs: <u>Bidders shall specify in the quotation form (including but not limited to) the CIP price of goods (Tianjin), customs clearance fees (covering all costs incurred at the port of destination), freight and insurance charges to the final destination, loading and unloading fees, customs duties, value-added tax, commodity inspection fees, installation and commissioning fees, training fees, third-party equipment verification fees, and all other related expenses. At the same time, complete the International Bidding Product Information Form (format as detailed in the attachment).</u>
*11.6.2	Bid quotation (for goods supplied from outside the territory of the People's

	Republic of China): CIP price of goods (Tianjin). Related costs: The bidder shall specify in the quotation form (including but not limited to) all relevant <u>costs such as cost, insurance, and freight (CIF)</u> <u>to</u> Tianjin, installation and commissioning fees, training fees, third-party equipment calibration fees, equipment handling fees, etc., excluding customs duties and value-added tax. Note: 1) The bidder shall enter into an import equipment procurement contract with the foreign trade agency company designated by the tenderer (end user), i.e., First Heavy Industry Group International Resources Co., Ltd., at the winning bid price, with the end user clearly stated in the contract. 2) The inland transportation costs, loading and unloading fees, equipment handling charges, insurance premiums, customs clearance fees, and all other incidental local expenses incurred in transporting the goods from the port of entry to the final destination shall be borne by the foreign trade agent designated by the tenderer, "One Heavy Group International Resources Co., Ltd." The bid quotation does not include these costs.
11.7	Price terms such as EXW, CIF, CIP, and DDP shall be interpreted in accordance with the latest version of the Incoterms® rules currently issued by the International Chamber of Commerce in Paris.
11.9	The bid price submitted by the bidder shall remain fixed throughout the contract execution and may not be changed for any reason. Any bid containing a request for price adjustment will be deemed non-substantive and rejected.
12.1	Currency for bidding on goods provided within the territory of the People's Republic of <u>China: Renminbi</u> .
12.2	Currency for bidding on goods provided outside the customs territory of the People's Republic of <u>China: Renminbi</u> .

*13.1	Does this tender accept joint venture bids: ☐ Yes ☒ No
13.3	Bidders must provide the following supporting documents: 1) Bidders must be manufacturers of X-ray fluorescence spectrometers or their authorized agents. If the bidder is a manufacturer, proof of manufacturing status must be provided. If the goods offered by the bidder are not manufactured by the bidder itself, the bidder must provide an official authorization letter from the manufacturer (format as specified in the "International Bidding Documents for Mechanical and Electrical Products" (Volume 1)). The tenderer will only accept authorizations issued directly by the manufacturer to the bidder, or authorizations issued by the manufacturer's trading company or general agent in China to the bidder. 2) Bidders must provide the original or a copy of the bank credit certificate issued by the opening bank of their basic account within three months prior to the bid opening date (if the credit certificate explicitly states that photocopies are invalid, the original document must be submitted; the tendering agency reserves the right to verify the original). 3) Performance Requirements: The bidder must have actual and successful experience in supplying X-ray fluorescence spectrometers to China, and shall provide supporting documents such as supply agreements demonstrating that the bidder was the supplier and clearly indicating the product models supplied. The complete system configuration consisting of the proposed product model and its corresponding functional accessories must have at least three supply contracts in China. Copies of these contracts must be submitted, with no parts obscured except for the contract price (the supplier in the contract may be either the manufacturer or an

	authorized agent of the product). *4) After-sales service: The product must have a dedicated repair station or after-sales service center within China, with relevant certification provided by the manufacturer.
14.3	2) The list of spare parts and special tools required for continuous operation for <u>2</u> years after the warranty period must be included in the bid total price and detailed in the breakdown.
14.3	*4) Forms of technical support documentation: printed materials publicly released by the manufacturer, test reports issued by testing agencies, product descriptions on the manufacturer's official website, data sheets, or technical explanations signed by an authorized representative of the manufacturer and stamped with the official seal.
*15.1	Bid Security Amount ■ Fixed amount: <u>RMB 20,000</u> <u>or dollars: 2,965 dollars.</u> □ Proportional range: .

*15.3	Bid Security Form: (Provide one of the following specified forms) ■ Bank guarantee or irrevocable letter of credit ☐ Banker's Draft ☐ Certified Check ☐ Sight Draft ■ Other forms: Bank transfer. Note: 1) For domestic bidders submitting bid security via bank remittance, the bid security must be transferred from the bidder's own basic account. The remittance should include a note specifying the name of the project and the purpose. A copy of the remittance voucher and a copy of the account opening permit (or proof of basic deposit account information) must be attached to the bid documents. 2) For overseas bidders submitting bid security via wire transfer, the payment must be transferred from the bidder's own basic bank account. The wire transfer should include a note specifying the name of the project and the purpose of the payment. A copy of the wire transfer receipt (which must clearly show the bidder's name and account information; if this information is not available on the receipt, additional supporting documents such as a bank statement must be provided), the bank account opening permit (or proof of basic deposit account information), and the business license (foreign bidders must provide legally valid documentation proving their corporate status) shall be attached to the bid documents. 3) If the bid security is submitted in the form of a bank guarantee or an irrevocable letter of credit, a copy of the bank guarantee or irrevocable letter of credit shall be attached to the bid documents. 4) Bidders should reasonably consider the actual time for the bid security to be received and ensure it is credited before the deadline for submission of bid documents.
*16.1	Bid validity period: <u>90</u> days. Bids with an insufficient validity period will be considered non-substantive responses and rejected.
17.1	Original copies: <u>1</u> copy; Number of copies: <u>4</u>; Electronic version: <u>2</u> copies, including the Word format bid document and a color-scanned PDF copy of the original with official seal.

	If the electronic version of a document differs from its paper version, the original paper copy shall prevail.
17.2	The original bid document must be printed or written in non-fading ink and signed by the legal representative or an officially authorized representative. The authorized representative must include a written "Authorization Letter from the Organization Head" (format as shown in Volume One) attached to the bid document. Each page of the bid document shall be signed by the legal representative or his authorized representative with their last name or initials. Each page of the quotation section, key commercial and technical terms (parameters) (those marked with an asterisk ""), corresponding responses, as well as <u>technical support</u> documents, must be signed by the legal representative or their authorized representative using the full surname or initials on every page; otherwise, the bid will be rejected.
4. Submission of Bidding Documents	
18.1	The bid opening summary table and the bid security deposit must be submitted separately in sealed envelopes, with the words "Bid Opening Summary Table" and "Bid Security Deposit" clearly marked on the envelopes.
18.2	1) Bids should be submitted to: Room 3, Building 2, Optoelectronics Industrial Park, No. 335 Jinjiang Road, Tanggu Ocean Science and Technology Park, Binhai New Area, Tianjin.
18.2	2) Project Name, Title and Number of the Invitation to Bid: _ <u>Project Name: Procurement of X-ray Fluorescence Spectrometer;</u> <u>Tender Number: 5256-264TGJTB1213.</u>

19.1	Bid deadline: <u>September 1, 2026 (Beijing time)</u>. Bid submission deadline: <u>09:30 a.m. (Beijing time)</u>.
V. Bid Opening and Evaluation	
22.1	Bid opening date: <u>September 1, 2026 (Beijing time)</u>. Bid opening time: <u>09:30 a.m. (Beijing time)</u>. Bid opening location: <u>Third-floor bid opening room, Building 2, Optoelectronics Industrial Park, No. 335 Jinjiang Road, Tanggu Ocean Science and Technology Park, Binhai New Area, Tianjin.</u>
23.1	Bidding Evaluation Method ■ Lowest Bid Price Method □ Comprehensive Evaluation Method
*24.5.1	In the business evaluation process, a bid shall be rejected if any of the following circumstances occur: 1、The bidder or its manufacturer has an interest relationship with the tenderer that may affect the fairness of the bidding process; 2、Bidders who participated in the preliminary consultation or preparation of the tender documents for the project; 3、Bidders whose legal representatives are the same person or who have a controlling or management relationship with each other; 4、The bid document is not signed as required by the tender documents; 5、The bidding consortium has not submitted a joint bidding agreement; 6、The bidder's bid document or qualification certification materials are not provided, or do not meet national regulations or the requirements of the tender documents; 7、A bidder shall not submit two or more different bidding proposals or quotations, except when the tender documents

	require submission of alternative proposals. 8、 The bidder fails to submit the bid security as required by the tender documents, or the amount of the security is insufficient, the validity period of the bank guarantee is inadequate, or the form of the bid security or the issuing bank does not meet the requirements specified in the tender documents. 9、 Bids that fail to meet the essential commercial terms marked with an asterisk ("*") in the tender documents; 10、 The bid price exceeds the maximum bid limit set in the tender documents; 11、 The bid validity period is insufficient; 12、 Bidders who engage in illegal activities such as bid rigging, fraud, or bribery; 13、 Other commercial terms specified in the tender documents that may result in bid rejection. The materials listed above must not be clarified or supplemented after the bid opening. If the tender documents require submission of original documents, originals must be provided; otherwise, the bid will be rejected.
24.5.2	During the technical evaluation process, a bid shall be rejected if any of the following circumstances occur: 1、 The bid document fails to meet the essential requirements of the technical specifications marked with an asterisk ("") in the tender documents, or lacks technical documentation supporting the essential terms (parameters) marked with an asterisk ("*") as required by the tender documents. 2、 Technical specifications in the bid documents exceed the maximum allowable deviation range or the maximum number of items

	permitted; 3、Responses in the technical specifications of the bid documents that do not match the facts or constitute false bidding; 4、A bidder who copies the technical specifications section of the tender documents as part of their bid submission; 5、Other technical requirements specified in the tender documents that may result in bid rejection.
25.1	Bid evaluation currency: <u>Renminbi</u> .
26.2	When calculating the bid evaluation total price, the delivery of goods to the installation site designated by the tenderer shall be taken as the basis. If there are price adjustments, the deviation surcharge shall be included in the calculation of the bid evaluation total price. When calculating the deviation surcharge for products within the customs territory, relevant taxes and fees included in the bid quotation shall be deducted. The method for calculating the bid evaluation total price is as follows: 1) Offshore products: CIP price + surcharge for missing items + surcharge for technical and commercial deviations + other costs (installation and commissioning fees, training fees, third-party equipment calibration fees, equipment handling fees, etc.) 2) Products within the customs territory: factory price (including VAT) + consumption tax (if applicable) + transportation and insurance fees + surcharges for missing or incomplete items + surcharges for technical and commercial deviations + other expenses (such as installation and commissioning fees, training fees, third-party equipment calibration fees, equipment handling fees, etc.). Special Note: If the products offered by bidders are manufactured within the customs territory, and if the bid price

	already includes relevant taxes and fees, in order to ensure that the base bid price used for evaluating deviations of general terms (parameters) during price evaluation can be calculated after deducting such taxes and fees, each bidder shall separately state the total amount and detailed breakdown of the included taxes and fees. The Bid Evaluation Committee will verify the reasonableness of these amounts. If deemed reasonable, the committee will use the bid price minus this total amount as the base bid price for evaluation. If deemed unreasonable or if the bidder fails to provide a separate quotation, the base bid price (after deducting relevant taxes and fees) will be calculated using the simplified formula provided in this tender document: Base Bid Price (after tax deduction) = Bid Price (including taxes and fees) / (1 + VAT rate + Consumption Tax rate). 3) For products imported before the bid deadline: sales price (including import duties and value-added tax at the sales stage) + transportation and insurance costs + surcharge for missing or incomplete items + surcharge for technical and commercial deviations + other expenses. Special Note: If the product offered by a bidder has already been imported prior to the bid deadline, and if the bid price includes import duties, value-added tax at the sales stage, and other related taxes and fees, in order to ensure that the adjusted bid price used for evaluating deviations from general terms (parameters) during price evaluation is based on the net price after deducting these taxes and fees, each bidder must separately state the total amount and detailed breakdown of all included taxes and fees in their bid quotation, or provide a separate CIP quotation. The Evaluation Committee will assess the reasonableness
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	of such submissions. If deemed reasonable, the Evaluation Committee will use the bid price minus the total amount of these taxes and fees as the benchmark price for evaluation. If deemed unreasonable or if the bidder fails to provide a separate CIP quotation, the original bid price will be taken as the benchmark price for evaluation (and it will be treated as if no taxes or fees were included in the bid price).
26.4.1	Inland transportation, insurance, and other related services. The bidder shall provide: (1) Estimated dimensions and shipping weight of each package. (2) Factory price (EXW), cost, insurance and freight to destination (CIF), carrier and insurance paid to... (CIP) for each package
26.4.2	Deviation from delivery schedule Selected option: ☒ Option 1): Section 26.4.2.1 of the Bidder's Instructions in Volume I of the Tender Documents ☐ Option 2): Section 26.4.2.2 of the Bidder's Instructions in Volume I of the Tender Documents ☐ Option 3): Section 26.4.2.3 of the Bidder's Instructions in Volume I of the Tender Documents ☐ Other options: _____ Percentage adjustment (%): <u>For each week of delay beyond the delivery period specified in the tender documents (with any fraction of a week counted as one full week), the evaluation price shall be increased by 0.5% based on the bid price for the equipment.</u>
26.4.3	Deviation from payment terms Selected option: ☐ Option 1): Section 26.4.3.1 of the Bidder's Instructions in Volume I of the Tender Document

	Adjustment percentage (%): <u>1%</u> ☐ Option 2): Section 26.4.3.2 of the Bidder's Instructions in Volume I of the Tender Documents where: the annual interest rate used for adjustment: _____ ☒ Option 3): Payment terms must not be deviated from; any deviation will result in the rejection of the bid.
26.4.4	Cost of components and spare parts Selected option: ☒ Option 1): Section 26.4.4.1 of the Bidder's Instructions in Volume I of the Tender Document ☐ Option 2): Section 26.4.4.2 of the Bidder's Instructions in Volume I of the Tender Documents ☐ Option 3): Section 26.4.4.3 of the Bidder's Instructions in Volume I of the Tender Documents ☐ Option 4): Other options .
26.4.5	Domestic spare parts and after-sales service facilities for bidders: <u>see the detailed specifications in Chapter 8, Technical Specifications and Requirements.</u>
26.4.6	Estimated operating and maintenance costs: Not applicable
26.4.7	Equipment performance and productivity: Not applicable
26.4.8	Other additional evaluation factors and criteria: Any failure to comply with the terms explicitly stated in national laws and regulations or in the tender documents (Volume I and Volume II) that may lead to disqualification of a bid shall result in the rejection of such bid. 2. In the tender documents (Volume II), items marked with an asterisk (*) are key technical specifications and important commercial terms; failure to meet any of these key technical

	specifications or terms will result in disqualification of the bid. 3. If omissions in equipment, spare parts, service terms, etc., fall within the acceptable range specified in the tender documents, adjustments will be made accordingly as stipulated. However, if such omissions exceed the acceptable range, the bid will be rejected. 4. For each negative deviation in general technical specifications (parameters), the evaluation price will be increased by 0.5% based on the bid price of the equipment, with a maximum increase not exceeding <u>1%</u> of the equipment's bid price. The method for calculating surcharges due to deviations in commercial terms such as delivery schedule and payment conditions may be separately specified in the tender documents. 5. If the cumulative number of negative deviations in general business and technical terms (non-* parameters) is equal to or greater than <u>5</u>, the bid will be rejected. 6. The "Technical Specifications Response/Deviation Table" must be completed truthfully and item by item in accordance with the specific requirements of Chapter 8 of the tender documents, based on the bidder's own product specifications and samples. For terms that can be expressed quantitatively, bidders must provide clear responses or functional descriptions. Any bid that merely copies the technical specifications from the tender documents or simply marks "complies" or "meets" will be rejected. Deviations not listed in the "Technical Specifications Response/Deviation Table" shall be deemed as full compliance with the tender requirements. However, if the evaluation committee identifies any deviations elsewhere in the bid documents, such deviations shall be
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	considered non-compliant with the tender requirements regardless of how the bidder has responded in this table.
26.5	Number of shortlisted candidates: <u>3.</u>
27	Comprehensive Evaluation Method: <u>(Not applicable).</u>
6. Granting the Contract	
34.1	Within 30 days of the issuance of the "Notice of Award," the successful bidder shall enter into a written contract in accordance with the bidding documents and the successful bidder's tender submission. The successful bidder may not enter into any other agreement with the tenderer that deviates from the essential terms of the contract.
36.1	Bidding Service Fee: The successful bidder shall pay the bid service fee to the bidding agency according to the following standards and regulations: Charge the winning bidder a service fee. After winning the bid, the successful bidder shall pay the bidding agency service fee and expert review fee to the bidding agency. Bidders should include these related costs in their bid quotations as a comprehensive amount, without listing them separately. The relevant pricing methods are as follows: (1) Bidding Agency Service Fee Bidding agency fee: calculated at 40% of the fee standards specified in the National Development and Reform Commission document "Ji Jia Ge [2002] No. 1980" and the National Development and Reform Commission's "Fa Gai Jia Ge [2011] No. 534". This project is a goods-related project, and the total winning amount specified in the bid award notice shall serve as the basis for calculating the fee. (2) Expert review fee: The expert review fee shall be settled based on actual expenses incurred.

	2. The currency for the bid service fee shall be the same as that used in the contract signed with the successful bidder. 3. The account for collecting bidding service fees and document fees is as follows: Account Name: Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. RMB Account Opening Bank: China Construction Bank, Tianjin Guangzhou Road Branch RMB Account Number: 12050167045200000254 Account Name: Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. Tianjin Jiantong Engineering Bidding Consulting Co.,Ltd Foreign Currency (USD) Account Opening Bank: China Construction Bank Co., Ltd. Tianjin Tanggu Branch CHINA CONSTRUCTION BANKCORPORATION TIANJIN TANGGU SUB-BRANCH Foreign Currency (USD) Account: A/C: 120501675900000003788 Overseas (RMB) Account Opening Bank: China Construction Bank Corporation, Tianjin Tanggu Branch CHINA CONSTRUCTION BANKCORPORATION TIANJIN TANGGU SUB-BRANCH Offshore (RMB) Account: A/C: 120501675900000003787 Bank Address: No. 1 Huanghai Road, Tianjin Economic-Technological Development Area No. 1 Huanghai Road, TEDA, Tianjin, China SWIFT CODE:PCBCCNBJTX Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. Registered Address: Room 215, Building B, Beitan Construction Development Building, No. 3 Quanzhou Road, Binhai-Zhongguancun Science Park, Tianjin Economic and Technological Development Zone Room 215, Block b, No.3 Quanzhou Road, Binhai Zhongguancun Science Park,Tianjin Economic-Technological Development Area 4. The bid security deposit shall be received at the following account: Account Name: Tianjin Jiantong Engineering Bidding Consulting Co., Ltd.
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	Account Name: Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. Bank: Tianjin Binhai Rural Commercial Bank, Central Business District Branch RMB Account Number: 101192000212673 Account Name: Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. Foreign Currency (USD) Bank: China Construction Bank Co., Ltd. Tianjin Tanggu Branch CHINA CONSTRUCTION BANKCORPORATION TIANJIN TANGGU SUB-BRANCH Foreign Currency (USD) Account: A/C: 12050167590000003788 Overseas (RMB) Account Opening Bank: China Construction Bank Corporation, Tianjin Tanggu Branch CHINA CONSTRUCTION BANKCORPORATION TIANJIN TANGGU SUB-BRANCH Offshore (RMB) Account: A/C: 12050167590000003787 Bank Address: No. 1 Huanghai Road, Tianjin Economic-Technological Development Area No. 1 Huanghai Road, TEDA, Tianjin, China SWIFT CODE:PCBCCNBJTX Tianjin Jiantong Engineering Bidding Consulting Co., Ltd. Registered Address: Room 215, Building B, Beitan Construction Development Building, No. 3 Quanzhou Road, Binhai-Zhongguancun Science Park, Tianjin Economic and Technological Development Zone Room 215, Block b, No.3 Quanzhou Road, Binhai Zhongguancun Science Park,Tianjin Economic-Technological Development Area Consultation phone: 25292406
No additional amendments to this bidder's instructions apply.	

Chapter 7 Special Contract Terms

This table specifies the detailed requirements for procured goods and serves as an addition and amendment to the contract terms. In case of any conflict, this table shall prevail.

Clause Number	Content
1.1	Buyer's Name: <u>Tianjin Heavy Equipment Engineering Research Co., Ltd. (IHI Group International Resources Co., Ltd.)</u> Buyer's address: <u>No. 20 Haixing Street, Tianjin Economic-Technological Development Zone.</u> Seller's Name: . Seller's address: . Import Agent Name (if applicable): . Project site: <u>No. 20 Haixing Street, Tianjin Economic-Technological Development Area</u>
7.1	Performance bond amount: <u>Not applicable for this project.</u>
7.3	Performance bond form: <u>Not applicable for this project</u>
11	Project site: <u>Delivery of both domestic and international goods shall be made on a delivered basis at the location specified by the buyer.</u>
16	Additional services to be provided: <u>as detailed in the specifications and requirements of Chapter 8.</u>
17.1	2) In the event that spare parts production is to be discontinued, the seller shall provide the buyer with written notice of the planned discontinuation at least three months in advance, allowing sufficient time for the buyer to procure the required spare parts.
17.2	Spare parts requirements: The bidder shall separately submit a list of spare parts required for

	routine maintenance, along with their unit prices. These costs shall not be included in the total bid price or the contract price. Spare parts provided within years after the end of the warranty period must not increase in price. The bidder shall commit to supplying spare parts, components, and consumables for a period of years from the date of successful acceptance. Wear parts provided within <u>3</u> years after the end of the warranty period must not increase in price.
18.2	Warranty period: <u>12</u> months from the date of acceptance and issuance of the receipt certificate by both parties.
18.4	Repair response time: <u>See the detailed specifications and requirements in Chapter 8.</u>
20.1	Payment methods and terms: <u>See the detailed provisions in Chapter 8 Technical Specifications and Requirements.</u>
25	The seller shall not subcontract all or any part of this contract to any third party.
27	The seller shall prepare a detailed production schedule and strictly adhere to it to ensure timely delivery, and must not delay delivery due to payment terms. The seller shall take all flexible measures to ensure that international relations do not prevent timely delivery. Otherwise, the seller shall bear all losses incurred by the buyer. Except for force majeure events (international trade disputes are excluded), if the seller fails to deliver within the contract-specified timeframe, the buyer may agree to an extension of delivery provided the seller pays a penalty. The penalty may be deducted by the paying bank when negotiating payment, with the total penalty not exceeding 15% of the total value of the delayed goods. The penalty shall be charged at 1% per week (calculated as seven days); periods less than seven days shall be counted as one full week. If the seller delays delivery beyond 15 weeks from the contract date, the buyer has

	the right to request the agent company to terminate the contract. In such case, the seller shall still pay the penalty as stipulated above, cease payment of the goods' amount, refund any previously paid amounts to the buyer's agent within one month, and compensate the buyer for all resulting losses, with all related costs borne by the seller.
32.1	All disputes arising from or related to the contract and its implementation shall be resolved through mutual consultation between the parties. If the dispute cannot be resolved within 60 days after the commencement of negotiations, either party may file a lawsuit with the people's court at the location of the tenderer. The interpretation of the contract and dispute resolution shall be governed by the laws of the People's Republic of China.
32.2	Arbitration shall be conducted in Beijing by the China International Economic and Trade Arbitration Commission (CIETAC) in accordance with its arbitration rules and procedures. Unless otherwise agreed by the parties, the official language of the arbitration shall be Chinese.
32.3	The arbitration award shall be final and binding on both parties.
32.4	Arbitration costs shall be borne by the losing party.
32.5	During arbitration, the other parts of this contract shall continue to be performed, except for the portion currently under arbitration.
35.1	Notice Address: <u>No. 16 Luoda Road, Tianjin Development Zone.</u>
36.2	The title of the mutual agreement is: "Agreement between the Government of the People's Republic of China and the Government of the Seller Country on the Avoidance of Double Taxation with Respect to Taxes on Income and Wealth and the Prevention of Tax Evasion and Fraud"

Additional amendments to the general terms of this contract:

1. The seller undertakes that all information provided to the buyer during the process of entering into this contract (including but not limited to bidding, negotiations, and signing) and throughout the performance of the contract—whether in written, oral, or other forms—is true, accurate, and complete. The seller shall not provide false or inaccurate documents regarding corporate qualifications or credibility, nor shall it intentionally conceal any material facts or other false information related to the conclusion and performance of the contract.

2. In the event of any inconsistency between the contract terms, special contract clauses, and the technical requirements specified in Chapter 8 of Volume II, the technical requirements in Chapter 8 of Volume II shall prevail.

Chapter 8 List of Goods Requirements and Technical Specifications

Section 1 List of Goods Requirements

(1) X-ray Fluorescence Spectrometer

Product Name	Quantity	Delivery location	Buyer
X-ray fluorescence spectrometer	1 set	CIP Tianjin	Tianjin Heavy Equipment Engineering Research Co., Ltd.

Delivery period: 6 months after the contract is signed.

*The bid must include all goods within the package being tendered.

Section 2 Technical Specifications and Requirements

1 Equipment name and quantity

1.1 Name: X-ray Fluorescence Spectrometer

1.2 Quantity: 1 set

2 Device Functions

Primarily used for qualitative and quantitative analysis, as well as standardless quantitative analysis of major and trace elements in metallic materials, non-metallic materials, bulk samples, glass fused beads, and pressed powder pellets.

3 Equipment Operating Environment

3.1 Voltage and Frequency: AC 220V $\pm 10\%$, 50/60Hz $\pm 1\text{Hz}$

3.2 Ambient temperature: 10°C to 35°C

3.3 Relative humidity: 20% to 80%

4 General Requirements

4.1 This equipment includes the main unit, analytical software, stabilized power supply, cooling chiller, spare parts, and auxiliary devices. Measurement range: elements from atomic number 8 (O) to 95 (Am) in the periodic table. Content range: 0.0001% to 100%.

4.2 Equipment manufacturing shall comply with national, American, European, and ISO standards for testing and instrumentation. Instruments and meters used must employ the International System of Units (SI) and come with valid metrological certification. Real-time data during testing shall be displayed in SI units, and equipment calibration and control methods must also meet the aforementioned standard requirements.

4.3 The equipment shall have sufficient strength, rigidity, reliable stability, and high precision to ensure the system has excellent dynamic performance.

4.4 The equipment shall be based on advanced and proven designs from recent years within the industry, manufactured using advanced processes, materials, and technologies, ensuring high reliability, excellent operability, and ease of maintenance, capable of long-term stable and continuous operation.

4.5 The equipment must comply with China's relevant environmental protection and safety standards.

5 Technical Requirements

*5.1 Measurement mode: Sequential scanning or fixed channel. Analytical element range: For sequential scanning instruments, a high-precision goniometer is required to analyze elements from atomic number 8 (O) to 95 (Am) in the periodic table. (For fixed channel instruments, fixed channels are required for analyzing 36 elements: F, Na, Mg, Al, Si, P, S, Cl, K, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Br, Ba, Cd, Pb, As, Mo, Nb, W, Sn, Sb, Bi, Zr, Sr, La, Ce, Y, and Ta. Additionally, a standard scanning channel must be installed, with the configuration list clearly specifying the crystal arrangements for both the 36 fixed channels and the scanning channel.) Concentration range: 0.0001% to 100%.

5.2 X-ray Generator

5.2.1 Solid-state high-frequency high-voltage generator.

*5.2.2 The high-voltage generator of the sequential scanning instrument shall have a maximum excitation power of ≥ 4 kW; maximum excitation voltage of ≥ 60 kV, in 1 kV steps; and maximum excitation current of ≥ 170 mA, in 1 mA steps. (For fixed-channel instruments, maximum power shall be ≥ 4 kW; maximum voltage ≥ 50 kV, in ≤ 5 kV steps; maximum current ≥ 100 mA, in ≤ 5 mA steps.)

5.2.3 Generator stability: When the external power supply fluctuates by 1%, the output fluctuation of a sequential scanning instrument is

$\leq 0.00005\%$ (or for a fixed-channel instrument, the output fluctuation is $\leq 0.001\%$).

5.2.4 Capable of operating at full power. Different voltages and currents can be set for different elements, and the instrument can be computer-controlled to achieve rapid switching and adjustment of current, voltage, and non-equal power modes. (Fixed-channel instruments are not required to have the non-equal power switching function.)

5.3 X-ray Tube

5.3.1 Ceramic X-ray tube with Rh anode and end window, featuring an additional cooling circuit at the tube head.

5.3.2 X-ray tube specifications: For sequential scanning fluorescence instruments, the maximum rated power of the X-ray tube shall be ≥ 4.2 kW, maximum rated voltage ≥ 75 kV, and maximum rated current ≥ 200 mA. (For fixed-channel instruments, the maximum rated power of the X-ray tube shall be ≥ 4 kW, maximum rated voltage ≥ 50 kV, and maximum rated current ≥ 100 mA.)

5.3.3 Irradiation mode: top or bottom irradiation. The equipment shall be equipped with a dust-proof device for the light tubes.

*5.3.4 The thickness of the beryllium window for the light tube shall be ≤ 75 μm .

5.3.5 Long-life X-ray tube with no intensity degradation; sample documentation and test data of at least 8 years must be provided as proof.

5.4 Primary Optical Path Filter: The sequential scanning instrument shall be equipped with a 10-position primary optical path filter located between the light source and the sample, pre-installed with at least seven types of filters to effectively enhance excitation efficiency, reduce background interference, and protect the light

source. Detailed specifications of filter types and thickness parameters must be provided, along with a clear image of the primary optical path filter. (For fixed-channel instruments, attenuation filters required for each channel must be included, and these should be clearly listed in the configuration sheet.)

5.5 Spectrometer and Sample Requirements

5.5.1 Sample types: direct analysis of solid metal samples, pressed powders, and fused beads.

*5.5.2 Sequential scanning instruments require five crystals capable of performing qualitative, quantitative, and calibration-free analysis for elements between O and Am, including LiF(200), LiF(220), PET, an artificial multilayer film crystal for element analysis between O and Mg, and a Ge bent crystal. (For fixed-channel types, crystals for F, Na, Mg, Al, Si, P, S, Cl, K, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Br, Ba, Cd, Pb, As, Mo, Nb, W, Sn, Sb, Bi, Zr, Sr, La, Ce, Y, Ta, as well as the scanning channel, must be provided.)

5.5.3 Collimator: Equipped with two types of collimators: fine collimator and general-purpose collimator.

5.5.4 Spectral chamber: Vacuum; for sequential scanning instruments, temperature stability fluctuation shall be $\leq \pm 0.05^{\circ}\text{C}$ (for fixed-channel type, temperature stability fluctuation shall be $\leq \pm 0.2^{\circ}\text{C}$).

5.6 Sequential scanning instrument goniometer (ordinary scanning channel added to fixed-channel instruments does not need to respond to this item)

5.6.1 Angle accuracy of the goniometer: $\leq 0.001^{\circ}$;

Angle repeatability of the goniometer: $\leq 0.0001^{\circ}$.

5.6.2 The maximum rotation speed of the goniometer shall be $\geq 2400^{\circ}$ per minute;

The maximum scanning speed of the goniometer is $\geq 1200^{\circ}/\text{min}$.

5.6.3 Positioning method: $\theta/2\theta$ independent drive, optical positioning, with no mechanical wear.

5.7 Detector: Sequential scanning instruments shall be equipped with flow gas proportional counters and scintillation counters, capable of full vacuum scanning. The maximum linear counting rate per second for each detector shall be: flow gas proportional counter ≥ 2000 kcps, scintillation counter ≥ 1500 kcps. (For fixed-channel instruments, all detectors must have a minimum of 1500 kcps.)

*5.8 Auto-sampler Technical Requirements: A 60-position X-Y two-dimensional auto-sampler is required. Sixty original stainless steel sample cups (to eliminate cup-to-cup variations and ensure analytical accuracy, these stainless steel sample cups must be original and delivered in the same packaging box as the main unit; no substitutes are accepted) shall be provided, including three different diameter sizes of sample cups, with the quantity of each specified in the main unit configuration list. The system shall include a sample tray matching the number of sample cups and collimator masks compatible with the sample cup specifications.

5.9 Analysis Software

5.9.1 Operating Software: Provide the latest version of original qualitative and quantitative analysis software, including the following features: fully automatic installation and calibration system; real-time, dynamic graphical display of spectrometer and sampler status; network connectivity and data transmission; self-diagnosis and remote diagnostics. Free software upgrades are guaranteed.

5.9.2 Qualitative analysis software: capable of high-resolution display of sample spectra, with automatic background subtraction and smoothing functions, automatic peak detection, and elemental identification.

5.9.3 Quantitative Analysis Software: Features automatic navigation of analysis curves; the intelligent software system provides optimal measurement conditions; automatically corrects spectral line overlap interference; includes matrix correction functions such as empirical coefficient method, fixed theoretical Alpha coefficient method, and variable theoretical Alpha coefficient method; allows flexible input of sample preparation parameters and any available chemical information; automatically displays alerts and triggers alarms when analysis results exceed warning limits; equipped with correction functions for loss-on-ignition and gain-on-ignition using fused bead method.

5.9.4 Quantitative Analysis Without Standards: Automatic quantitative analysis of various completely unknown samples can be performed without a standard curve, using either scanning mode for standardless analysis or peak-to-background ratio measurement mode.

5.9.5 Specialized software for metal material analysis, capable of accurately determining major, minor, and trace elements in iron-based, nickel-based, cobalt-based, copper-based, lead-based, and other metallic materials, including Al, Si, P, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Zr, Nb, Mo, Sn, Sb, Ta, W, Pb, and Bi. The software is an open platform, allowing users to calibrate matrix effects using their own reference standards, thereby expanding the software's application range. A set of spectral standard samples, 30 pieces.

5.9.6 Refractory Material Analysis Procedure: Establish standard analysis curves on-site for silica, magnesia, alumina, calcium, zirconia, and chromia refractory materials. A set of standard refractory material samples, 40 in total (including silica, magnesia, alumina, calcium, zirconia, and chromia).

5.10 Computers and Printers

5.10.1 Computer: Windows 11 Enterprise (64-bit) operating system, Intel

Core Ultra 5 processor, 14-core, up to 5GHz, 16GB memory, 1TB SSD hard drive, 24-inch LED monitor, keyboard, mouse, and two network cards.

5.10.2 The printer is a mainstream market configuration, featuring a popular brand laser printer.

5.11 Quality and Safety Standards:

5.11.1 The manufacturer holds ISO9001 quality management certification, ISO14001 environmental management certification, and ISO45001 occupational health and safety management system certification.

5.11.2 In accordance with the "Regulations on Safety and Protection of Radioactive Isotopes and Radiation Devices," the bidder shall provide a radiation exemption certification document issued by a provincial environmental protection department recognized by the Ministry of Ecology and Environment, granted to the product manufacturer, the manufacturer's China-based company, or the import general agent. Additionally, a declaration letter from the exemption processing authority confirming the legal validity of the exemption for this product must be submitted. The exemption conditions must meet or exceed the equipment's maximum voltage and maximum current. The exemption certification shall be based on the official announcement published on the website of the Ministry of Ecology and Environment regarding the filing documents for exemptions of radioactive isotopes and radiation devices. Certifications obtained through regional agents or those involving legal disputes or controversies will not be accepted. All losses resulting from exemption filing shall be borne by the supplier.

5.12 Auxiliary Configuration Equipment

5.12.1 Carbon and Sulfur Analyzer: A carbon and sulfur analyzer set for analyzing carbon and sulfur elements in refractory materials. Equipped with two independent infrared detection channels as standard, analysis range: carbon 1 ppm–6%, sulfur 0.6 ppm–5%; precision: carbon

RSD $\leq$ 0.5%, sulfur RSD $\leq$ 1.5%.

5.12.2 Voltage Regulated Power Supply: One 15 kVA voltage regulated power supply; adjustable output voltage range of 220 V $\pm$ 20%, with output accuracy of 220 V $\pm$ 2%. Must include overload and short-circuit protection functions.

5.12.3 Water Chiller: One circulation split-type water chiller with a maximum cooling capacity of 8 kW; temperature control range of 15–45 °C; temperature control accuracy: $\pm$ 2 °C; circulating water flow rate: 40 L/min.

5.12.4 Sample Grinder: One automatic sample grinder with a speed greater than 900 rpm, feed particle size less than 5 mm, grinding time adjustable from 0 to 999 seconds, equipped with one set of tungsten carbide grinding disc.

5.12.5 Tablet Press: One tablet press with a maximum pressure of 40 tons, and two sets of boric acid tablet molds.

5.12.6 Spectral Grinding Machine: One spectral grinding machine with a 400 mm grinding disc diameter and a rotational speed of 1400 rpm.

5.12.7 One P10 gas pressure regulator.

5.12.8 Ultrasonic Cleaner: Two ultrasonic cleaners, each with a capacity of no less than 6L.

5.12.9 Electric Forced-Convection Drying Oven: Two electric forced-convection drying ovens, temperature range 10–250°C, with a capacity of no less than 20 liters each.

5.12.10 Muffle Furnace: Two muffle furnaces, rated temperature 1300°C, with chamber volume no less than 17L.

5.13 Spare Parts

5.13.1 The unit shall be supplied with imported spare parts for five years of use, including no fewer than 25 types and at least 50 pieces. These must include at least one solenoid valve, one proportional

solenoid valve, one cartridge valve, one standby pump with connecting device, one stepper motor with encoder, one stepper motor with rotary wheel, and one temperature sensor.

5.13.2 Equipped with 500 dedicated powder analysis sample cups and 90 meters of dedicated polypropylene film for powder analysis.

5.13.3 Equipped with one set of dedicated instrument repair tools.

5.13.4 One set of drift correction sample is randomly included.

5.14 Instrument operation and maintenance manual, software user manual: 3 sets.

5.15 Installation and Acceptance

5.15.1 The bidder shall be responsible for installation and commissioning, and the acceptance of the equipment shall be jointly negotiated and determined by both the buyer and seller. Any special items required for installation, commissioning, and acceptance shall be provided free of charge by the bidder. The warranty period for the equipment shall commence from the date both parties sign off on the final acceptance.

5.15.2 Complete set of technical documentation for installation, operation, and maintenance. Basic structural drawings and user manuals for the main unit and all functional components, as well as maintenance and servicing instructions. All instrument parameters shall be measured according to factory standards, meeting the requirements specified in the manual and tender documents.

5.15.3 The acceptance criteria for the instrument's precision and long-term stability comply with the parameter requirements specified in JJF 2251-2025 "Calibration Specification for Wavelength Dispersive X-ray Fluorescence Spectrometers."

6 Configuration List

Serial Number	Configuration List	Quantity
6.1	X-ray fluorescence spectrometer main unit (including analysis software)	1 set
6.2	Stabilized power supply	1 unit
6.3	Split-type cooling chiller	1 unit
6.4	Spectral Sample Grinding Machine	1 unit
6.5	Tablet Press	1 set
6.6	Sample grinding machine	1 set
6.7	P10 Gas Cylinder Pressure Reducing Valve	1 piece
6.8	5-year spare parts	1 set
6.9	Electric Forced Convection Drying Oven	2 units
6.10	Muffle furnace	2 units
6.11	Carbon and sulfur elemental analyzer	1 set
6.12	Ultrasonic Cleaner	2 units
6.13	Refractory material standard samples	40
6.14	Spectral reference standards	30
6.15	Powder analysis 专用 sample cup	500 pieces
6.16	Polypropylene film	90 meters
6.17	Drift correction sample	1 set
6.18	Sample cups in various sizes	60
6.19	Computer and printer	1 set
6.20	Instrument-specific repair tools	1 set
6.21	Instrument Operation and Maintenance Manual, Software User Guide	3 sets
Note: To ensure functionality, the supplier may provide configurations in quantities not less than those specified above.		

7 Random Technical Documents

7.1 The seller shall provide three sets each of Chinese and English versions of the instruction manuals (including complete operating instructions, maintenance manuals, installation and commissioning guides, requirements for laboratory environment and supporting facilities, structural diagrams and electrical schematics of the equipment, as well as user manuals for all components, order numbers and ordering methods, configuration lists, etc.).

7.2 List of factory inspection for equipment, accessories and spare parts, product quality certification, calibration data and calibration certificate prior to equipment shipment.

7.3 Genuine computer operating system CD and genuine application software CD.

8. Bid Quotation

8.1 The bidding language shall be Chinese.

8.2 The bid price shall be a fixed tax-exempt RMB amount. If quoted in foreign currency, it must be converted into a fixed RMB amount based on the exchange rate on the day of bidding for evaluation purposes.

8.3 The bid price shall include all related costs under the import contract, such as CIP price, installation and commissioning, training, third-party equipment calibration, etc., with the buyer designated as the beneficiary of the relevant insurance.

8.4 Itemized Quotation:

8.4.1 Provide itemized quotations for each equipment unit under the standard configuration list.

8.4.2 Provide a list of spare parts and itemized quotation.

8.5 The seller shall enter into an import equipment procurement contract with the agency company designated by the buyer (the end user),

i.e., IHI Group International Resources Co., Ltd., at the winning bid price, with the end user clearly specified in the contract.

9 Quality Assurance and Packaging Requirements

9.1 The seller shall ensure that the goods are brand new and unused, with all assemblies and components being new standard products. The seller shall guarantee that the supplied goods, when properly installed, operated under normal conditions, and maintained, will perform satisfactorily throughout their service life.

9.2 For the equipment being bid, the manufacturer must conduct operational testing and commissioning at the place of origin, and all technical parameters and functional tests must be completed and passed before the equipment leaves the factory.

9.3 All goods supplied by the Seller are precision equipment and shall be packed in accordance with international standards, ensuring that the packaging is suitable for long-distance transportation, moisture-proof, shock-resistant, rust-proof, and protected against rough handling, so as to guarantee safe and undamaged delivery to the site. The Seller shall bear full responsibility for any damage, rust, or loss caused by improper or inadequate packaging, including all losses incurred by the Buyer as a result. If wooden crates are used, a quarantine certificate must be provided to prove that fumigation treatment has been carried out.

9.4 Each packaging box shall include a detailed packing list and a certificate of quality.

9.5 The seller shall mark each carton with non-fading paint in both Chinese and English, including the box number, size, gross weight, and net weight. If necessary, additional instructions such as "Do Not Invert," "Keep Dry," "Handle with Care," and lifting positions shall be indicated.

10 Delivery Method and Location

10.1 After delivering the equipment to Tianjin Airport or port, the seller shall still be responsible for assisting the buyer's agent in arranging domestic transportation and ensuring the safe delivery of the goods.

10.2 The final destination is No. 20 Haixing Street, Tianjin Economic-Technological Development Zone, and all components must arrive at the final destination before the specified date.

11 Installation, commissioning, and training

11.1 The seller shall be responsible for conducting a pre-installation site survey of the buyer's equipment laboratory and submitting installation requirements and drawings within 10 days after the contract becomes effective. If necessary, the seller shall provide recommendations for laboratory improvement measures.

11.2 Upon arrival of the purchased equipment at the buyer's site, the seller shall dispatch experienced technical and installation personnel within three days after receiving notice from the buyer to carry out complete installation and commissioning. The necessary tools for installation and commissioning shall be provided by the seller. On-site, the equipment shall be unpacked and inspected according to the product configuration list, ensuring full compliance with specifications, undamaged packaging, good surface quality of equipment and components, and absence of surface damage, crushing, or deformation. A "three-warranty" service (repair, replacement, return) shall be provided. If any damage or non-conformity is found, the buyer has the right to reject the goods, and the seller shall bear all resulting losses. After completion of installation and commissioning, a qualified calibration agency shall calibrate the equipment in accordance with relevant verification procedures and methods.

12.3 Training

12.3.1 Basic Training: This training can be conducted during the installation and commissioning phase, covering topics such as equipment safety operation, maintenance, routine troubleshooting, and other related content. On-site training will establish working curves for low-alloy steel, stainless steel, nickel-based alloys, and refractory materials, guiding users on how to create these curves. Through technical training, the bidder's operators should be able to independently and correctly operate the equipment and use the analysis software, as well as identify and resolve various simple faults. The total duration of equipment installation and commissioning training shall not exceed 15 days.

11.3.2 Training Enhancement: The buyer shall send two personnel free of charge to attend training courses hosted by the winning bidder at its domestic application laboratory, with training materials and related resources provided free of charge. Travel, accommodation, and meals are the responsibility of the participants. Training content includes: basic principles of the instrument, instrument structure and components, review and reinforcement of instrument operation, advanced instrument operation training, and post-installation maintenance.

11.4 The seller shall be responsible for equipment transportation, installation, commissioning, third-party verification, and related expenses.

12 Product Acceptance

12.1 Acceptance Criteria: Items shall be accepted in accordance with the technical agreement and the relevant national or product-specific technical standards (whichever is more stringent). The acceptance plan shall be formulated by the buyer.

12.2 The equipment shall be calibrated or verified by a third party in accordance with national and international standards. The seller shall

provide all completion documentation for the equipment. After on-site acceptance, both parties shall sign the final acceptance report. The warranty period for the entire unit is one year from the date of acceptance, and free repair or replacement of the X-ray tube shall continue for one year after the end of the main warranty period.

13 After-Sales Service

13.1 During the warranty period, if any product quality issues arise, upon receiving a user's equipment failure report, the seller shall respond within 24 hours, guide the user, or dispatch a technician free of charge to perform on-site repairs within 48 hours, promptly eliminating the fault, with all related costs borne by the seller. The warranty period shall be extended according to the written confirmation of time delays between both parties. Additionally, the seller shall conduct free maintenance checks on the supplied equipment every six months and one month prior to the end of the warranty period, and provide on-site guidance to address any operational issues encountered by the user.

13.2 After the warranty period, the manufacturer provides lifetime maintenance for the instrument. If the user discovers any quality issues during operation and reports them to after-sales service, the supplier's after-sales team shall respond within 24 hours upon receiving written or electronic notification from the user, guiding the user accordingly or dispatching engineering technicians to the site within 48 hours to resolve the issue. Maintenance personnel will not leave the site until the fault is fully resolved (except when component replacement is required). The final resolution time must be mutually confirmed by both parties.

13.3 Outside the warranty period, and without involving hardware upgrades or repairs to the instrument, the seller shall provide free

lifetime software upgrades and free resolution of any software issues that arise.

13.4 The seller shall have a professional maintenance or after-sales service organization within China, with no fewer than five after-sales maintenance engineers and technical support engineers, each having at least two years of relevant work experience. The seller must provide documentation proving its capability to offer long-term technical support for the equipment under bid.

14 Payment

14.1 Payment terms: 90% by letter of credit, and the remaining 10% in cash (check, wire transfer, etc.).

14.2 If payment is made by letter of credit, the buyer's agent company shall issue an irrevocable letter of credit in favor of the seller for 90% of the total contract amount, with a document presentation period of seven days after the air waybill date (the letter of credit shall remain valid for one month following the signing of the final acceptance report by the seller and the buyer).

15.3 The 90% of the total contract amount shall be negotiated upon shipment by the seller, based on the following documents:

① A full set of clean bills of lading, either air waybills or ocean bills of lading, marked "freight prepaid," addressed to the buyer's agent company and notifying the buyer (end user) and its agent company;

② Five copies of a dual-endorsement invoice issued by the seller/manufacturer, covering 90% of the total contract value and 100% of the total contract value (3 originals / 2 copies), clearly indicating the contract number, letter of credit number, and shipping marks.

③ Three original and two duplicate copies of the packing list issued by the seller/manufacturer, indicating the quantity shipped, net weight,

gross weight, volume, and the invoice number and date;

④ Full set of insurance policies/documents, one original and two copies, covering 110% of the contract value, payable in China in the contract currency, endorsed in blank, insuring Institute Cargo Clauses (A)/All Risks (CIC) and War Risk;

⑤ Three original copies of the quality and quantity certificate issued by the seller/manufacturer;

⑥ One original and two copies of the certificate of origin issued by the seller/manufacturer/third party;

⑦ Within 3 business days after shipment, notify the buyer and its agent company by fax or email, and simultaneously provide electronic copies of documents ① to ⑥;

14.4 The final 10% of the total contract amount shall be paid by TT after the equipment has been finally accepted, upon submission of the following documents: (i) a commercial invoice issued by the seller/manufacturer, in the amount of 10% of the total contract value, matching the payment amount, one original and one copy, clearly indicating the contract number and bill of lading number;

② Final acceptance report of the equipment jointly signed by the seller and the end user;

③ Payment will be made upon verification by the agency company of a document signed by the buyer (end user) certifying that no quality issues have occurred during the warranty period.

Payment to the winning bidder does not constitute the tenderer's acknowledgment that the goods or services provided by the winning bidder comply with relevant regulations.

15 Breach of Contract Compensation

15.1 The seller shall prepare a detailed production schedule and strictly adhere to it to ensure timely delivery, and must not delay

delivery due to payment cycles. The seller shall take all flexible measures to ensure that international relations do not prevent timely delivery. Otherwise, the seller shall bear all losses incurred by the buyer. Except for force majeure events (international trade disputes are not included), if the seller fails to deliver goods within the time stipulated in the contract, the buyer may agree to an extension of delivery provided the seller pays a penalty. The penalty may be deducted by the paying bank when negotiating payment, with the total penalty not exceeding 15% of the total value of the delayed goods. The penalty shall be charged at 1% per week of delay (calculated as seven days), with any period less than seven days counted as one full week. If the seller delays delivery beyond 15 weeks from the contractual deadline, the buyer has the right to request the agent company to terminate the contract. In such case, the seller shall still pay the penalty as specified above, cease payment of the goods' amount, refund all previously paid amounts to the buyer's agent company within one month, and compensate the buyer for all resulting losses, with all related costs borne by the seller.

16 Arbitration

16.1 The parties shall resolve by friendly negotiation any disputes arising in the performance of this contract or related to this contract. If such negotiation fails, either party may submit the dispute to the China International Economic and Trade Arbitration Commission in Beijing for arbitration in accordance with its arbitration rules. The arbitral award shall be final and binding on both parties. Arbitration costs shall be borne by the losing party.

Attachment 1

International Bidding Product Information Form

Serial Number	Goods Name	Specifications and Model	Manufacturer Name / Country or Region	Manufacturer's address	Product quantity	Equipment price (FOB/FOA unit price)	Domestic shipping fee	CIF/CIP total price	Tariff %	Tariff (CNY)	Value Added Tax %	Value-Added Tax (CNY)	Total price including tax
Total								/		/			

Bidding Entity (Seal):

Bidder's Representative Signature:

Date:

Attachment 2

Bid Itemized Quotation Table

Serial Number	Name	Quantity	Brand	Model	CIP Unit Price (RMB)	Subtotal (CNY)
6.1	X-ray fluorescence spectrometer main unit (including analysis software)	1 set				
6.2	Stabilized power supply	1 unit				
6.3	Split-type cooling chiller	1 unit				
6.4	Spectral Sample Grinding Machine	1 unit				
6.5	Tablet Press	1 set				
6.6	Sample grinding machine	1 set				
6.7	P10 Gas Cylinder Pressure Reducing Valve	1 piece				
6.8	5-year spare parts	1 set				
6.9	Electric Forced Convection Drying Oven	2 units				
6.10	Muffle furnace	2 units				
6.11	Carbon and sulfur elemental analyzer	1 set				
6.12	Ultrasonic Cleaner	2 units				
6.13	Refractory material standard samples	40				
6.14	Spectral reference standards	30				

6.15	Powder analysis 专用 sample cup	500 pieces				
6.16	Polypropylene film	90 meters				
6.17	Drift correction sample	1 set				
6.18	Sample cups in various sizes	60				
6.19	Computer and printer	1 set				
6.20	Instrument-specific repair tools	1 set				
6.21	Instrument Operation and Maintenance Manual, Software User Guide	3 sets				
Note: To ensure functionality, the supplier may provide configurations in quantities not less than those specified above.						

Note: The bidder shall respond to each of the above items individually.

Bidding Entity (Seal):

Bidder's Representative Signature:

Date:

Attachment 3

List of Consumable Parts and Itemized Quotation Sheet

Serial Number	Name	Unit	Brand	Model	DDP unit price (CNY)

Bidding Entity (Seal):

Bidder's Representative Signature:

Date:

Attachment 4 Summary Table of Performance Contracts

Serial Number	Contract Name	Equipment Name	Device model	Number of devices	Username	User address	Contract signing date

Bidders shall guarantee the authenticity of the information provided; the evaluation committee has the right to verify the authenticity of the submitted materials, and any falsification will result in disqualification of the bid.

Bidding Entity (Seal):

Bidder's Representative Signature:

Date:

