

***Review of Railway Rehabilitation
in Central Asia***

for Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan

Tender Documents
for the rehabilitation measures of the
Kungrad - Kazakh border railway section
(Uzbekistan)

Lot 1.2 - Power Supply



This project is funded by
the European Union



A project implemented by
Italferr S.p.A.

Uzbekistan

INVITATION FOR PREQUALIFICATION

[date]

[name of the Employer]

[ADB Loan number]

Rehabilitation measures for the Kungrad – Kazakh Border railway section
Lot 1.2 Power Supply

This Invitation for Prequalification follows the General Procurement Notice for this project that appeared in the "ADB Business Opportunities", issue of [*issue date*].

[*name of Borrower*] has received a loan from the Asian Development Bank (the Bank) towards the cost of [*specify project*] and intends to apply part of the proceeds of the Loan to payments under the contract for the [*specify the contract*].

[*name of Employer*] (the Employer) intends prequalifying firms and joint ventures to tender for the following contract(s) to be funded from part of the proceeds of the loan:

Construction of a new double three-phase 10kV overhead line from Kungrad to Karakalpokia, about 307 km long is foreseen as well as.

The contract shall include the supply on site of all necessary materials and the execution of the related services (including the detailed design, the dismantling of the existing line, and the installation of the supplied necessary materials).

The contract implementation period will be 30 months.

Prequalification and tendering for contracts to be financed with the proceeds of a loan from the Bank is open to firms and joint ventures of firms from eligible countries.

Interested eligible firms may obtain further information from [*insert name of Employer*] and inspect Prequalification Documents at the address given below, [*insert address at end of document*] from [*insert office hours*].

Prequalification documents in English language may be obtained from the address below upon payment of a non-refundable fee of [*state currency and value*] or equivalent in a convertible currency. [*Give instructions for payment by bank transfer or the like*].

If requested, the documents will be promptly despatched by courier, but no liability can be accepted for loss or late delivery.

The prequalification documents must be duly completed and delivered to the address below, on or before [*specify time and date of deadline for submission*].

Documents which are received late may be rejected and returned unopened.

Interested firms may obtain further information from, and inspect and acquire the prequalification documents at the following office:

[*Contact name*]

[*Executing agency*]

[*Address*]

[*Tel:*]

[*Fax:*]

Date: _____

STANDARD PROCUREMENT DOCUMENT

Prequalification of Bidders

Asian Development Bank
November 2004

Foreword

This Standard Procurement Document for the Prequalification of Bidders (SPQD) has been prepared by the Asian Development Bank (ADB) and is based on the Master Procurement Document entitled "Prequalification Documents for Procurement of Works", prepared by multilateral development banks and other public international financial institutions which reflects the majority view of these institutions. This document has the structure and the provisions of the Master Procurement Document, except where ADB-specific considerations have required a change.

This SPQD facilitates prequalification of bidders for large and complex civil works contracts, turnkey contracts, and contracts for the fabrication of expensive and technically complex plant and equipment. This is to ensure that only firms with appropriate experience, a proven track record, and necessary annual turnover, which are free of any major pending litigation, will be invited to submit bids.

This SPQD is to be used for the prequalification process for contracts financed in whole or in part by ADB and to be procured through International Competitive Bidding.

An important feature of this SPQD is that it can be used with minimum changes, as it does not contain explanations, footnotes or examples. The SPQD is only available in electronic format.

This SPQD is supported by a User's Guide. The User's Guide contains detailed explanations and recommendations to Employers on how to prepare specific Prequalification Documents and how to evaluate applications. The User's Guide is not a part of the Prequalification Document.

To obtain further information on procurement under ADB-assisted projects, contact

Project Coordination and Procurement Division
Central Operations Services Office
Asian Development Bank
P.O. Box 789, 0980 Manila, Philippines
Email: procurement@adb.org
Fax: (63-2) 636 2475

PROCUREMENT DOCUMENT

Prequalification of Bidders for the Procurement of

Issued on:

Invitation for Prequalification No.:

ICB No.:

Employer:

Country:

Preface

This Prequalification Document (PQD) has been prepared by and is based on the Standard Procurement Document for the Prequalification of Bidders (SPQD) issued by the Asian Development Bank dated

ADB's SPQD has the structure and the provisions of the Master Procurement Document entitled "Prequalification Documents for Procurement of Works", prepared by multilateral development banks and other public international financial institutions except where ADB-specific considerations have required a change.

Summary Description

Page No.

PART 1. APPLICATION PROCEDURES

Section I. Instructions to Applicants (ITA)-----1-1

This section specifies the procedures to be followed by Applicants in the preparation and submission of their Applications for Prequalification (AFP). Information is also provided on opening and evaluation of AFPs. **Section I. contains provisions that are to be used without modification.**

Section II. Application Data Sheet (ADS) -----2-1

This section consists of provisions that are specific to each prequalification and supplement the information or requirements included in Section I. Instructions to Applicants.

Section III. Qualification Criteria (QLC) -----3-1

This section contains the criteria and methods to be used to evaluate applications.

Section IV. Application Forms (APF) -----4-1

This section contains the Application Submission Sheet and all the forms required to be submitted with the Application.

Section V. Eligible Countries (ELC) -----5-1

This section contains a list of eligible countries.

PART 2. REQUIREMENTS

Section VI. Scope of Contract (SOC) -----6-1

This section includes a summary description of the scope of contract and additional information on major contract components, major quantities, required construction methods, and the contract implementation period of the Contract subject of this prequalification exercise.

PART 1 – Prequalification Procedures

Section I. Instructions to Applicants

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A. General

- | | |
|--------------------------------|--|
| 1. Scope of Application | <p>1.1 In connection with the Invitation for Prequalification indicated in Section II, Application Data Sheet (ADS), the Employer, as defined in the ADS, issues this Prequalification Document to applicants interested in bidding for the works described in Section VI, Scope of Contract. The number of contracts and the name and identification of each contract as well as the International Competitive Bidding (ICB) number corresponding to this prequalification, are provided in the ADS.</p> |
| 2. Source of Funds | <p>2.1 The Borrower or Recipient (hereinafter called "Borrower") indicated in the ADS has applied for or received financing (hereinafter called "funds") from the Asian Development Bank (hereinafter called "the ADB") towards the cost of the project named in the ADS. The Borrower intends to apply a portion of the funds to eligible payments under the contract resulting from the bidding for which this prequalification is conducted (hereinafter called "the Contract").</p> <p>2.2 Payments by the ADB will be made only at the request of the Borrower and upon approval by the ADB in accordance with the terms and conditions of the financing agreement between the Borrower and the ADB (hereinafter called the Loan Agreement), and will be subject in all respects to the terms and conditions of that Loan Agreement. No party other than the Borrower shall derive any rights from the Loan Agreement or have any claim to the funds.</p> |
| 3. Corrupt Practices | <p>3.1 ADB's Anticorruption Policy requires borrowers (including beneficiaries of ADB-financed activity), as well as bidders, suppliers, and contractors under ADB-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the ADB:</p> <p>(a) defines, for the purposes of this provision, the terms set forth below as follows:</p> <ul style="list-style-type: none"> (i) "corrupt practice" means the offering, giving receiving, or soliciting, directly or indirectly, of any thing of value to influence the action of any party in the procurement process or the execution of a contract; (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract; (iii) "collusive practices" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to influence the action of any party in a procurement process or the execution of a contract; (iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract; |

- (b) will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract; and
- (c) will sanction a party or its successor, including declaring ineligible, either indefinitely or for a stated period of time, to participate in ADB-financed activities if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, an ADB-financed contract.

4. Eligible Applicants

- 4.1 An Applicant shall be a private or government-owned legal entity, subject to ITA Sub-Clause 4.6, or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture (JV). In the case of a JV,
- (a) all partners to the JV shall be jointly and severally liable; and
 - (b) a JV shall nominate a representative who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV during the prequalification process and, in the event the JV is prequalified, during the bidding process, and in the event the JV is awarded the Contract, during contract execution.
- 4.2 An Applicant, and all partners constituting the Applicant, shall have the nationality of an eligible country, in accordance with Section V, Eligible Countries. An Applicant shall be deemed to have the nationality of a country if the Applicant is a national of that country; or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of that country.
- 4.3 The above requirement shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related services.
- 4.4 Applicants shall not have a conflict of interest. All Applicants found to have a conflict of interest with one or more parties in this prequalification process shall be disqualified. Applicants shall be considered to have a conflict of interest, if they
- (a) have controlling shareholders in common; or
 - (b) receive or have received any direct or indirect subsidy from any of them; or
 - (c) have the same legal representative for purposes of their Application; or
 - (d) have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or to influence the application of another Applicant in the subsequent bidding process or influence the decisions of the Employer regarding this prequalification process; or

- (e) participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of this prequalification. Where a firm, or a firm from the same economic or financial group, in addition to consulting, also has the capability to manufacture or supply goods or to construct works, that firm, or a firm from the same economic or financial group, may not normally be a supplier of goods or works, if it provided consulting services for the contract corresponding to this prequalification, unless it can be demonstrated that there is no significant degree of common ownership, influence or control.

- 4.5 A firm that is under a declaration of ineligibility by the ADB in accordance with ITA Clause 3, at the date of submission of the application or thereafter, shall not be considered.
- 4.6 Government-owned enterprises in the Employer's country shall be eligible only if they can establish that they are legally and financially autonomous, and operate under commercial law, and that they are not in any way dependent agencies of the Employer.
- 4.7 Applicants shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.

**5. Eligible
Materials,
Equipment and
Services**

- 5.1 The materials, equipment and services to be supplied under the Contract and financed by ADB shall have as their country of origin an eligible country of ADB (see Section V, Eligible Countries).

B. Contents of Prequalification Document

**6. Sections of the
Prequalification
Document**

- 6.1 The Prequalification Document consists of Parts 1 and 2 which include all the sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITA Clause 8.

PART 1 Prequalification Procedures

- Section I. Instructions to Applicants (ITA)
- Section II. Application Data Sheet (ADS)
- Section III. Qualification Criteria
- Section IV. Application Forms
- Section V. Eligible Countries

PART 2 Requirements

- Section VI. Scope of Contract

- 6.2 The "Invitation for Prequalification" issued by the Employer is not part of the Prequalification Document.
- 6.3 The Employer accepts no responsibility for the completeness of the Prequalification Document and its addenda unless they were obtained directly from the Employer.

- 6.4 The Applicant is expected to examine all instructions, forms, and terms in the Prequalification Document and to furnish all information or documentation required by the Prequalification Document.
- 7. Clarification of Prequalification Document**
- 7.1 A prospective Applicant requiring any clarification of the Prequalification Document shall contact the Employer in writing at the Employer's address indicated in the ADS. The Employer will respond in writing to any request for clarification provided that such request is received no later than fourteen (14) days prior to the deadline for submission of Applications. The Employer shall forward copies of its response to all Applicants who have acquired the Prequalification Document directly from the Employer including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the Prequalification Document as a result of a request for clarification, it shall do so following the procedure under ITA Clause 8 and in accordance with the provisions of Sub-Clause 17.2.
- 8. Amendment of Prequalification Document**
- 8.1 At any time prior to the deadline for submission of Applications, the Employer may amend the Prequalification Document by issuing addenda.
- 8.2 Any addendum issued shall be part of the Prequalification Document and shall be communicated in writing to all who have obtained the Prequalification Document directly from the Employer.
- 8.3 To give prospective Applicants reasonable time in which to take an addendum into account in preparing their Applications, the Employer may, at its discretion, extend the deadline for the submission of applications.
- C. Preparation of Applications**
- 9. Cost of Applications**
- 9.1 The Applicant shall bear all costs associated with the preparation and submission of its application, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the prequalification process.
- 10. Language of Application**
- 10.1 The application, as well as all correspondence and documents relating to the prequalification exchanged by the Applicant and the Employer, shall be written in the English language. Supporting documents and printed literature that are part of the application may be in another language, provided they are accompanied by an accurate translation of the relevant passages into the English language, in which case, for purposes of interpretation of the application, the translation shall govern.
- 11. Documents Comprising the Application**
- 11.1 The Application shall comprise the following:
- (a) Application Submission Sheet, in accordance with ITA Clause 12;
 - (b) written confirmation authorizing the signatory of the application to commit the Applicant, in accordance with ITA Sub-Clause 15.3;

- (c) documentary evidence establishing the Applicant's eligibility to prequalify, in accordance with ITA Clause 13;
 - (d) documentary evidence establishing the Applicant's qualifications, in accordance with ITA Clause 14; and
 - (e) any other document required as specified in the ADS.
- 12. Application Submission Sheet** 12.1 The Applicant shall prepare an Application Submission Sheet using the form furnished in Section IV, Application Forms. This form must be completed without any alteration to its format.
- 13. Documents Establishing the Eligibility of the Applicant** 13.1 To establish its eligibility in accordance with ITA Clause 4, the Applicant shall complete the eligibility declarations in the Application Submission Sheet and Forms ELI 1.1 and 1.2, included in Section IV, Application Forms.
- 14. Documents Establishing the Qualifications of the Applicant** 14.1 To establish its qualifications to perform the contract in accordance with Section III, Qualification Criteria, the Applicant shall provide the information requested in the corresponding Information Sheets included in Section IV, Application Forms.
- 15. Signing of the Application and Number of Copies** 15.1 The Applicant shall prepare one original of the documents comprising the application as described in ITA Clause 11 and clearly mark it "ORIGINAL". The original of the application shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Applicant.
- 15.2 The Applicant shall submit copies of the signed original application, in the number specified in the ADS, and clearly mark them "COPY". In the event of any discrepancy between the original and the copies, the original shall prevail.
- 15.3 The requirements regarding the legal instrument evidencing the authorization to represent and sign on behalf of the Applicant shall be as specified in the ADS. Applications submitted by an existing or intended JV shall include an undertaking signed by all partners
- (a) stating that all partners shall be jointly and severally liable, and
 - (b) nominating a Representative who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV during the prequalification process and, in the event the JV is prequalified, during the bidding process, and in the event the JV is awarded the Contract, during contract execution.

D. Submission of Applications

- 16. Sealing and Marking of Applications** 16.1 The Applicant shall enclose the original and the copies of the application in a sealed envelope which shall
- (a) bear the name and address of the Applicant;
 - (b) be addressed to the Employer, in accordance with ITA 17.1; and
 - (c) bear the specific identification of this prequalification process indicated in the ADS 1.1.

- 16.2 If the envelope is not sealed and marked as required, the Employer will assume no responsibility for the misplacement of the application.
- 17. Deadline for Submission of Applications**
- 17.1 Applications shall be received by the Employer at the address and no later than the deadline indicated in the ADS.
- 17.2 The Employer may, at its discretion, extend the deadline for the submission of Applications by amending the Prequalification Document in accordance with ITA Clause 8, in which case all rights and obligations of the Employer and the Applicants subject to the previous deadline shall thereafter be subject to the deadline as extended.
- 18. Late Applications**
- 18.1 The Employer reserves the right to accept or reject late Applications.
- 19. Opening of Applications**
- 19.1 The Employer shall prepare a record of the opening of Applications that shall include, as a minimum, the name of the Applicant. A copy of the record shall be distributed to all Applicants.
- E. Evaluation of Applications**
- 20. Confidentiality**
- 20.1 Information relating to the evaluation of Applications, and recommendation for prequalification, shall not be disclosed to Applicants or any other persons not officially concerned with such process until the notification of prequalification is made to all Applicants.
- 20.2 From the deadline for submission of Applications to the time of notification of the results of the prequalification in accordance with ITA Clause 28, if any Applicant wishes to contact the Employer on any matter related to the prequalification process, it may do so in writing.
- 21. Clarification of Applications**
- 21.1 To assist in the evaluation of Applications, the Employer may, at its discretion, ask any Applicant for a clarification of its application which shall be submitted within a stated reasonable period of time. Any request for clarification and all clarifications shall be in writing.
- 21.2 If an Applicant does not provide clarifications of the information requested by the date and time set in the Employer's request for clarification, its Application may be rejected.
- 22. Responsiveness of Applications**
- 22.1 The Employer may reject any Application which is not responsive to the requirements of the Prequalification Document.
- 23. Margin of Preference**
- 23.1 If so indicated in the ADS, a margin of preference shall apply in the bidding process resulting from this prequalification.

- 24. Subcontractors**
- 24.1 Applicants shall state in the Application Submission Sheet whether they intend to subcontract parts or elements of the Works.
- 24.2 If an Applicant intends to subcontract any of the key activities listed in Section III, Qualification Criteria, Criteria 4.2(b), then such key activities and the proposed subcontractors (Specialist Subcontractors) shall be clearly identified in Section IV, Application Forms, Forms ELI-1.2 and EXP-4.2(b). Such Specialist Subcontractor(s) shall meet the corresponding qualification requirements specified in Section III, Qualification Criteria. At the time of bidding, the Bidder shall use in its bid only Specialist Subcontractor(s) prequalified during the prequalification exercise.
- 24.3 Unless otherwise specified in the ADS, the Employer does not intend to execute certain specific parts of the Works by subcontractors selected in advance by the Employer (Nominated Subcontractors).

F. Prequalification of Applicants

- 25. Evaluation of Applications**
- 25.1 The Employer shall use the criteria and methods defined in Section III, Qualification Criteria to evaluate the qualifications of the Applicants and proposed subcontractors.
- 25.2 Only the qualifications of proposed subcontractors that have been identified in the Application pursuant to ITA 24.2 will be considered in the evaluation of an Applicant. However, the general experience and financial resources of subcontractors may not be added to those of the Applicant for purposes of prequalification of the Applicant.
- 25.3 Unless otherwise indicated in the ADS, this prequalification shall be for a single contract.
- 26. Employer's Right to Accept or Reject Applications**
- 26.1 The Employer reserves the right to accept or reject any Application, and to annul the prequalification process and reject all applications at any time, without thereby incurring any liability to Applicants
- 27. Prequalification of Applicants**
- 27.1 All Applicants, including their proposed subcontractors, whose applications have been determined to be substantially responsive to the requirements of the Prequalification Document and who have met or exceeded the specified criteria shall be prequalified by the Employer.
- 28. Notification of Prequalification**
- 28.1 Once the Employer has completed the evaluation of the Applications it shall notify all Applicants in writing of the names of those applicants who have been prequalified.

- 29. Invitation to Bid**
- 29.1 Promptly after the notification of the results of the prequalification, the Employer shall invite bids from all the Applicants that have been prequalified.
- 29.2 Bidders may be required to provide bid security in the form of a demand guarantee or other security acceptable to the Employer for an amount as specified in the bidding document.
- 29.3 A qualified firm or a member of a qualified joint venture may participate in only one bid for the contract. If a firm submits more than one bid, singly or in joint venture, all bids including that firm request will be rejected. This rule will not apply in respect of bids that include specialist subcontractors that are used by more than one bidder.
- 30. Changes in Qualifications of Applicants**
- 30.1 Any change in the qualification status of an Applicant after being prequalified in accordance with ITA Clause 27 shall be subject to the written approval of the Employer. Any such change shall be submitted to the Employer not later than fourteen (14) days after the date of the Invitation to Bid. Such approval shall be denied if as a consequence of any change,
- (a) the prequalified Applicant, after the change, no longer substantially meets the qualification criteria set forth in Section III, Qualification Criteria; or
 - (b) a new partner that had not been prequalified as an Applicant or a Specialist Subcontractor as per ITA 24.2 is added to a prequalified Applicant.

Section II. Application Data Sheet

A. General

ITA 1.1	The identification of the Invitation for Prequalification is:
ITA 1.1	The name of the Employer is:
ITA 1.1	The names, identification and number of the contracts are:
ITA 1.1	The name and identification number of the ICB are:
ITA 2.1	The name of the Borrower is:
ITA 2.1	The name of the Project is: Rehabilitation measures for the Kungrad – Kazakh border railway section – Lot 1.2 Power Supply

B. Contents of the Prequalification Document

ITA 7.1	<p>For clarification purposes only, the Employer's address is:</p> <p>Attention:</p> <p>Number and Street:</p> <p>Floor/Room Number:</p> <p>City: .</p> <p>ZIP Code:</p> <p>Country</p> <p>Telephone:</p> <p>Facsimile number:</p> <p>Electronic mail address:</p>
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C. Preparation of Applications

ITA 11.1 (e)	The Applicant shall submit with its application the following additional documents:
ITA 15.2	In addition to the original, the number of copies to be submitted with the application is:
ITA 15.3	The requirements regarding the legal instrument evidencing the authorization to represent and sign on behalf of the Applicant shall be:

D. Submission of Applications

ITA 17.1	<p>For application submission purposes only, the Employer's address is:</p> <p>Attention:</p> <p>Number and Street:</p> <p>Floor/Room Number:</p> <p>City:</p> <p>ZIP Code:</p> <p>Country:</p> <p>Telephone:</p> <p>Facsimile number:</p> <p>Electronic mail address:</p> <p>The deadline for application submission is:</p> <p>Date:</p> <p>Time:</p>
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E. Evaluation of Applications

ITA 23.1	<p>A margin of preference apply in the bidding process corresponding to this prequalification. If a Margin of Preference applies, the procedure for evaluation will be specified in bidding document.</p>
ITA 24.3	<p>The Employer to execute certain specific parts of the Works by subcontractors selected in advance (Nominated Subcontractors). The specific parts of the works and the respective subcontractors are:</p>

F. Prequalification of Applicants

ITA 25.3	<p>As stipulated in ITA 1.1, this prequalification exercise shall be for:</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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Section III. Qualification Criteria

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1. Eligibility

Criteria	Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture		Submission Requirements
		All Partners Combined	Each Partner	

1.1 Nationality

Nationality in accordance with ITA Sub-Clause 4.2.	must meet requirement	existing or intended JV must meet requirement	must meet requirement	not applicable	Forms ELI -1.1; ELI -1.2 with attachments
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1.2 Conflict of Interest

No conflicts of interest in accordance with ITA Sub-Clause 4.4.	must meet requirement	existing or intended JV must meet requirement	must meet requirement	not applicable	Application Submission Sheet
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1.3 ADB Eligibility

Not having been declared ineligible by ADB, as described in ITA Sub-Clause 4.5.	must meet requirement	existing or intended JV must meet requirement	must meet requirement	not applicable	Application Submission Sheet
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1.4 Government-owned Entity

Applicant required to meet conditions of ITA Sub-Clause 4.6.	must meet requirement	must meet requirement	must meet requirement	not applicable	Forms ELI -1.1, ELI -1.2 with attachments
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2. Pending Litigation

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	

2.1 Pending Litigation

All pending litigation shall be treated as resolved against the Applicant and so shall in total not represent more than percent of the Applicant's net worth.	must meet requirement by itself or as partner to past or existing JV	not applicable	must meet requirement by itself or as partner to past or existing JV	not applicable	Form LIT - 2
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3. Financial Situation

Criteria	Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture		Submission Requirements
		All Partners Combined	Each Partner	

3.1 Historical Financial Performance

Submission of audited balance sheets or, if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last years to demonstrate the current soundness of the applicants financial position and its prospective long-term profitability.	must meet requirement	not applicable	must meet requirement	not applicable	Form FIN - 3.1 with attachments
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Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	

3.2 Average Annual Construction Turnover

Minimum average annual construction turnover of US\$ calculated as total certified payments received for contracts in progress or completed, within the last years.	must meet requirement	must meet requirement	must meet of the requirement	must meet of the requirement	Form FIN - 3.2
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4. Experience

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	

4.1 General Construction Experience

Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last years prior to the applications submission deadline.	must meet requirement	not applicable	must meet requirement	not applicable	Form EXP-4.1
---	-----------------------	----------------	-----------------------	----------------	--------------

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	

4.2 Specific Construction Experience

(a) Contracts of Similar Size and Nature

Participation as contractor, management contractor, or subcontractor, in at least contracts within the last years, each with a value of at least US\$ that have been successfully or are substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods, technology or other characteristics as described in Section VI, Scope of Contract.	must meet requirement	must meet requirement	not applicable	not applicable	Form EXP 4.2(a)
--	-----------------------	-----------------------	----------------	----------------	-----------------

Criteria	Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture		Submission Requirements
		All Partners Combined	Each Partner	

4.2 Specific Construction Experience

(b) Construction Experience in Key Activities

For the above or other contracts executed during the period stipulated in 4.2(a) above, a minimum construction experience in the following key activities:	must meet all requirements	must meet all requirements	not applicable	not applicable	Form EXP-4.2(b)

Section IV. Application Forms

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Application Submission Sheet

Date:
 IFP No.:
 ICB No.:

To:

We, the undersigned, apply to be prequalified for the referenced ICB and declare the following.

- (a) We have examined and have no reservations to the Prequalification Document, including Addenda No(s)....., issued in accordance with ITA Clause 8.
- (b) We, including all subcontractors or suppliers for any part of the contract(s) resulting from this prequalification process, if any, have nationalities of eligible countries, in accordance with ITA Sub-Clause 4.2.
- (c) We, including any subcontractors or suppliers for any part of the contract(s) resulting from this prequalification, do not have any conflict of interest in accordance with ITA Sub-Clause 4.4.
- (d) We, including any subcontractors or suppliers for any part of the contract(s) resulting from this prequalification, have not been declared ineligible by the ADB.
- (e) We are a not government-owned entity. ⁽¹⁾
- (f) We, in accordance with ITA Sub-clause 24.1, plan to subcontract the following key activities or parts of the works:
- (g) We declare that the following commissions, gratuities, or fees have been paid or are to be paid with respect to the prequalification process:

Name of Recipient	Address	Reason	Amount
.....
.....

(If none has been paid or is to be paid, indicate "none.")

- (h) We understand that you may cancel the prequalification process at any time and that you are not bound either to accept any application that you may receive or to invite the prequalified applicants to bid for the contract(s) subject of this prequalification, without incurring any liability to the Applicants, in accordance with ITA Clause 26.

Name

In the capacity of

Signed

Duly authorized to sign the Application for and on behalf of

Date

(1) Government-owned entities must replace para (e) with the following statement: "We are a government-owned entity but meet the requirements of ITA Sub-Clause 4.6."

Form ELI – 1.1

Applicant Information Sheet

Date:
 IFP No.:
 ICB No.:
 Page of pages

Applicant Information	
Applicant's legal name	
In case of JV, legal name of each partner	
Applicant's actual or intended country of constitution	
Applicant's actual or intended year of constitution	
Applicant's legal address in country of constitution	
Applicant's authorized representative (name, address, telephone numbers, fax numbers, e-mail address)	
<p>Attached are copies of the following original documents.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. In case of single entity, articles of incorporation or constitution of the legal entity named above, in accordance with ITA Sub-Clauses 4.1 and 4.2. <input type="checkbox"/> 2. Authorization to represent the firm or JV named in above, in accordance with ITA Sub-Clause 15.3. <input type="checkbox"/> 3. In case of JV, letter of intent to form JV or JV agreement, in accordance with ITA Sub-Clause 4.1. <input type="checkbox"/> 4. In case of a government-owned entity, any additional documents not covered under 1 above required to comply with ITA Sub-Clause 4.6. 	

Form ELI – 1.2

JV Information Sheet

for JV Partners and Specialist Subcontractors as per ITA 24.2

Date:
 IFP No.:
 ICB No.:
 Page of pages

Each member of a JV and Specialist Subcontractors as per ITA 24.2 must fill in this form

JV / Specialist Subcontractor Information	
Applicant's legal name	
JV Partner's or Subcontractor's legal name	
JV Partner's or Subcontractor's country of constitution	
JV Partner's or Subcontractor's year of constitution	
JV Partner's or Subcontractor's legal address in country of constitution	
JV Partner's or Subcontractor's authorized representative information (name, address, telephone numbers, fax numbers, e-mail address)	
<p>Attached are copies of the following original documents.</p> <p><input type="checkbox"/> 1. Articles of incorporation or constitution of the legal entity named above, in accordance with ITA Sub-Clauses 4.1 and 4.2.</p> <p><input type="checkbox"/> 2. Authorization to represent the firm named above, in accordance with ITA Sub-Clause 15.3.</p> <p><input type="checkbox"/> 3. In the case of government-owned entity, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITA Sub-Clause 4.6.</p> <p><input type="checkbox"/> 4. In case of Specialist Subcontractors as per ITA 24.2 a formal intent to enter into an agreement.</p>	

Form LIT – 1

Pending Litigation

Applicant's Legal Name:

Date:

JV Partner Legal Name:

IFP No.:

.....

ICB No.:

Page of pages

Each Applicant or member of a JV must fill in this form

Pending Litigation			
<input type="checkbox"/> No pending litigation in accordance with Criteria 2.1 of Section III, Qualification Criteria			
<input type="checkbox"/> Pending litigation in accordance with Criteria 2.1 of Section III, Qualification Criteria, as indicated below			
Year	Matter in Dispute	Value of Pending Claim in US\$ Equivalent	Value of Pending Claim as a Percentage of Net Worth

Form FIN – 3.1

Financial Situation

Applicant's Legal Name:

Date:

JV Partner's Legal Name:.....

IFP No.:

ICB No.:

Pageof pages

Each Applicant or member of a JV must fill in this form

	Financial Data for Previous 3 Years [US\$ Equivalent]		
	Year 1:	Year 2:	Year 3:
1. Total Assets			
2. Current Assets			
3. Total Liabilities			
4. Current Liabilities			
5. Profits Before Taxes			
6. Profits After Taxes			

7. Net Worth [= 1 – 3]			
8. Working Capital [= 2 – 4]			
9. Return on Equity [= 5 / 7 of prior year]			

Attached are copies of the audited balance sheets, including all related notes, and income statements for the last three years, as indicated above, complying with the following conditions.

- All such documents reflect the financial situation of the Applicant or partner to a JV, and not sister or parent companies.
- Historic financial statements must be audited by a certified accountant.
- Historic financial statements must be complete, including all notes to the financial statements.
- Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

Form FIN – 3.2

Average Annual Construction Turnover

Applicant's Legal Name:

Date:

JV Partner's Legal Name:

IFP No.:

.....

ICB No.:

Page of pages

Each Applicant or member of a JV must fill in this form

Annual Turnover Data for the Last 3 Years (Construction only)			
Year	Amount Currency	Exchange Rate	US\$ Equivalent
Average Annual Construction Turnover			

The information supplied should be the Annual Turnover of the Applicant or each member of a JV in terms of the amounts billed to clients for each year for work in progress or completed, converted to US Dollars at the rate of exchange at the end of the period reported.

Form EXP – 4.1

General Construction Experience

Applicant's Legal Name:

Date:

JV Partner's Legal Name:.....

IFP No.:

.....

ICB No.:

Pageof pages

Each Applicant or member of a JV must fill in this form

General Construction Experience				
Starting Month Year	Ending Month Year	Years	Contract Identification and Name Name and Address of Employer Brief Description of the Works Executed by the Applicant	Role of Applicant

Form EXP – 4.2 (a)

Specific Construction Experience

Applicant's Legal Name:

 JV Partner's Legal Name:

Date:
 IFP No.:
 ICB No.:
 Page of pages

Fill up one (1) form per contract.

Contract of Similar Size and Nature		
Contract No of	Contract Identification	
Award Date	Completion Date	
Role in Contract	<input type="checkbox"/> Contractor <input type="checkbox"/> Management Contractor <input type="checkbox"/> Subcontractor	
Total Contract Amount	US\$	
If partner in a JV or subcontractor, specify participation of total contract amount	Percent of Total	Amount
Employer's Name Address Telephone/Fax Number E-mail		
Description of the similarity in accordance with Criteria 4.2(a) of Section III		

Form EXP – 4.2(b)

Specific Construction Experience in Key Activities

Applicant's Legal Name: Date:
 JV Partner's Legal Name:..... IFP No.:
 Subcontractor's Legal Name (as per ITA 24.2): ICB No.:
 Page : of pages

Fill up one (1) form per contract

Contract with Similar Key Activities		
Contract No of	Contract Identification	
Award Date	Completion Date	
Role in Contract	<input type="checkbox"/> Contractor <input type="checkbox"/> Management Contractor <input type="checkbox"/> Subcontractor	
Total Contract Amount	US\$	
If partner in a JV or subcontractor, specify participation of total contract amount	Percent of Total	Amount
Employer's Name Address Telephone Number Fax Number E-mail		
Description of the key activities in accordance with Criteria 4.2(b) of Section III		

Section V. Eligible Countries

PART 2 – Requirements

Section VI. Scope of Contract

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A. Requirements

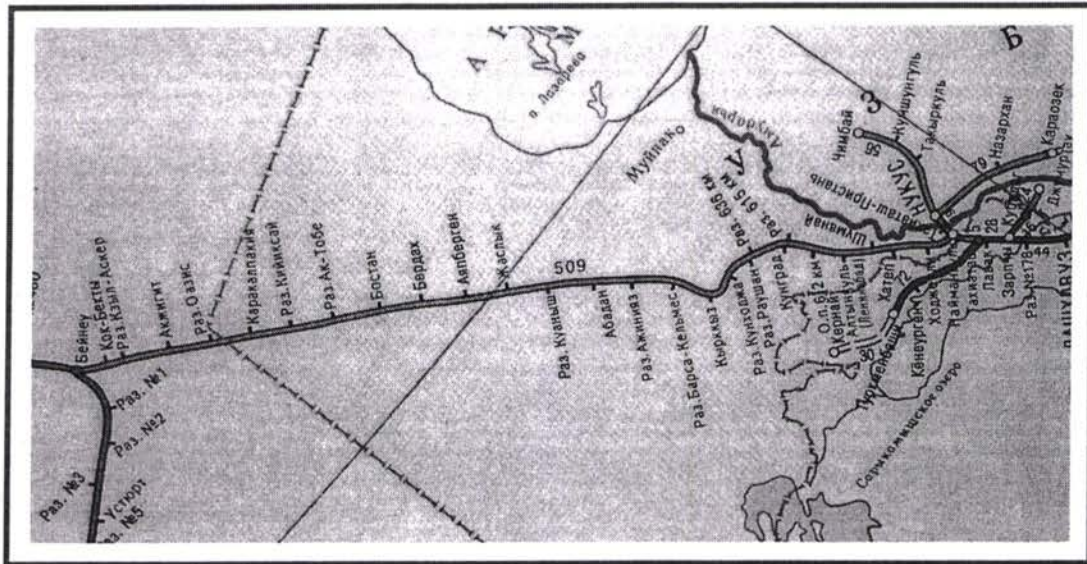
1. Brief Description of the Scope

The Scope of works refers to the conclusions of the feasibility study of the rehabilitation measures for the Kungrad – Kazakh border railway section in Uzbekistan. Historically the section under study belongs to the line Kungrad - Beyneu (407 km) as it is shown in the following Figures A and B.

Figure A - The Kungrad – Beyneu railway line



Figure B - Details of Kungrad-Beyneu railway line



After the end of the former Soviet Union, the line has been split into two sections because of the introduction of the national border between Uzbekistan and Kazakhstan: the Kungrad – Border (327 km) and the Beyneu – Border (80 km).

Improvements along the main line have to be financed and managed by two different Railway Administrations. Consequently the study has to consider two different Feasibility Studies for rehabilitation measures concerning sections of the same line.

The Feasibility Study carried out for the Uzbek side of the line (from Kungrad to the Border) has outlined the need of rehabilitation of the line for the following issues:

- a. permanent way;
- b. main structures (bridges);
- c. power supply system for signalling and stations;
- d. telecommunications.

Aspects related to uses a. and b. have been considered within Lot 1 while Lot 2 is for issue indicated under c. Aspects related to telecommunication (d. in the list) are managed separately within the present Lot 3.

The electric power supply system of Kungrad – Kazakh border section is basically carried out by means of three medium voltage lines:

1. two three phase overhead lines installed on the same wooden posts from Kungrad to the Kazakh border; the first one operates at 6 kV and feeds exclusively the Automatic Block boxes along the section, the second one operates at 10 kV and feeds all the station facilities and plants (safety plants, lighting, pumps etc.); presently the last is de-energized from Kungrad to Jaslyk.

2. one three phase overhead line installed on prefabricated reinforced concrete posts of circular section, from Kungrad to Karakalpakia, operating at 10 kV and at 6 kV from Bostan to Karakalpakia.

Lines 1 are old and obsolete.

Line 2 is new and in very good condition.

The described 10 kV / 6kV system is connected to the high voltage 110 kV / 35 kV national system through single three phase overhead lines at a voltage of 10 kV to the cabins of "Kungrad" and "Akchalak", at a voltage of 6 kV to the cabins of "Tuley" and "Karakalpakia". Moreover the lines are sectioned and de-energized in the Abadan and Bostan cabins. The protection is implemented with VMG 50 circuit breakers, controlled by PP 67 relays.

The scheme of connections is indicated in Figure C and Figure D.

The total load supplied to users by the system is about 300 kW for A.B., 350 kW for the lighting of stations, 3300 kW for buildings and houses, residential areas; the total is then 3950 kW.

In Kungrad there is one diesel generator for reserving an electric power supply of 48 kW.

As above said, lines 1 are obsolete. The area is windy and the soil polluted with salt.

Both cause frequent short circuits and interruption of the power supply continuity.

The operational voltage of the three phase line feeding the A.B. was lowered to 6 kV as provisional measure to reduce the failures, but the coexistence of 10 kV and 6 kV systems does not seem to be the best solution. Presently works of partial reconstruction of the double lines 1 are going on implementing the replacement of wooden cross arms for metal ones.

Construction of a new double three-phase 10kV overhead line from Kungrad to Karakalpakia, about 326.5 km long is foreseen as well as the demolition of the existing line recovering the relevant materials.

It includes foundation works for the new reinforced concrete posts (50m distance), posts installation, posts equipments, cables laying and their tensioning. Finally it includes electrical connections to the sources and clients.

The new line will be about 326.5 km long and it is made of two lines. The first line (AB) will feed the Automatic Block posts, the second line (PS-Power Supply) will feed the stations (safety and lighting plants, buildings, pumps, battery charge devices, etc.).

Both lines will be equipped with conductors steel-aluminium type.

Figure C – Kungrad – Karakalpakiya (Uzbekistan) line. Power Supply Scheme – 10kv/6kv System

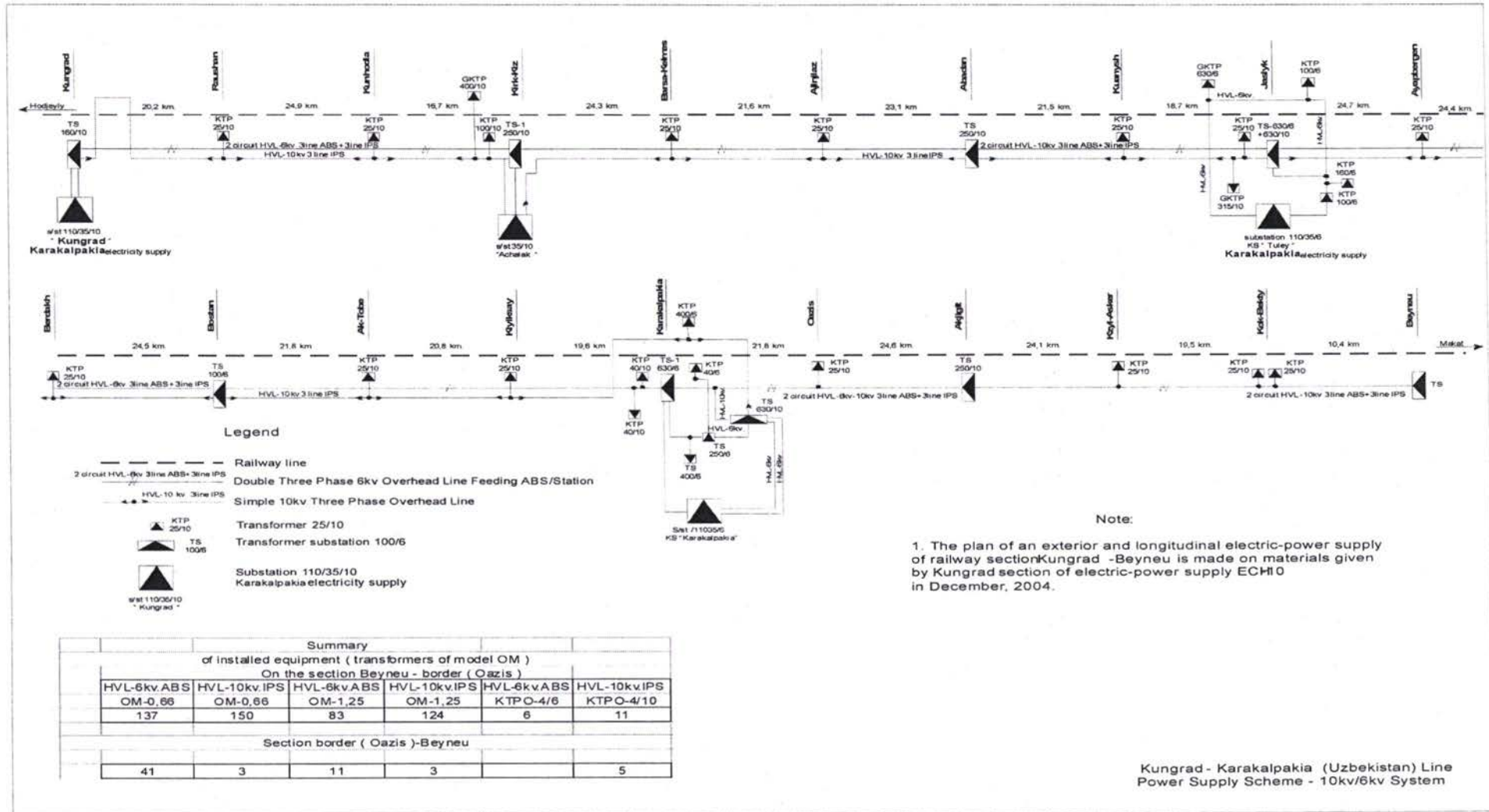
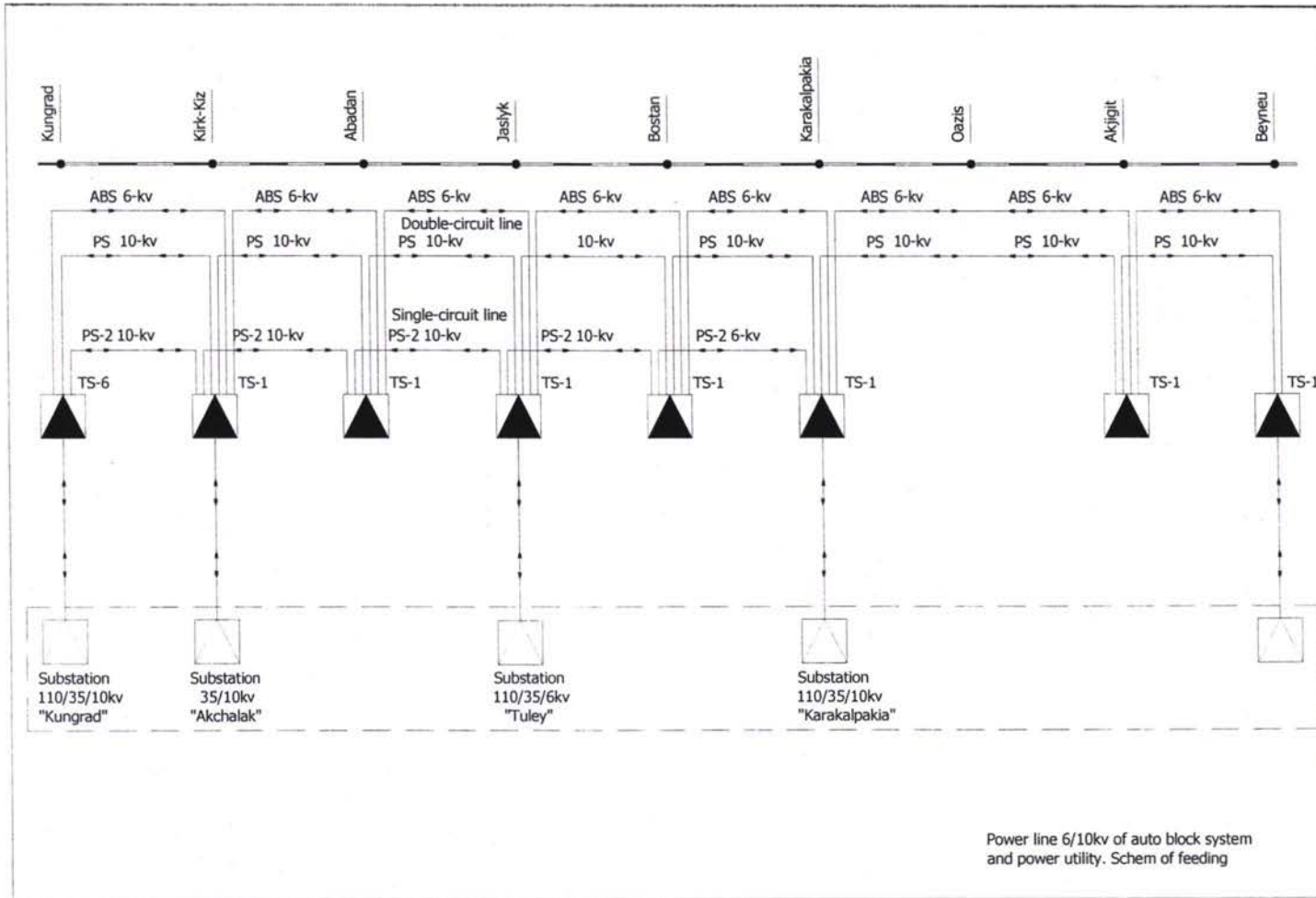


Figure D – Power line 6/10 kv of auto block system and power utility. Scheme of feeding



2. Major Contract Components

Code	Description	Unit	Quantity	NOTES
24-A1	Topographic survey of the line and corrections of the existing alignment and profile	km	326,5	To be done jointly with the track topographical survey
24-A2	Pole 11 m high: provision and installation	N°	7272,0	Including accessories installation
24-A3	Pole 13 m high: provision and installation	N°	68	Including accessories installation
24-A4	Bracket Insulator: provision and installation	N°	41.328	
24-A5	Cap-and-pin insulator: provision and installation	N°	5.628	
24-A6	Conductor: rope Al-st 6x3.2+1x3.2 (50mm ²): provision and installation	T	422	including junction and anchor clamps provision and installation
24-A7	Accessories provision	kg	747.535	
24-A8	Demolition of the old line	km	327	Including transport, splitting in reusable and scrap, stacking of demolished materials

3. Estimated Quantities of Major Components

See section 2.

4. Methods Required

No specific methods are required.

5. Contract Implementation Period

The contract implementation period will be of 30 months. The time schedule for implementation should avoid the interferences with the implementation of other Lots.

B. Supplementary Information

1. Project Country

The project country is Uzbekistan.

2. Contract Site

The contract site is along the railway line between Kungrad (Uzbekistan) and the border with Kazakhstan.

C. Facilities to be Provided by the Employer

[...]

STANDARD BIDDING DOCUMENT

Procurement of Goods

**Single-Stage: One-Envelope
Bidding Procedure**

Asian Development Bank

November 2004

Preface

This document has been based on the Master Bidding Document for Procurement of Goods, prepared by Multilateral Development Banks and International Financial Institutions, and reflects what they consider best practices in regard to Bidding Documents and contracting for the procurement of goods.

This document reflects the structure and the provisions of the Master Bidding Document for the Procurement of Goods, except where specific considerations within the respective multilateral development bank or international financial institution have required a change.

This document has been prepared by the Asian Development Bank (ADB) to facilitate a Single-Stage:One-Envelope bidding procedure. The Single-Stage:One-Envelope bidding procedure is the main bidding procedure used for most of the procurement financed by the ADB. In the Single-Stage:One-Envelope bidding procedure, Bidders submit Bids in one envelope containing both the Price Proposal and the Technical Proposal. The envelopes are opened in public at the date and time advised in the Bidding Document. The Bids are evaluated and the Contract is awarded to the Bidder whose Bid has been determined to be the lowest evaluated substantially responsive Bid.

To obtain further information on procurement under ADB assisted projects, contact:

Project Coordination and Procurement Division
Central Operations Services Office
Asian Development Bank
P.O.Box 789, 0980 Manila, Philippines
Fax: (63-2) 636 2475
Email: procurement@adb.org

Standard Bidding Document

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PART 1 – Bidding Procedures

Section I. Instructions to Bidders

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A. General

- 1. Scope of Bid**
- 1.1 In support of the Invitation for Bids indicated in the Bid Data Sheet (BDS), the Purchaser, as indicated in the BDS, issues this Bidding Document for the supply of Goods and Related Services incidental thereto as specified in Section VI, Schedule of Supply (SS). The name, identification, and number of lots of the International Competitive Bidding (ICB) are provided in the BDS.
- 1.2 Throughout this Bidding Document :
- (a) the term "in writing" means communicated in written form with proof of receipt;
 - (b) if the context so requires, singular means plural and vice versa; and
 - (c) "day" means calendar day.
- 2. Source of Funds**
- 2.1 The Borrower or Recipient (hereinafter called "Borrower") indicated in the BDS has applied for or received financing (hereinafter called "funds") from the Asian Development Bank (hereinafter called "the ADB") toward the cost of the project named in the BDS. The Borrower intends to apply a portion of the funds to eligible payments under the contract for which this Bidding Document is issued.
- 2.2 Payments by the ADB will be made only at the request of the Borrower and upon approval by the ADB in accordance with the terms and conditions of the financing agreement between the Borrower and the ADB (hereinafter called the Loan Agreement), and will be subject in all respects to the terms and conditions of that Loan Agreement. No party other than the Borrower shall derive any rights from the Loan Agreement or have any claim to the funds.
- 3. Corrupt Practices**
- 3.1 ADB's Anticorruption Policy requires borrowers (including beneficiaries of ADB-financed activity), as well as bidders, suppliers, and contractors under ADB-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the ADB:
- (a) defines, for the purposes of this provision, the terms

set forth below as follows:

- (i) "corrupt practice" means the offering, giving receiving, or soliciting, directly or indirectly, of any thing of value to influence the action of any party in the procurement process or the execution of a contract;
 - (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
 - (iii) "collusive practices" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to influence the action of any party in a procurement process or the execution of a contract;
 - (iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;
- (b) will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract; and
- (c) will sanction a party or its successor, including declaring ineligible, either indefinitely or for a stated period of time, to participate in ADB-financed activities if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, an ADB-financed contract.

3.2 Furthermore, Bidders shall be aware of the provision stated in Sub-Clause 3.2 and Sub-Clause 35.1 (c) of the General Conditions of Contract.

4. Eligible Bidders

4.1 A Bidder may be a natural person, private entity, government-owned entity (subject to ITB Sub-Clause 4.5) or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the

form of a Joint Venture (JV). In the case of a JV:

- (a) all parties to the JV shall be jointly and severally liable; and
- (b) a JV shall nominate a Representative who shall have the authority to conduct all businesses for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.

4.2 A Bidder, and all parties constituting the Bidder, shall have the nationality of an eligible country, in accordance with Section V, Eligible Countries. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, or incorporated, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related services.

4.3 A Bidder shall not have a conflict of interest. All Bidders found to be in conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if they:

- (a) have controlling shareholders in common; or
- (b) receive or have received any direct or indirect subsidy from any of them; or
- (c) have the same legal representative for purposes of this Bid; or
- (d) have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
- (e) submit more than one bid in this bidding process, except for alternative offers permitted under ITB Clause 13. However, this does not limit the participation of subcontractors in more than one bid, or as Bidders and subcontractors simultaneously; or
- (f) participated as a consultant in the preparation of the design or technical specifications of the goods and

related services that are the subject of the Bid.

- 4.4 A firm that is under a declaration of ineligibility by the ADB in accordance with ITB Clause 3, at the date of the deadline for bid submission or thereafter, shall be disqualified.
- 4.5 Government-owned enterprises in the Purchaser's country shall be eligible only if they can establish that they are legally and financially autonomous and operate under commercial law, and that they are not a dependent agency of the Purchaser.
- 4.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.

5. Eligible Goods and Related Services

- 5.1 All goods and related services to be supplied under the Contract and financed by the ADB, shall have as their country of origin an eligible country of the ADB (see Section V, Eligible Countries).
- 5.2 For purposes of this Clause, the term "goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "related services" includes services such as insurance, installation, training, and initial maintenance.
- 5.3 The term "country of origin" means the country where the goods have been mined, grown, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its imported components.
- 5.4 The nationality of the firm that produces, assembles, distributes, or sells the goods shall not determine their origin.
- 5.5 If so required in the BDS, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section V, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the

Purchaser's country.

B. Contents of Bidding Document

- 6. Sections of the Bidding Document**
- 6.1 The Bidding Document consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB Clause 8.
- PART 1 Bidding Procedures**
- Section I. Instructions to Bidders (ITB)
 - Section II. Bid Data Sheet (BDS)
 - Section III. Evaluation and Qualification Criteria
 - Section IV. Bidding Forms
 - Section V. Eligible Countries
- PART 2 Supply Requirements**
- Section VI. Schedule of Supply
- PART 3 Contract**
- Section VII. General Conditions of Contract (GCC)
 - Section VIII. Special Conditions of Contract (SCC)
 - Section IX. Contract Forms
- 6.2 The Invitation for Bids issued by the Purchaser is not part of the Bidding Document.
- 6.3 The Purchaser is not responsible for the completeness of the Bidding Document and its addenda, if they were not obtained directly from the Purchaser.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document, may result in the rejection of the Bid.
- 7. Clarification of Bidding Document**
- 7.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Purchaser in writing at the Purchaser's address indicated in the BDS. The Purchaser will respond in writing to any request for clarification, provided that such request is received no later than twenty-one (21) days prior to the deadline for submission of Bids. The Purchaser shall forward copies of its response to all Bidders who have acquired the

Bidding Document directly from it, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Document as a result of a clarification, it shall do so following the procedure under ITB Clause 8 and Sub-Clause 24.2.

- 8. Amendment of Bidding Document**
- 8.1 At any time prior to the deadline for submission of the Bids, the Purchaser may amend the Bidding Document by issuing addenda.
- 8.2 Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document directly from the Purchaser.
- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of the Bids, pursuant to ITB Sub-Clause 24.2

C. Preparation of Bids

- 9. Cost of Bidding**
- 9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 10. Language of Bid**
- 10.1 The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.
- 11. Documents Comprising the Bid**
- 11.1 The Bid shall comprise the following:
- (a) Bid Submission Sheet and the applicable Price Schedules, in accordance with ITB Clauses 12, 14, and 15;
 - (b) Bid Security, in accordance with ITB Clause 21;

- (c) alternative bids, if permissible, in accordance with ITB Clause 13;
 - (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 22;
 - (e) documentary evidence in accordance with ITB Clause 16 establishing the Bidder's eligibility to bid;
 - (f) documentary evidence in accordance with ITB Clause 17, that the Goods and Related Services to be supplied by the Bidder are of eligible origin;
 - (g) documentary evidence in accordance with ITB Clauses 18 and 30, that the Goods and Related Services conform to the Bidding Document;
 - (h) documentary evidence in accordance with ITB Clause 19 establishing the Bidder's qualifications to perform the contract if its Bid is accepted; and
 - (i) any other document required in the BDS.
- 12. Bid Submission Sheet and Price Schedules**
- 12.1 The Bidder shall submit the Bid Submission Sheet using the form furnished in Section IV, Bidding Forms. This form must be completed without any alterations to its format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
- 12.2 The Bidder shall submit the Price Schedules for Goods and Related Services, according to their origin as appropriate, using the forms furnished in Section IV, Bidding Forms.
- 13. Alternative Bids**
- 13.1 Unless otherwise indicated in the BDS, alternative bids shall not be considered.
- 14. Bid Prices and Discounts**
- 14.1 The prices and discounts quoted by the Bidder in the Bid Submission Sheet and in the Price Schedules shall conform to the requirements specified below.
- 14.2 All items in the Schedule of Supply must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items. Items not listed in the Price Schedule shall be assumed not to be included in the Bid, and provided that the Bid is substantially responsive, the corresponding adjustment shall be applied in accordance with ITB Sub-

Clause 31.3

- 14.3 The price to be quoted in the Bid Submission Sheet shall be the total price of the Bid excluding any discounts offered.
- 14.4 The Bidder shall quote any unconditional discounts and the methodology for their application in the Bid Submission Sheet.
- 14.5 The terms EXW, CIF, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by The International Chamber of Commerce, at the date of the Invitation for Bids or as specified in the BDS.
- 14.6 Prices proposed in the Price Schedule Forms for Goods and Related Services, shall be disaggregated, when appropriate as indicated in this sub-clause. This disaggregation shall be solely for the purpose of facilitating the comparison of Bids by the Purchaser. This shall not in any way limit the Purchaser's right to contract on any of the terms offered:
- (a) For Goods offered from within the Purchaser's country :
- (i) the price of the goods quoted EXW (ex works, ex factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of goods quoted ex works or ex factory, or on the previously imported goods of foreign origin quoted ex warehouse, ex showroom, or off-the-shelf;
 - (ii) sales tax and all other taxes applicable in the Purchaser's country and payable on the Goods if the Contract is awarded to the Bidder; and
 - (iii) the total price for the item.
- (b) For Goods offered from outside the Purchaser's country :
- (i) the price of the goods quoted CIF (named port of destination), or CIP (border point), or CIP

- (i) (named place of destination), in the Purchaser's country, as specified in the BDS;
 - (ii) the price of the goods quoted FOB port of shipment (or FCA, as the case may be), if specified in the BDS.
 - (iii) the total price for the item.
- (c) For Related Services whenever such Related Services are specified in the Schedule of Requirements:
- (i) the local currency cost component of each item comprising the Related Services; and
 - (ii) the foreign currency cost component of each item comprising the Related Services,
- inclusive of all custom duties, sales and other similar taxes applicable in the Purchaser's country, payable on the Related Services, if the Contract is awarded to the Bidder

14.7 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, unless otherwise specified in the BDS. A Bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB Clause 30. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a Bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.

14.8 If so indicated in ITB Sub-Clause 1.1, Bids are being invited for individual contracts (lots) or for any combination of contracts (packages), Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their Bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB Sub-Clause 14.4, provided the Bids for all lots are submitted and opened at the same time.

15. Currencies of Bid

- 15.1 Bid prices shall be quoted in the following currencies:
- (a) the currencies specified in the BDS;
 - (b) a Bidder expecting to incur a portion of its expen-

ditures in the performance of the Contract in more than one currency, and wishing to be paid - accordingly, shall so indicate in its Bid; and

- (c) if some of the expenditures for the Related Services are to be incurred in the borrowing country, such expenditures should be expressed in the Bid and will be payable in the borrower's currency.

16. Documents Establishing the Eligibility of the Bidder

16.1 To establish their eligibility in accordance with ITB Clause 4, Bidders shall:

- (a) complete the eligibility declarations in the Bid Submission Sheet, included in Section IV, Bidding Forms; and
- (b) if the Bidder is an existing or intended JV in accordance with ITB Sub-Clause 4.1, submit a copy of the JV Agreement, or a letter of intent to enter into such an Agreement. The respective document shall be signed by all legally authorized signatories of all the parties to the existing or intended JV, as appropriate.

17. Documents Establishing the Eligibility of the Goods and Related Services

17.1 To establish the eligibility of the Goods and Related Services, in accordance with ITB Clause 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.

18. Documents Establishing the Conformity of the Goods and Related Services to the Bidding Document

18.1 To establish the conformity of the Goods and Related Services to the Bidding Document, the Bidder shall furnish as part of its Bid the documentary evidence specified in Section VI, Schedule of Supply.

18.2 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods

and Related Services to those requirements, and if applicable, a statement of deviations and exceptions to the provisions of Section VI, Schedule of Supply.

18.3 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Supply, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Schedule of Supply.

19. Documents Establishing the Qualifications of the Bidder

19.1 To establish its qualifications to perform the Contract, the Bidder shall submit the evidence indicated for each qualification criteria specified in Section III, Evaluation and Qualification Criteria.

20. Period of Validity of Bids

20.1 Bids shall remain valid for the period specified in the BDS after the bid submission deadline date prescribed by the Purchaser. A Bid valid for a shorter period shall be rejected by the Purchaser as nonresponsive.

20.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 21, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its Bid.

21. Bid Security

21.1 Unless otherwise specified in the BDS, the Bidder shall furnish as part of its Bid, a Bid Security in original form and in the amount and currency specified in the BDS.

21.2 The Bid Security shall be, at the Bidder's option, in any of the following forms:

- (a) a bank guarantee;
- (b) an irrevocable letter of credit; or
- (c) a cashier's or certified check;

all from a reputable bank from an eligible country. In case of a bank guarantee, the Bid Security shall be submitted using the Bid Security Form included in Section IV, Bidding Forms, or another form acceptable to the Purchaser. The form must include the complete name of the Bidder. The Bid Security shall be valid for twenty-eight days (28) beyond the end of the validity period of the bid. This shall also apply if the period for bid validity is extended.

- 21.3 If a bid Security is required in accordance with ITB Sub-Clause 21.1, any Bid not accompanied by a substantially responsive Bid Security in accordance with ITB Sub-Clause 21.2, shall be rejected by the Purchaser as nonresponsive.
- 21.4 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder furnishing the Performance Security pursuant to ITB Clause 44.
- 21.5 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required Performance Security.
- 21.6 The Bid Security may be forfeited :
 - (a) if a Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Submission Sheet, except as provided in ITB Sub-Clause 20.2; or
 - (b) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB Clause 43;
 - (ii) furnish a Performance Security in accordance with ITB Clause 44; or
 - (iii) accept the correction of its Bid Price pursuant to ITB Sub-Clause 31.5.

21.7 The Bid Security of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners as named in the letter of intent mentioned in ITB Sub-Clause 16.1.

22. Format and Signing of Bid

22.1 The Bidder shall prepare one original of the documents comprising the Bid as described in ITB Clause 11 and clearly mark it "ORIGINAL." In addition, the Bidder shall submit copies of the Bid, in the number specified in the BDS and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

22.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid, except for unamended printed literature, shall be signed or initialed by the person signing the Bid.

22.3 Any interlineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission and Opening of Bids

23. Sealing and Marking of Bids

23.1 The Bidder shall enclose the original and each copy of the Bid, including alternative bids, if permitted in accordance with ITB Clause 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL" and "COPY." These envelopes containing the original and the copies shall then be enclosed in one single envelope.

23.2 The inner and outer envelopes shall:

- (a) bear the name and address of the Bidder;
- (b) be addressed to the Purchaser in accordance with ITB Sub-Clause 24.1;
- (c) bear the specific identification of this bidding process indicated in the BDS; and

- (d) bear a warning not to open before the time and date for bid opening, in accordance with ITB Sub-Clause 27.1.
- 23.3 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the bid.
- 24. Deadline for Submission of Bids**
 - 24.1 Bids must be received by the Purchaser at the address and no later than the date and time indicated in the BDS.
 - 24.2 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Document in accordance with ITB Clause 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 25. Late Bids**
 - 25.1 The Purchaser shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB Clause 24. Any Bid received by the Purchaser after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.
- 26. Withdrawal, Substitution, and Modification of Bids**
 - 26.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written Notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB Sub-Clause 22.2 (except that Withdrawal Notices do not require copies). The corresponding substitution or modification of the Bid must accompany the respective written Notice. All Notices must be:
 - (a) submitted in accordance with ITB Clauses 22 and 23 (except that Withdrawal Notices do not require copies), and in addition, the respective envelopes shall be clearly marked "Withdrawal," "Substitution," "Modification"; and
 - (b) received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB Clause 24.
 - 26.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 26.1 shall be returned unopened to the Bidders.
 - 26.3 No Bid shall be withdrawn, substituted, or modified in the

interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Submission Sheet or any extension thereof.

- 27. Bid Opening**
- 27.1 The Purchaser shall conduct the bid opening in the presence of Bidders' designated representatives who choose to attend, and at the address, date and time specified in the BDS.
- 27.2 First, envelopes marked "WITHDRAWAL" shall be opened, read out, and recorded, and the envelope containing the corresponding Bid shall not be opened, but returned to the Bidder. No Bid shall be withdrawn unless the corresponding Withdrawal Notice contains a valid authorization to request the withdrawal and is read out and recorded at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened, read out, recorded, and exchanged for the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid shall be substituted unless the corresponding Substitution Notice contains a valid authorization to request the substitution and is read out and recorded at bid opening. Envelopes marked "MODIFICATION" shall be opened, read out, and recorded with the corresponding Bid. No Bid shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at bid opening. Only envelopes that are opened, read out, and recorded at bid opening shall be considered further.
- 27.3 All other envelopes shall be opened one at a time, and the following read out and recorded: the name of the Bidder and whether there is a modification; the Bid Prices (per lot if applicable), any discounts and alternative offers; the presence of a Bid Security, if required; and any other details as the Purchaser may consider appropriate. Only discounts and alternative offers read out and recorded at bid opening shall be considered for evaluation. No Bid shall be rejected at bid opening except for late bids, in accordance with ITB Sub-Clause 25.1.
- 27.4 The Purchaser shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot if applicable, any

discounts and alternative offers; and the presence or absence of a Bid Security, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

- 28. Confidentiality**
- 28.1 Information relating to the examination, evaluation, comparison, and postqualification of Bids, and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.
- 28.2 Any attempt by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and postqualification of the Bids or Contract award decisions may result in the rejection of its Bid.
- 28.3 Notwithstanding ITB Sub-Clause 28.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.
- 29. Clarification of Bids**
- 29.1 To assist in the examination, evaluation, comparison and post-qualification of the Bids, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the evaluation of the Bids, in accordance with ITB Clause 31.
- 30. Responsiveness of Bids**
- 30.1 The Purchaser's determination of the responsiveness of a Bid is to be based on the contents of the Bid itself.
- 30.2 A substantially responsive Bid is one that conforms to all the terms, conditions, and specifications of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is

one that:

- (a) affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
- (b) limits in any substantial way, inconsistent with the Bidding Document, the Purchaser's rights or the Bidder's obligations under the Contract; or
- (c) if rectified would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.

30.3 If a Bid is not substantially responsive to the Bidding Document, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

31. Nonconformities, Errors, and Omissions

31.1 Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformity or omission in the Bid that does not constitute a material deviation.

31.2 Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

31.3 Provided that a Bid is substantially responsive, the Purchaser shall rectify nonmaterial nonconformities or omissions. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of the missing or non-conforming item or component. The adjustment shall be made using the method indicated in Section III, Evaluation and Qualification Criteria.

31.4 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:

- (a) if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit

price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;

- (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

31.5 If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its Bid Security may be forfeited.

32. Preliminary Examination of Bids

32.1 The Purchaser shall examine the Bids to confirm that all documents and technical documentation requested in ITB Clause 11 have been provided, and to determine the completeness of each document submitted.

32.2 The Purchaser shall confirm that the following documents and information have been provided in the Bid:

- (a) Bid Submission Sheet, in accordance with ITB Sub-Clause 12.1;
- (b) Price Schedules, in accordance with ITB Sub-Clause 12.2;
- (c) Written confirmation of authorization to commit the Bidder, in accordance with ITB Sub-Clause 22.2; and
- (d) Bid Security, in accordance with ITB Clause 21, if applicable.

If any of these documents or information is missing, the offer shall be rejected.

33. Examination of Terms and Conditions; Technical

33.1 The Purchaser shall examine the Bid to confirm that all terms and conditions specified in the GCC and the SCC have been accepted by the Bidder without any material deviation or reservation.

Evaluation

- 33.2 The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with ITB Clause 18, to confirm that all requirements specified in Section VI, Schedule of Supply of the Bidding Document have been met without any material deviation or reservation.
- 33.3 If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with ITB Clause 30, it shall reject the Bid.
- 34. Conversion to Single Currency**
- 34.1 For evaluation and comparison purposes, the Purchaser shall convert all bid prices expressed in the amounts in various currencies into a single currency, using the selling exchange rates established by the source and on the date specified in the BDS.
- 35. Margin of Preference**
- 35.1 Unless otherwise specified in the BDS, a margin of preference shall not apply.
- 36. Evaluation of Bids**
- 36.1 The Purchaser shall evaluate each Bid that has been determined, up to this stage of the evaluation, to be substantially responsive.
- 36.2 To evaluate a Bid, the Purchaser shall only use all the criteria and methodologies defined in this Clause and in Section III, Evaluation and Qualification Criteria. No other criteria or methodology shall be permitted.
- 36.3 To evaluate a Bid, the Purchaser shall consider the following:
- (a) the Bid Price;
 - (b) price adjustment for correction of arithmetic errors in accordance with ITB Sub-Clause 31.4;
 - (c) price adjustment due to discounts offered in accordance with ITB Sub-Clause 14.4;
 - (d) application of all the evaluation factors indicated in Section III, Evaluation and Qualification Criteria.
- 36.4 In the calculation of the evaluated cost of the Bids, the Purchaser shall exclude and not take into account:
- (a) in the case of Goods offered from within the Purchaser's country, all sales tax and all other

taxes, applicable in the Purchaser's country and payable on the Goods if the Contract is awarded to the Bidder;

- (b) in the case of Goods offered from outside the Purchaser's country, all customs duties, sales tax, and other taxes, applicable in the Purchaser's country and payable on the Goods if the Contract is awarded to the Bidder; and
- (c) any allowance for price adjustment during the period of performance of the Contract, if provided in the Bid.

36.5 The Purchaser's cost evaluation of a Bid may require the consideration of other factors, in addition to the Bid Price quoted in accordance with ITB Clause 14. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The factors selected, if any, shall be expressed in monetary terms to facilitate comparison of the Bids, unless otherwise specified in Section III, Evaluation and Qualification Criteria. The factors to be used and the methodology of application shall be as indicated in Section III, Evaluation and Qualification Criteria.

36.6 If this Bidding Document allows Bidders to quote separate prices for different lots, and the award to a single Bidder of multiple lots, the methodology of evaluation to determine the lowest evaluated lot combinations, including any discounts offered in the Bid Submission Sheet, is as specified in Section III, Evaluation and Qualification Criteria.

37. Comparison of Bids

37.1 The Purchaser shall compare all substantially responsive bids to determine the lowest-evaluated bid, in accordance with ITB Clause 36.

38. Postqualification of the Bidder

38.1 The Purchaser shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive Bid is qualified to perform the Contract satisfactorily.

38.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 19, to clarifications in accordance with ITB Clause 29 and the

qualification criteria indicated in Section III, Evaluation and Qualification Criteria. Factors not included in Section III, Evaluation and Qualification Criteria shall not be used in the evaluation of the Bidder's qualification.

38.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the Bid, in which event the Purchaser shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

39. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids

39.1 The Purchaser reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids at any time prior to Contract award, without thereby incurring any liability to the Bidders.

F. Award of Contract

40. Award Criteria

40.1 The Purchaser shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated Bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

41. Purchaser's Right to Vary Quantities at Time of Award

41.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VI, Schedule of Supply, provided this does not exceed the percentages indicated in the BDS, and without any change in the unit prices or other terms and conditions of the Bid and the Bidding Document.

42. Notification of Award

42.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. At the same time, the Purchaser shall also notify all other Bidders of the results of the bidding.

42.2 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.

- 43. Signing of Contract**
- 43.1 Promptly after notification, the Purchaser shall send to the successful Bidder the Agreement and the Special Conditions of Contract.
- 43.2 Within twenty-eight (28) days of receipt of the Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.
- 44. Performance Security**
- 44.1 Within twenty-eight (28) days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section IX, Contract Forms, or another form acceptable to the Purchaser.
- 44.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

Section II. Bid Data Sheet

A. Introduction	
ITB 1.1	The number of the Invitation for Bids is : _____ _____
ITB 1.1	The Purchaser is: _____ _____
ITB 1.1	The name of the ICB is: _____ _____ The identification number of the ICB is: _____ _____ The number and identification of lots comprising this ICB is: _____ _____ _____
ITB 2.1	The Borrower is: _____ _____
ITB 2.1	The name of the Project is: Rehabilitation measures for the Kungrad - Kazakh Border railway section – Lot 1.2 Power Supply
ITB 5.5	The Bidder _____ required to include with its Bid, documentation from the Manufacturer of the Goods, that it has been duly authorized to supply, in the Purchaser's country, the Goods indicated in its Bid.

B. Bidding Document	
ITB 7.1	For clarification purposes only, the Purchaser's address is: Attention: _____ Street Address: _____ Floor/Room number: _____ City: _____ ZIP Code: _____ Country: _____ Telephone: _____ Facsimile number: _____ Electronic mail address: _____
C. Preparation of Bids	
ITB 10.1	The language of the Bid is: _____ _____
ITB 11.1 (i)	The Bidder shall submit with its Bid the following additional documents: _____ _____
ITB 13.1	Alternative Bids _____ permitted
ITB 14.5	The Incoterms edition is: _____
ITB 14.6 (b) (i)	For Goods offered from outside the Purchaser's country, the Bidder shall quote prices using the following Incoterms: _____ _____
ITB 14.6 (b) (ii)	In addition to the above, the Bidder shall quote prices for Goods offered from outside the Purchaser's country using the following Incoterms: _____ _____

ITB 14.7	The prices quoted by the Bidder shall be: _____
ITB 15.1 (a)	The currency of the Bid shall be: _____
ITB 20.1	The bid validity period shall be _____ days.
ITB 21.1	<p>A Bid Security _____ required.</p> <p>If a Bid Security shall be required, the amount and currency of the Bid Security shall be _____</p> <p>_____</p>
D. Submission and Opening of Bids	
ITB 22.1	In addition to the original of the Bid, the number of copies is: _____
ITB 22.2	The written confirmation of Authorization to sign on behalf of the Bidder shall consist of: _____
ITB 23.2 (c)	The identification of this bidding process is: _____
ITB 24.1	<p>For bid submission purposes only, the Purchaser's address is :</p> <p>Attention: _____</p> <p>Street Address: _____</p> <p>Floor/Room number: _____</p> <p>City: _____</p> <p>ZIP Code: _____</p> <p>Country: _____</p>

ITB 24.1	<p>The deadline for bid submission is:</p> <p>Date: _____</p> <p>Time: _____</p>
ITB 27.1	<p>The bid opening shall take place at:</p> <p>Street Address: _____</p> <p>Floor/Room number: _____</p> <p>City : _____</p> <p>Country: _____</p> <p>Date: _____</p> <p>Time: _____</p>
E. Evaluation, and Comparison of Bids	
ITB 34.1	<p>The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is: _____</p> <p>The source of exchange rate shall be: _____</p> <p>The date for the exchange rate shall be: _____</p>
ITB 35.1	<p>A margin of preference _____ apply.</p> <p>If a margin of preference applies, the application methodology shall be as stipulated in Section III, Evaluation and Qualification Criteria.</p>
F. Award of Contract	
ITB 41.1	<p>The percentage by which quantities may be increased is: _____</p> <p>_____</p> <p>The percentage by which quantities may be decreased is: _____</p> <p>_____</p>

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Economic Criteria

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Qualification Criteria

Financial Criteria

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Bid Submission Sheet

Date: _____
 ICB No.: _____
 Invitation for Bid No.: _____
 Alternative No.: _____

To: _____

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda No.: _____;
- (b) We offer to supply in conformity with the Bidding Document and in accordance with the delivery schedule specified in the Schedule of Supply, the following Goods and Related Services: _____;
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is: _____;
- (d) The discounts offered and the methodology for their application are: _____;
- (e) Our Bid shall be valid for a period of _____ days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our Bid is accepted, we commit to obtain a Performance Security in the amount of _____ percent of the Contract Price for the due performance of the Contract;
- (g) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the following eligible countries _____;
- (h) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Document;
- (i) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the ADB;

- (j) The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract:

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate "none.")

- (k) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed.
- (l) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Price Schedule For Goods To Be Offered From Within The Purchaser's Country

Name of Bidder _____ IFB Number _____ Page ____
of ____

1 Item	2 Description	3 Country of Origin	4 Domestic Value Added in Percent	5 Quantity and Unit of Measurement	6 Unit Price EXW	7 Total EXW Price per item	8 Sales and Other Taxes Per Item	9 Total Price per Item including Taxes
						5 x 6		7 + 8
Total Amount								

Notes:

Column 4: In accordance with margin of preference ITB Clause 35, if applicable. Domestic Value Added comprises domestic labor, the domestic content of materials, domestic overheads and profits from the stage of mining the raw material until final assembly.

Column 6: Incoterm in accordance with ITB Clause 14
 Currency in accordance with ITB Clause 15
 Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or the custom duties and sales and other taxes already paid on previously imported items.

Column 8: Payable in the Purchaser's country if Contract is awarded

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Price Schedule For Goods To Be Offered From Outside The Purchaser's Country

Name of Bidder _____ IFB Number _____ Page ____
of ____

1	2	3	4	5	6	7	8
Item	Description	Country of Origin	Quantity and Unit of Measurement	Unit Price CIF (...) or CIP (...)	Unit Price FOB (...) or FCA (...)	Total Price CIF or CIP per Item	Total Price FOB or FCA per Item
						4 x 5	4 x 6
					Total Amount		

Notes:

Column 5 and 6 : Incoterm in accordance with ITB Clause 14
Currency in accordance with ITB Clause 15

Column 6: Only to be used if the Purchaser wishes to reserve transportation and insurance to domestic companies or other designated sources. Identification of the lowest evaluated bid must be on the basis of the CIF or CIP price, but the Purchaser may sign the contract on FOB or FCA terms and make its own arrangement for transportation and/or insurance.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Price Schedule For Related Services To Be Offered From Outside And Within The Purchaser's Country

Name of Bidder _____ IFB Number _____ Page _____
of _____

1 Item No.	2 Description	3 Country of Origin	4 Quantity and Unit of Measurement	5 Unit Price		6 Total Price per Item	
				(a)	(b)	(a)	(b)
				Foreign Currency	Local Currency	Foreign Currency	Local Currency
						4 x 5(a)	4 x 5(b)
Total Amount							

Notes :

Column 5 and 6: Currencies in accordance with ITB Clause 15

Prices are to be quoted inclusive of all custom duties, sales and other similar taxes applicable in the Purchaser's country and payable on the Related Services, if the Contract is awarded to the Bidder

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Bid Security

Date: _____
 ICB No.: _____
 Invitation for Bid No.: _____

To: _____

Whereas

_____ (hereinafter "the Bidder") has submitted its Bid dated _____ for ICB No. _____ for the supply of _____ hereinafter called "the Bid."

KNOW ALL PEOPLE by these presents that WE _____ of _____ having our registered office at _____ (hereinafter "the Guarantor"), are bound unto _____

(hereinafter "the Purchaser") in the sum of _____ for which payment well and truly to be made to the aforementioned Purchaser, the Guarantor binds itself, its successors, or assignees by these presents. Sealed with the Common Seal of this Guarantor this _____ day of _____.

THE CONDITIONS of this obligation are the following:

1. If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder in the Bid Submission Sheet, except as provided in ITB Sub-Clause 20.2; or
2. If the Bidder, having been notified of the acceptance of its Bid by the Purchaser, during the period of bid validity, fails or refuses to:
 - (a) execute the Contract; or
 - (b) furnish the Performance Security, in accordance with the ITB Clause 44; or
 - (c) accept the correction of its Bid by the Purchaser, pursuant to ITB Clause 31.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser states that the amount claimed by it is due to it, owing to the occurrence of one or more of the above conditions, specifying the occurred conditions.

This security shall remain in force up to and including twenty-eight (28) days after the period of bid validity, and any demand in respect thereof should be received by the Guarantor no later than the above date.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid Security for and on behalf of _____

Date _____

Manufacturer's Authorization

Date: _____

ICB No.: _____

Invitation for Bid No.: _____

Alternative No.: _____

To: _____

WHEREAS _____ who are official manufacturers of _____ having factories at _____ do hereby authorize _____ to submit a Bid in relation to the Invitation for Bids indicated above, the purpose of which is to provide the following Goods, manufactured by us _____ and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm in reply to this Invitation for Bids.

Name _____

In the capacity of: _____

Signed _____

Duly authorized to sign the Authorization for and on behalf of _____

Date _____

Section V. Eligible Countries

List of Eligible Countries of the Asian Development Bank

PART 2 – Supply Requirements

Section VI. Schedule of Supply

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3. Technical Specifications.....6-4

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1. List of Goods and Related Services

Lot No. : 1.2				
Lot Name : Power Supply				
Item No.	Name of Goods or Related Services	Description	Unit of Measurement	Quantity
24-A1	Topographic survey of the line and corrections of the existing alignment and profile	To be done jointly with the track topographical survey	km	326,5
24-A2	Pole 11 m high: provision and installation	The rate includes the accessories installation	N°	7272,0
24-A3	Pole 13 m high: provision and installation	Ditto	N°	68
24-A4	Bracket Insulator: provision and installation		N°	41.328
24-A5	Cap-and-pin insulator: provision and installation		N°	5.628
24-A6	Conductor: rope Al-st 6x3.2+1x3.2 (50mm ²): provision and installation	The rate includes junction and anchor clamps provision and installation	T	422
24-A7	Accessories provision		kg	747.535
24-A8	Dismantling of the old line and recovery of the resulting materials	Includes transport, splitting in reusable and scrap, stacking of demolished materials	km	327

2. Delivery and Completion Schedule

The delivery period shall start as of _____.

Item No.	Description of Goods or Related Services	Delivery Schedule (Duration)	Location	Required Arrival Date of Goods or Completion Date for Related Services

3. Technical Specifications

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Characteristics of the new line and general specifications	5
24-A1 Topographical survey	7
24-A2 and 24-A3 Poles provision and installation.....	7
24-A4 and 24-A5 Insulators provision and installation	9
24-A6 Conductors provision and installations	9
24-A7 Provision of accessories	10
24-A8 Dismantling of the existing line.....	11
Materials	12

SHORT DESCRIPTION OF WORKS

The existing obsolete 10kV/6kV double line supported by wooden poles will be substituted by a new double line on reinforced concrete poles with increased insulation.

CHARACTERISTICS OF THE NEW LINE AND GENERAL SPECIFICATIONS

The new line will be about 326.5 km long.

The first line (AB) will feed the Automatic Block posts, the second line (PS-Power Supply) will feed the stations (safety and lighting plants, buildings, pumps, battery charge devices, etc.).

Both lines will be equipped with conductors steel-aluminum type.

Design of the line shall be based on the following hypothesis:

- air temperature variation between +45°C and -40°C,
- maximum wind speed: 29 m/sec (about 105 km/h)
- maximum ice thickness of ice sleeve around the conductor: 15 mm.

The conductors are to be installed according to "laying tables" to be proposed by the Contractor and approved by the Engineer, An example is shown in the following tables:

SPAN – 50m

Operating mode	Conductor total mechanical tension (daN)	Mechanical stress per mm ² (daN/mm ²)	Height from the ground of the lower cond. (m)	Sag (m)
Tmax	61	1,08	6,80	1,00
T= 40oC	64	1,13	6,84	0,96
T= 30oC	70	1,25	6,93	0,87
T= 20oC	79	1,41	7,03	0,77
T= 10oC	92	1,84	7,14	0,66
T= 0oC	112	1,99	7,26	0,54
T= - 10oC	144	2,56	7,38	0,42
T= - 20oC	194	3,44	7,49	0,31
Tmin	339	6,03	7,62	0,18

SPAN -25m

Operating mode	Conductor total mechanical tension (daN)	Mechanical stress per mm ² (daN/mm ²)	Height from the ground of the lower cond. (m)	Sag (m)
Tmax	15	0,27	6,80	1,00
T= 40oC	15	0,27	8,81	0,99
T= 30oC	16	0,28	6,83	0,97
T= 20oC	16	0,29	6,86	0,94
T= 10oC	17	0,29	6,88	0,92
T= 0oC	17	0,30	6,91	0,89
T= - 10oC	17	0,31	6,93	0,87
T= - 20oC	18	0,32	6,96	0,84
Tmin	19	0,34	7,01	0,79

The line passes through windy areas with soils formed by sand and clay mixed with some sodium chloride, then strong insulation is required, therefore insulators for 20kV rated voltage has to be chosen.

Soils are aggressive toward concrete therefore reinforced poles from sulphate-resistant Portland cement shall be used.

Generally poles 11 m and 13 m long, produced in the Republic of Uzbekistan shall be installed.

The double line passes through uninhabited sites; the minimum height of the lowest conductor has to be as it follows:

- from the ground level: 6 m,
- from the road level: 7 m,
- from the rail level: 7.5 m

When the line crosses roads and railway, double anchorage on both sides has to be foreseen. No angle between road/railway and line axles less than 30° is allowed.

The normal span in plain has to be 50 m.

Poles are to be provided with metallic brackets and braces for supporting insulators and conductors.

Earthing of metallic parts installed on poles will be done from strip steel and L shaped steel. Resistance of poles grounded circuit should not exceed 15 ohm.

Conductors are to be transposed along the line about every 5 km.

After or during the construction of the new line, wooden poles, conductors, insulators, transformers, disconnectors, lightning arresters, cables, minor materials of the existing line, are to be recovered, distinguished in reusable and scrap, transported and staked according to the Engineer instructions, with the exception of the reusable materials and devices to be immediately reinstalled.

The new three-phase lines shall be connected to users as the existing ones; lightning arresters, disconnectors, transformers, etc. has to be recovered, revised by the Contractor, and reinstalled on the new line.

The line has to be built according to all the national rules about the correct execution of this kind of works and about the safety.

The Contractor has in any case the complete responsibility that every material used to build the line and its installation comply with the technical, structural, functional and safety requirements of the line. He is therefore authorized to propose any variation to the Engineer to implement these targets.

The following description of materials has to be considered a simple indication produced by the Consultant experience, without relieving the Contractor from the above described responsibility.

At the end of the work the Contractor has to hand over the "as built " drawings, that is the lay-out of the line in scale 1:2000 (every crossing has to be indicated), the profile in scale 1:2000 for the length and 1: 500 for the height, the tables of the laying down of conductors, the drawings of poles, insulators, conductors, accessories.

24-A1 TOPOGRAPHICAL SURVEY

This survey is part of the survey foreseen for PW works (see Lot 1.1 – Description of Item 1A)

The lay out of the new line has to follow as much as possible the lay out of the existing one.

The Contractor has to delivery 2 copies of the proposed lay out of the line, in which poles position will be indicated, as well as connections to users, devices supported (disconnectors, transformers, lightning arresters, etc); sketches of crossings in adequate scale shall be moreover handed over.

The expenses have to be considered included in the rates of the other items.

24-A2 AND 24-A3 POLES PROVISION AND INSTALLATION

a) Description

Poles shall be made of reinforced concrete, 11m and 13m long, having a quadrilateral section with rounded angles reducing its area progressively from the base to the top. Sulphate-resistant Portland cement shall be used for concrete (see drawings Lot 1.2 - 5/8, Lot 1.2 - 11)

The Contractor has to confirm the use of these poles, sending detailed drawings to the Engineer, their mechanical characteristics, and the characteristics of the materials to be used , as well as a short description of the production plant.

The Contractor can propose poles of other type to the Engineer, asking for the approval. He has to produce the above said documentation.

Along the line, anchor and angle posts shall be installed. These supports has to bear heavier stresses than the single ones and are formed by two poles, the second one lent against the first one with an angle of about 30° and tied to it.

In these cases the line shall be anchored to the posts using two suspended insulators for every conductors.

The poles have to be installed driving them into holes 2,1+2,3 m deep, leaning them on a reinforced concrete slab, then filling the hole with soil and compacting the soil itself (see drawing Lot 1.2 - 5/8)

The part of the pole that will be put into the soil has to be painted with bituminous varnish.

At two meters from the ground a sign has to be painted in black letters on a white back-ground the number of the pole, starting from 1 and progressing from a substation to the following one.

Moreover

- in indelible red color shall be indicated the design code of the post,
- from a painted strip the distances to the top and to the base,
- with the help of a stencil on the concrete surface has to be painted warning notice (yellow background, black arrow and edges) and the rated voltage of the line.

Drawings Lot 1.2 - 11 and Lot 1.2 - 12 show the armatures of the CB 110-3,5 pole and of the slab supporting the pole.

b) Tests

The Contractor has to put at disposal a prototype of a pole and of an anchor/angle pole before the manufacturing will start; he has to agree with the Engineer the installation of them for all the mechanical and electrical tests will be considered necessary.

The Engineer has the right to inspect the production plant and verify the quality of the used materials and the manufacturing process.

Poles have to pass visual inspection, before their handing over.

Tests can be repeated on one sample out of one thousand chosen by the Engineer.

The Contractor has to ask the Engineer authorization for every lot of poles he was intentioned to order to the manufacturing factory.

Every lot has to be provided with certificates of tests executed on the component materials.

c) Measures and payments

Poles shall be paid per unit, considering as unit the pole correctly installed on site with all the accessories assembled on it, included the earthling circuit, with the exception of conductors and insulators. The rate covers all expenses of transport, installation, provision of poles and

supporting slabs, installation of accessories and whatever other relevant expenses born by the Contractor.

Anchor and angle posts are to be paid with the sum of the rates of the two constituent poles.

The Contractor can ask for a partial 50% payment for the poles handed over by the manufacturer. In this case the poles will become property of the Employer; verbal of handing over-taking over of these materials has to be signed between parties. They remain at disposal of the Contractor to be installed on site, but the Contractor will have the responsibility of their correct stacking, storage and care.

24-A4 AND 24-A5 INSULATORS PROVISION AND INSTALLATION

a) Description

Two types of insulators shall be provided (see drawing Lot 1.2 - 9)

- Bracket insulators for 20 kV rated voltage, type ШФ20-B

<u>Characteristics</u>	Disruptive Discharge Voltage:	180 kV
	Impulse Wave Discharge Voltage:	135 kV
	50Hz Discharge Voltage (dry):	85 kV
	50Hz Discharge Voltage (rain):	65 kV
	Length of Leakage:	400 mm
	Breaking load at bending:	13 kN
	Mass :	3,5 kg

- Cap-and-pin Insulators for 20 kV rated voltage, type ПФ70-B.

This insulator has to comply with the GOST 6490-83.

<u>Characteristics</u>	Disruptive Discharge Voltage:	180 kV
	Impulse Wave Withstanding Voltage:	110
	50Hz Withstanding Voltage (rain):	45 kV
	Length of Leakage:	340 mm
	Breaking load at tension:	70 kN
	Disk diameter	270 mm
	Overall height	146 mm
	Mass :	4,8 kg

This second type of insulators has to be used on anchor and angle poles.

b) Tests

The Contractor has to inform the Engineer about the programs of standard tests scheduled in the laboratory of manufacturer to allow his participation.

Anyway every lot of insulators has to be provided with certificates of the acceptance tests executed according to the existing laws.

c) Payments

Insulators have to be paid per installed unit. The rate covers all the provision, transport, installation, of insulators and relevant accessories for coupling and installing insulators and whatever other relevant expenses born by the Contractor.

The Contractor can ask for a partial 50% payment for the insulators delivered by the manufacturer. In this case the insulators will become property of the Employer; verbal of handing over-taking over of these materials has to be signed between parties. They remain at disposal of the Contractor to be installed on site, but the Contractor will have the responsibility of their correct storage and care.

24-A6 CONDUCTORS PROVISION AND INSTALLATIONS

a) Description

Both Automatic Block (AB) and Power Supply (PS) lines will be equipped with aluminum-steel conductors **AC – 50** type, having the following characteristic (see drawing Lot 1.2 - 10):

- | | | |
|---|---------------|-------|
| ▪ Formation rope, Al n.xΦ+ Steel n.xΦ, (mm): | 6x3,2 + 1x3.2 | |
| ▪ Section area, (mm ²): | 48,2 + 9,6 | |
| ▪ Diameter of rope, (mm): | | 9,6 |
| ▪ Breaking load (not less than), (N) : | 17112 | |
| ▪ Mass of 1 km, (kg): | | 195,0 |
| ▪ Electrical resistance per km (no more than), (Ω): | 0,5951 | |

This conductor has to comply with the GOST 839-80.

The Contractor has to inform the Engineer about the programs of standard tests scheduled in the laboratory of manufacturer to allow his participation.

Anyway every lot of lot of conductors has to be provided with certificates of the acceptance tests executed according to the existing laws.

The Contractor has to provide in time the table of laying down conductors, that is, the table of sags and stresses in function of temperature for every span length.

The laying down of conductors shall starts only after the poles, insulators, hurtling circuit will be completely installed and inspected by the Engineer.

The laying down has to be implemented with the rope running on wooden or aluminum blocks, assembled on ball bearings; its groove has to have a diameter 2,5 times the radius of rope and deep at least 5 times, allowing in any case the passage of junctions. The block diameter has to be at least 20 times the rope diameter.

In case of rope bending and twisting, all the conductor stretch has to be replaced.

Only anchorage auto-compressing cone clamp are allowed on mechanically tensioned conductors. Joints have to be done on anchor poles where the conductors have not mechanical stress.

Therefore the length of the conductor stretch laid down from anchor pole to the following one has to be without any longitudinal clamp.

This length has to be normally from 1000 m to a maximum of 1500 m (twenty to thirty spans).

The conductor is normally delivered by the manufacturer in pieces of 3000m.

The rope has to be mechanically tensioned during all the process of laying down, without touching the ground or anything sticking out from the ground like rocks, iron scraps, barbed wire.

The Constructor is responsible of the minimum admissible height of the lowest conductor from the rail or road or conductors levels in crossings. He has to produce a plan and section of each crossing in scale 1:2000 for lengths and 1:500 for heights.

b) Method of measurement and payment

The conductors provision and installation have to be paid per m.

Referring to a span, the real length of a conductor, will be calculated with the following formula:

$$L_s = D + 8 D_i / 3D + H^2 / 2D$$

where: L_s is the real length of the conductor as if it were laid down on the ground

D is the distance between the two supporting points of the conductor (span),

D_i is the sag referred to the temperature of 20° C,

H is the difference between the levels of the supporting points.

The rate covers the provision, transport, installation, of conductors and junction/anchorage clamps and whatever relevant expenses born by the Contractor.

The Contractor can ask for a partial 50% payment for the conductors delivered by the manufacturer. In this case the conductors will become property of the Employer; verbal of handing over-taking over of these materials has to be signed between parties. They remain at disposal of the Contractor to be installed on site, but the Contractor will have the responsibility of their correct storage, and care.

24-A7 PROVISION OF ACCESSORIES

a) Description

All the steel accessories not included in the above points 3, 4, 5 like brackets, anchoring wires, shelves, anchoring wires, L-shaped, strip, sheet steel, staying straps, corner plates completed with all the necessary bolts, nuts, washers, welds correctly executed, etc. are to be designed by the Contractor. Drawings of all the accessories are to be sent to the Engineer for his approval.

As above said, all devices connected to the existing line, like disconnectors, lighting arresters, AB transformers, cable boxes etc. are to be recovered and connected to the poles of the new line. All the relevant accessories are as well to be designed by the Contractor and drawings sent to the Engineer for his approval.

All these accessories are to be zinc coated or painted with one hand of antirust paint and three hands of grey paint.

b) Measure and payment

The payment shall be per kg of material mass. The mass can be obtained by direct weighting of all pieces or samples or calculation of the volume and considering the steel density of 7850 kg/m³.

The rate includes the transport, provision and installation if not foreseen in the above mentioned points and whatever relevant expenses born by the Contractor.

No payment shall be allowed for accessories not yet correctly installed.

24-A8 DISMANTLING OF THE EXISTING LINE

a) Description

After the completion of the new line, the old one has to be dismantled up to the ground level.

The Contractor has to split up the reusable materials from the scrap ones, transport all of them according to the instruction of the Engineer, and stack them correctly,

b) Measurement and payment

The demolition has to be paid per m measured along the axle of the old line, after controlling that the Contractor has complied with all the obligation described in a).

MATERIALS

Before closing the account of works, has to be verified that the remaining quantities of materials correspond to the differences between quantities handed over to the Employer and quantities installed on the line. The differences exceeding 1%, corresponding to the admissible waste, will be charged to the Contractor.

4. Drawings

Due to the number and the size (A3) of drawings they have been provided in a separate volume.

Tender Documents of the rehabilitation measures for the Kungrad – Kazakh border railway section (Uzbekistan)

Lot 1. 2 – Power Supply

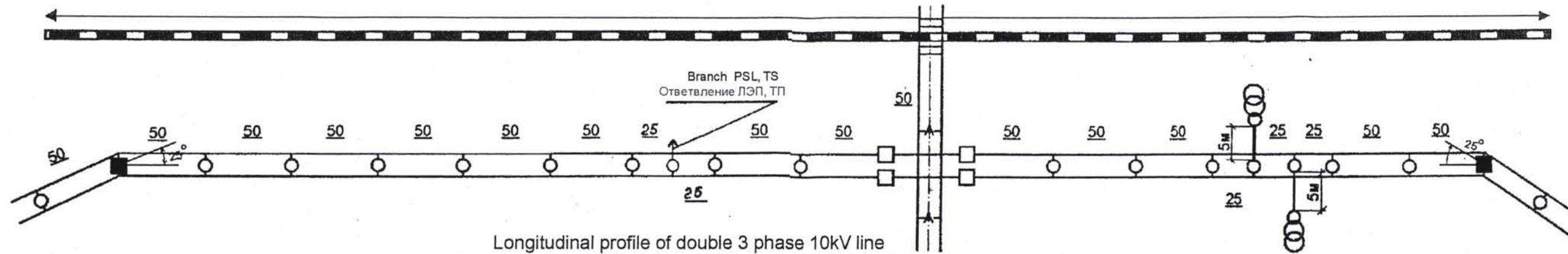
Section VI – Schedule of Supply

Chapter 4 - Drawings

List of Drawings

Coding	Title
L1.2-1	Example of profile, earthing circuit of pole, scheme of users feeding
L1.2-2	Railway crossing
L1.2-3	Road crossings
L1.2-4	Electrical 10 KV line crossing
L1.2-5	Pole installation
L1.2-6	Angle pole installation
L1.2-7	Anchorage pole of single 10 KV line
L1.2-8	Pole supporting transformer feeding AB post
L1.2-9	Insulators
L1.2-10	Conductor aluminium-steel type 6X3.2+1X3.2 (50 mm ²), joint clamp, anchor clamp
L1.2-11	Pole armature
L1.2-12	Base slab for poles

Plan of double 3 phase 10kV line
План трассы двухцепной ЛЭП-10кВ



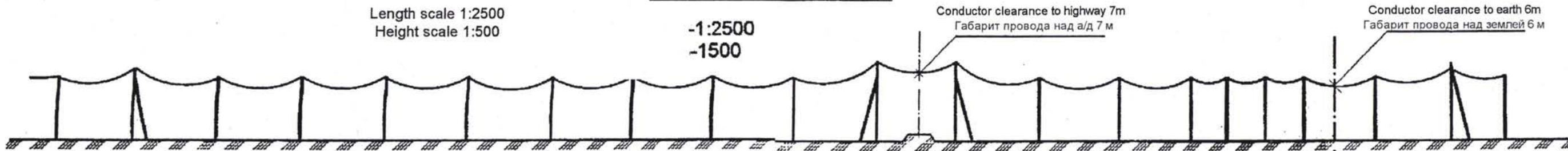
Longitudinal profile of double 3 phase 10kV line
Продольный профиль двухцепной ЛЭП-10кВ

Length scale 1:2500
Height scale 1:500

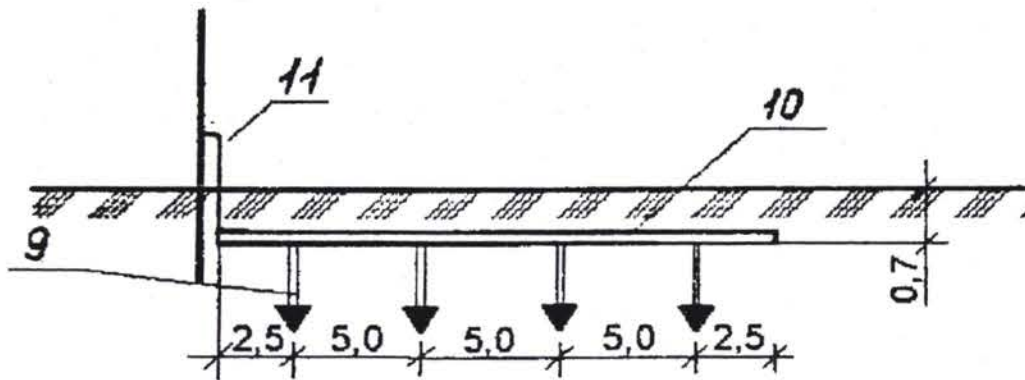
-1:2500
-1500







Conductor clearance to highway 7m
Габарит провода над а/д 7 м

Conductor clearance to earth 6m
Габарит провода над землей 6 м



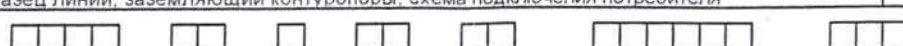


Sketch of earth connection of pole
Эскиз заземления опоры

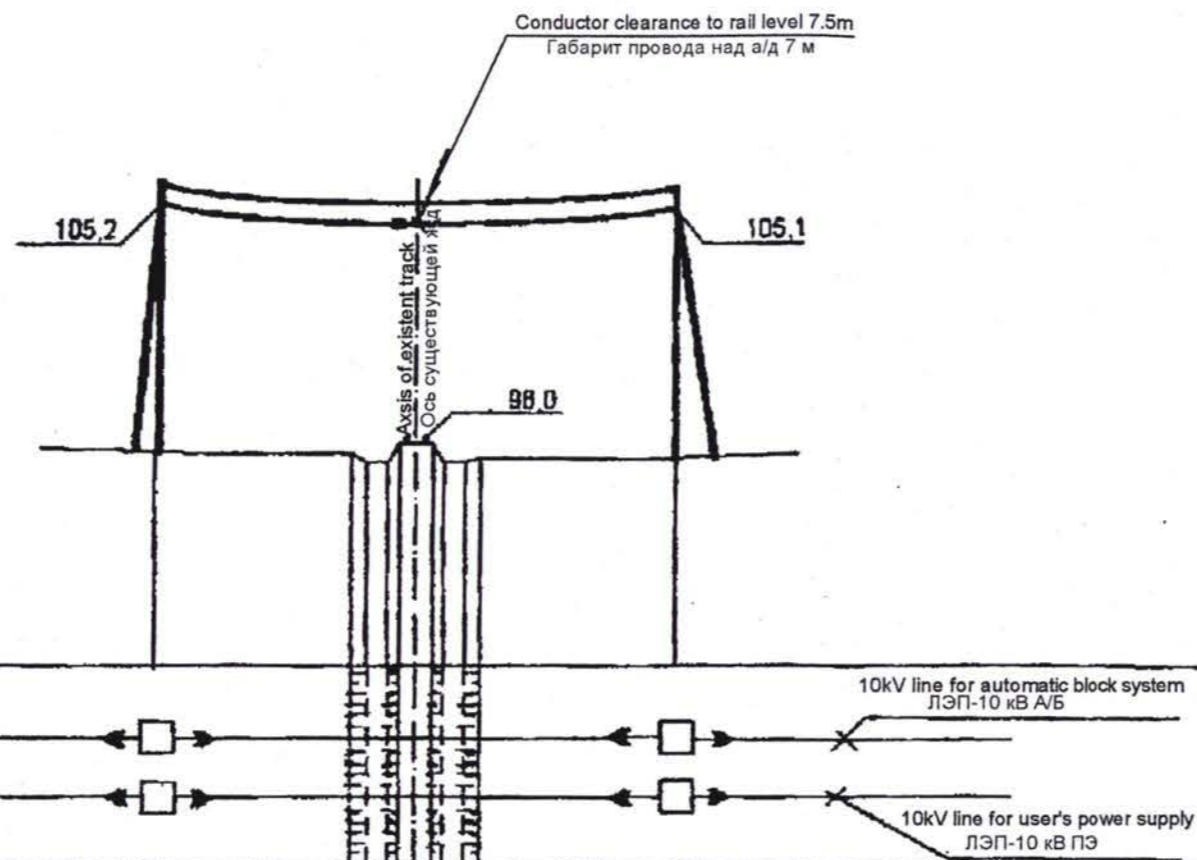


-  Intermediate pole
Опора промежуточная
-  Angle intermediate pole
Опора промежуточная угловая
-  Anchor pole
Переходная опора
-  Pole supporting phase to phase transformer for A.B.
Силовая опора
-  Pole for 3 wire branch line
Ответвительная опора на 3 провода
-  Pole for 2 wire branch line
Ответвительная опора на 2 провода

№ №	Description Наименование	Type, model, description Тип, марка, Характеристика	Unit Ед. изм	Quantity Кол-во	Notes Примечания
1	Intermediate pole Опора промежуточная	draft черт.	pieces шт.	15	
2	Angle intermediate pole Опора промежуточная угловая	draft черт.	pieces шт.	2	
3	Transition pole Переходная опора	draft черт.	pieces шт.	4	
4	Power pole Силовая опора	draft черт.	pieces шт.	2	
5	Branch-off pole to 2 wire Ответвительная опора на 2 провода	draft черт.	pieces шт.	2	
6	Branch-off pole to 3 wire Ответвительная опора на 3 провода	draft черт.	pieces шт.	1	
7	Steel-aluminum wire Сталеалюминиевый провод	AS-50 AC-50	t/kg т/км	1.16	
8	Angle steel Сталь угловая	50x50x5	pieces/kg шт./кг	104/981	For individual earth connection of Для индивидуально го заземления
9	Flat bar steel Сталь полосовая	40x4	m/kg м/кг	520/655	
10	Round steel Сталь круглая	D=12	m/kg м/кг	130/116	

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	NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE 10 КВ ЛЭП							
Example of profile, earthing circuit of pole, scheme of users' feeding Образец линии, заземляющий контур опоры, схема подключения потребителя				L1.2-1				
				Scale:				
Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized
File:					Referred Tables			

RAILWAY CROSSING
ПЕРЕСЕЧЕНИЕ С ЖЕЛЕЗНОЙ ДОРОГОЙ

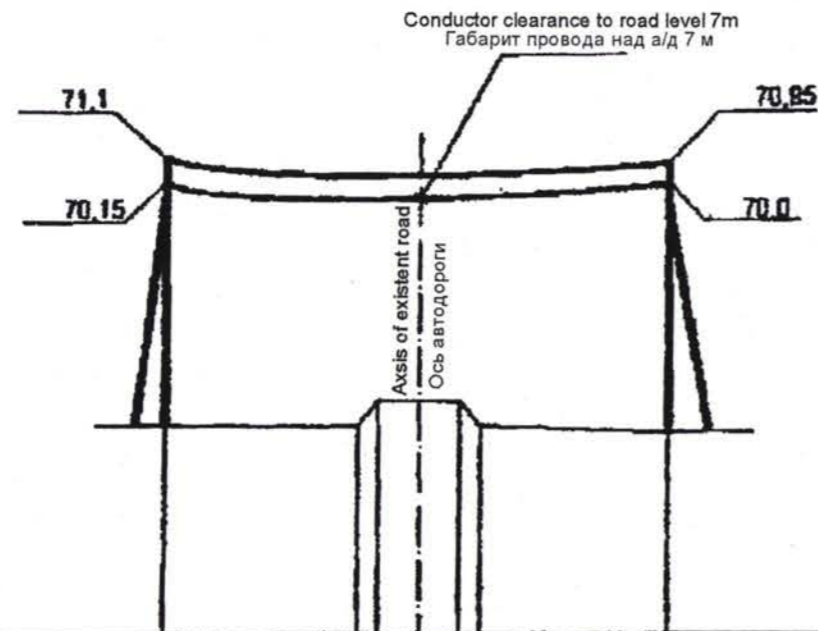


Axis of line Ось линии и ситуации				10kV line for automatic block system ЛЭП-10 кВ А/Б	
				10kV line for user's power supply ЛЭП-10 кВ ПЭ	
Level Отметки земли	Existing Существующие	95.2		95.1	
	Projected Проектируемые				
Distances Расстояния	Existing Существующие	25	25		
	Projected Проектируемые				
Spans Пролеты	Existing Существующие	50			
	Projected Проектируемые				
Type of pole Тип опор	Existing Существующие	PA10-3 2 pieces ПА10-3 2 шт	PA10-3 2 pieces ПА10-3 2 шт		
	Projected Проектируемые				

No №	Designation Наименование	Type, description, model Тип, марка, характеристика	Unit Ед. Изм	Quantity Количество	Notes Примечания
1	Transition pole Переходная опора	Draft L1.2-7 Черт	pieces шт	4	
2	Steel-aluminum wire Сталеалюминиевый провод	AS-50 AC-50	kg/km кг/км	58.5	
3	Angle steel Стль угловая	50x50x5	pieces/kg шт/кг	16/151	
4	Flash bar steel Стль полосовая	40x4	m/kg м/кг	80/101	For individual earth connection of pole
5	Round steel Стль круглая	d=12mm	m/kg м/кг	20/18	Для индивидуального заземления опор

	Review of Railways Rehabilitation in Central Asia - Module B (EUROPEAID/116151/C/SV/MULTI)	A project implemented by: 						
NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE 10 КВ ЛЭП								
RAILWAY CROSSING ПЕРЕСЕЧЕНИЕ С ЖЕЛЕЗНОЙ ДОРОГОЙ		L1.2-2						
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Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized
File:		Referred Tables						

ROAD CROSSING
ПЕРЕСЕЧЕНИЕ ЛЭП С АВТОДОРОГОЙ

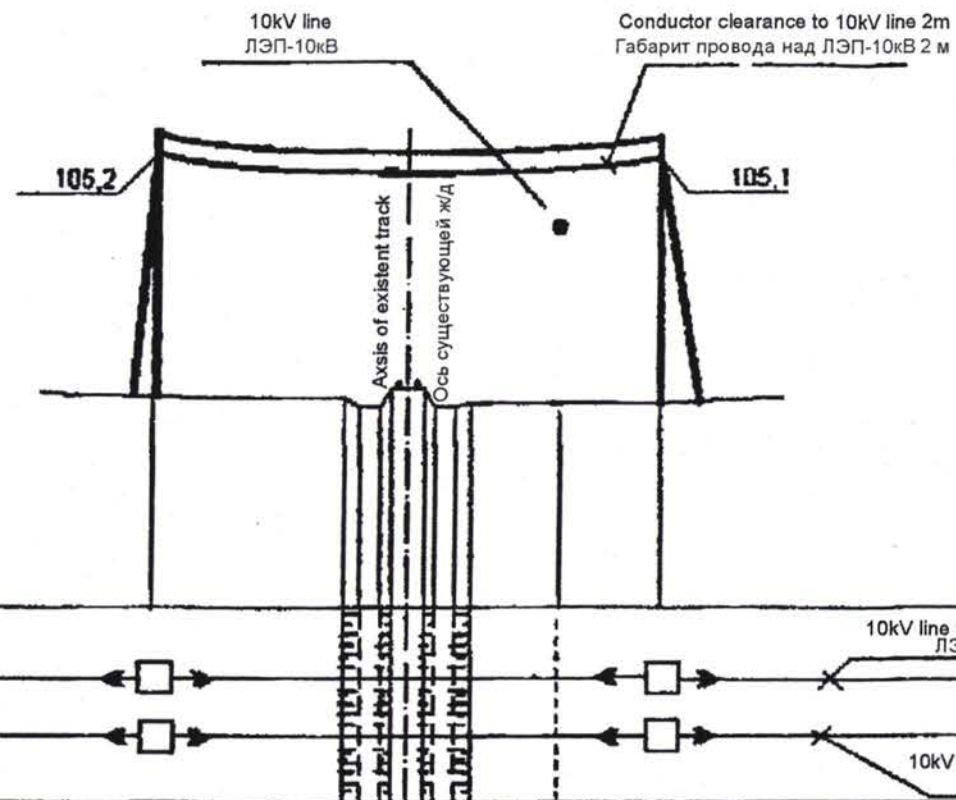


Axis of line and situation Ось линии и станции			
Level Отметки земл	Existent Существующие	60.15	60
	Projected Проектируемые		
Distances Расстояния	Existent Существующие		50
	Projected Проектируемые		
Spans Пролеты	Existent Существующие		50
	Projected Проектируемые		
Type of pole Тип опор	Existent Существующие	PA10-3 2pieces ПА10-3 2шт	PA10-3 2pieces ПА10-3 2шт
	Projected Проектируемые		

№ №	Designation Наименование	Type, description, model Тип, марка, характеристика	Unit Ед. Изм	Quantity Количество	Notes Примечания
1	Transition pole Переходная опора	Draft L1.2-7 Черт	pieces шт	4	
2	Steel-aluminum wire Сталеалюминиевый провод	AS-50 AC-50	kg кг	58.5	
3	Angle steel Стель угловая	50x50x5	pieces/kg шт/кг	16/151	
4	Flash bar steel Стель полосовая	40x4	m/kg м/кг	80/101	For individual earth connection of pole
5	Round steel Стель круглая	d=12mm	m/kg м/кг	20/18	Для индивидуального заземления опор

	Review of Railways Rehabilitation in Central Asia - Module B (EUROPEAID/116151/C/SV/MULTI)	A project implemented by: 						
NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE 10 KV ЛЭП								
ROAD CROSSING ПЕРЕСЕЧЕНИЕ ЛЭП С АВТОДОРОГОЙ		L1.2-3						
		Scale:						
Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized
File:		Referred Tables						

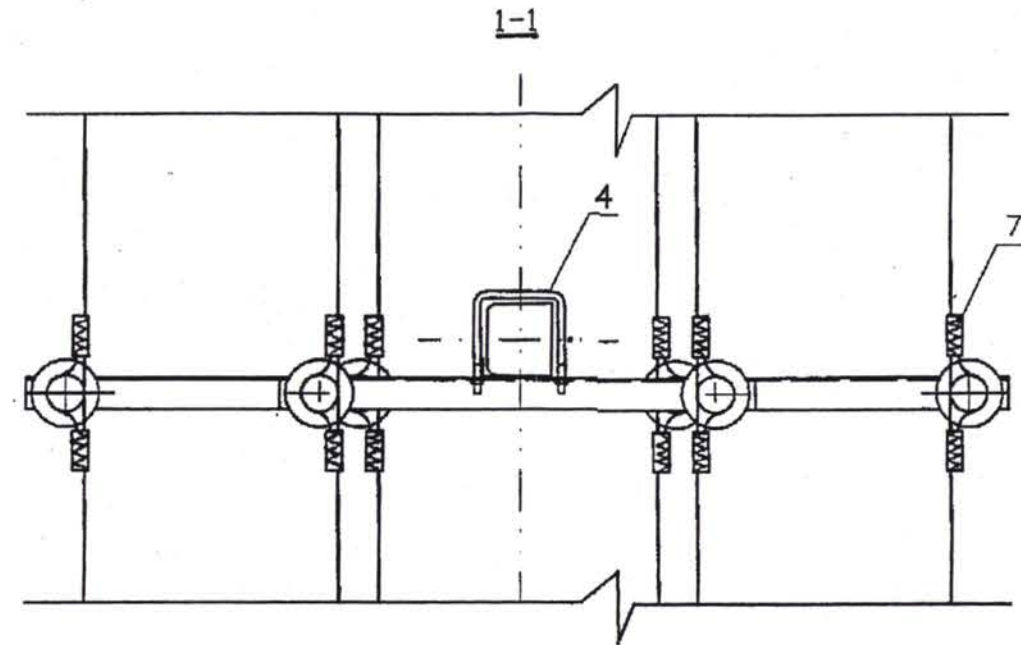
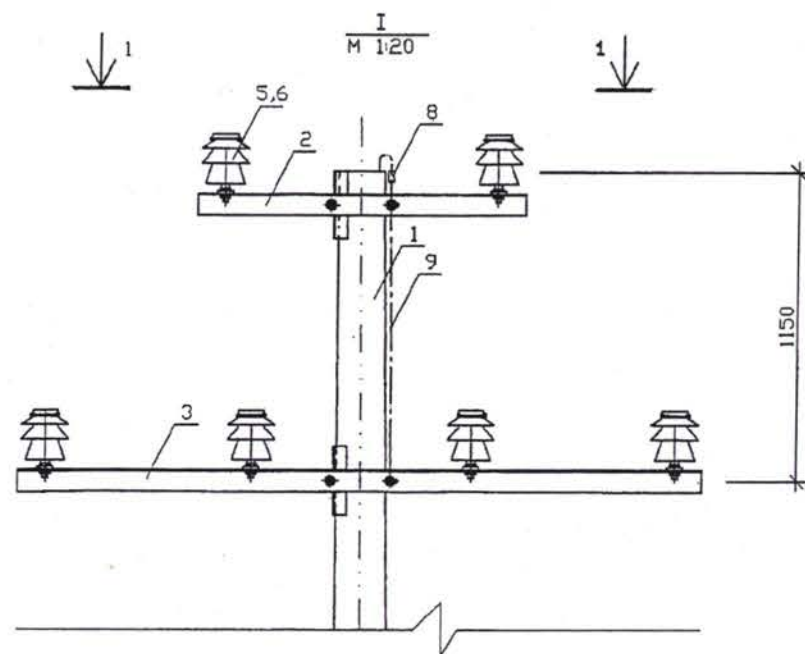
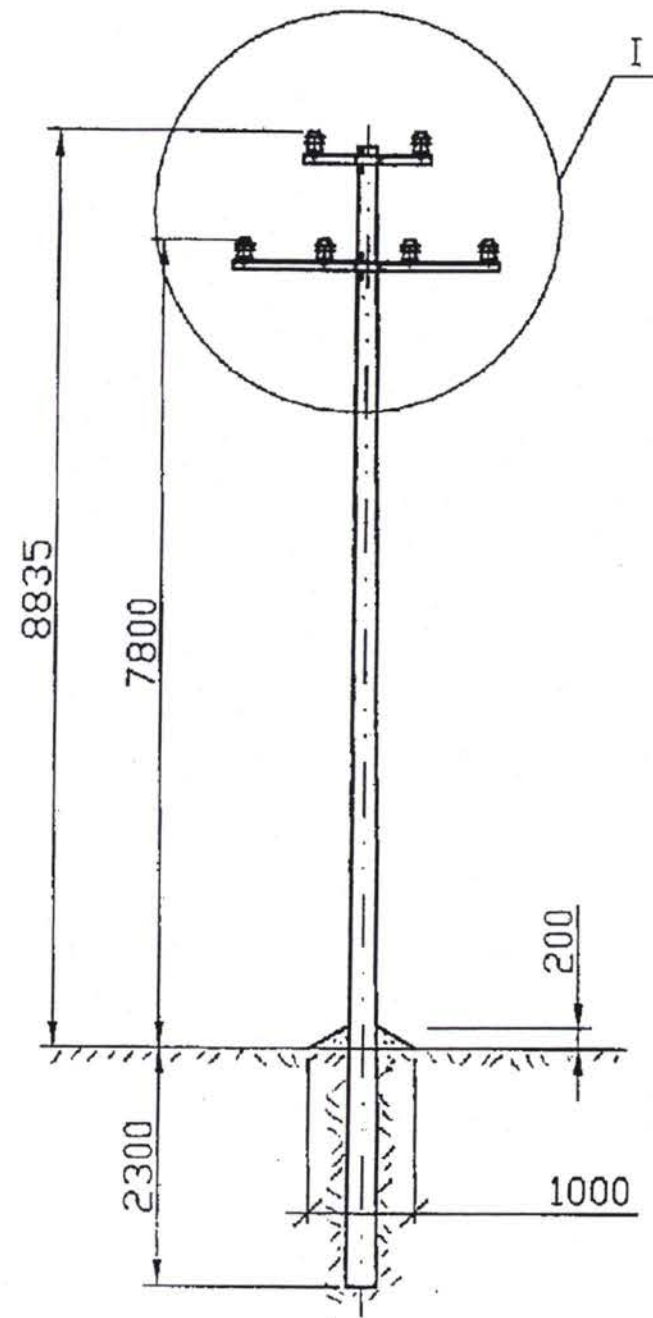
ELEKTRICAL 10 kV LINE CROSSING
 ПЕРЕСЕЧЕНИЕ С ЛЭП 10кВ



Axis of line Ось линии и ситуации		10kV line for automatic block system ЛЭП-10 кВ А/Б			10kV line for user's power supply ЛЭП-10 кВ ПЭ		
Level Отметки зем.	Existing Существующие	95.2	95	95.1			
	Projected Проектируемые						
Distances Расстояния	Existing Существующие		40	10			
	Projected Проектируемые						
Spans Пролеты	Existing Существующие		50				
	Projected Проектируемые						
Type of pole Тип опор	Existing Существующие	PA10-3 2pieces ПА10-3 2шт		PA10-3 2pieces ПА10-3 2шт			
	Projected Проектируемые						

No №	Designation Наименование	Type, description, model Тип, марка, характеристика	Unit Ед. Изм	Quantity Количество	Notes Примечания
1	Transition pole Переходная опора	Draft L1.2-7 Черт	pieces шт	4	
2	Steel-aluminum wire Сталеалюминиевый провод	AS-50 AC-50	kg кг	58.5	
3	Angle steel Стель угловая	50x50x5	pieces/kg шт/кг	16/151	
4	Flash bar steel Стель полсовая	40x4	m/kg м/кг	80/101	For individual earth connection of pole
5	Round steel Стель круглая	d=12mm	m/kg м/кг	20/18	Для индивидуального заземления опор

	Review of Railways Rehabilitation in Central Asia - Module B (EUROPEAID/116161/C/SV/MULTI)	A project implemented by: 						
NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE 10 кВ ЛЭП								
ELECTRICAL 10 kV LINE CROSSING ПЕРЕСЕЧЕНИЕ С ЛЭП 10кВ		L1.2-4						
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Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized
File:							Referred Tables	



№№	Designation Наименование	Type, description, model Тип, марка, характеристика	Unit Ед. Изм	Quantity Количество	Notes Примечания
1	Post Стойка ж/б	Draft СВ110-3,5	pieces шт	1	
2	Cross-arm T-1 Траверса Т-1	Draft Черт	pieces шт	1	
3	Cross-arm T-2 Траверса Т-2	Draft Черт	pieces шт	1	
4	Yoke Хомут	Draft Черт	pieces шт	2	
5	Insulator Изолятор	SHF20V ШФ20В	pieces шт	6	
6	Cowl Колпачек	K-6	pieces шт	6	
7	Binding wire Проволока вязальная	d=2mm	m м	12	
8	Clutch Зажим плащечный	PC-2 ПС-2	pieces шт	1	
9	Round steel Сталь круглая	d=10mm	m м	2	



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Review of Railways Rehabilitation
in Central Asia - Module B
(EUROPEAID/116151/C/SV/MULTI)



A project implemented by:

NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE
10 КВ ЛЭП

POLE INSTALLATION
ОПОРА ПРОМЕЖУТОЧНАЯ

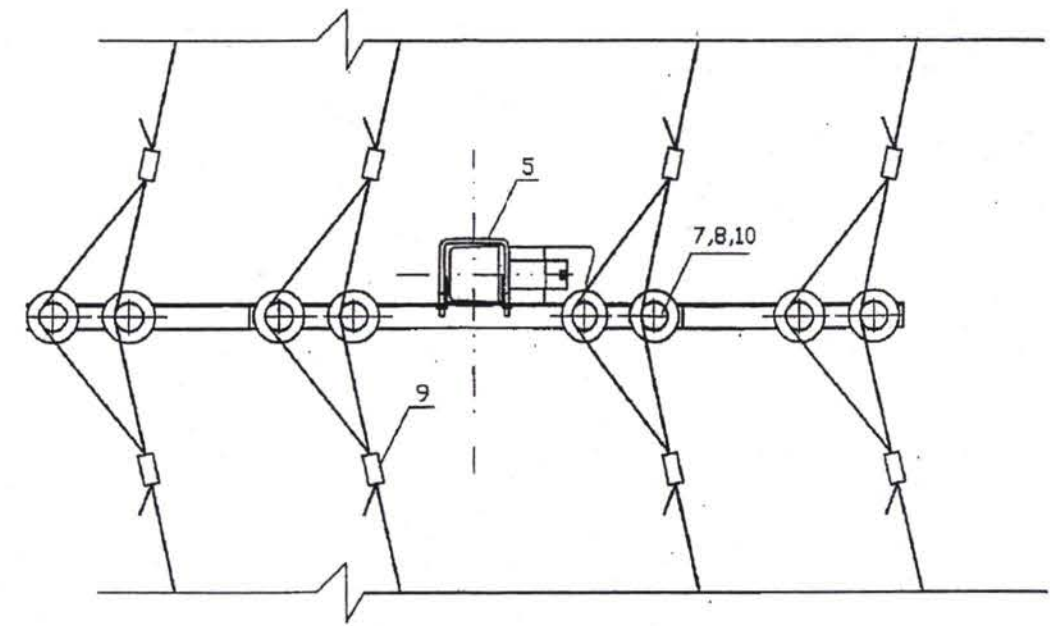
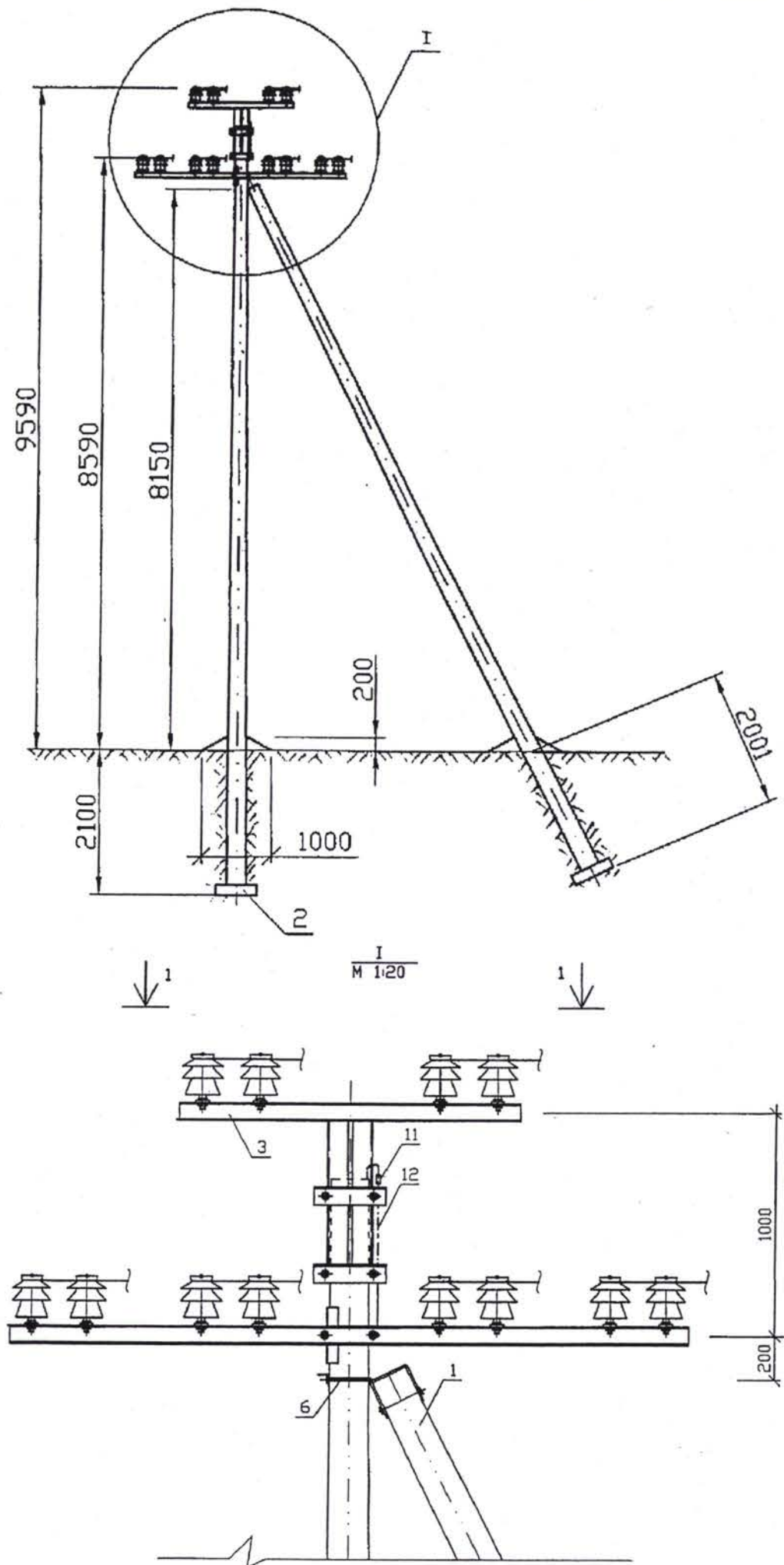
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Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized

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Referred Tables



No№	Designation Наименование	Type, description, model Тип, марка, характеристика	Unit Ед. Изм	Quantity Количество	Notes Примечания
1	Post Стойка ж/б	SV110-3.5 CB110-3,5	pieces шт	2	
2	Base plate Плита опорная	P-ZI П-ЗИ	pieces шт	2	
3	Cross-arm T-3 Траверса Т-3	Draft Черт	pieces шт	1	
4	Cross-arm T-4 Траверса Т-4	Draft Черт	pieces шт	1	
6	Yoke X-1 Хомут X-1	Draft Черт	pieces шт	3	
5	Bracket K-1 Кронштейн К-1	Draft Черт	pieces шт	1	
7	Insulator Изолятор	SHF20V ШФ20В	pieces шт	12	
8	Cowl Колпачек	K-9	pieces шт	12	
9	Clutch Зажим	PA-1 ПА-1	pieces шт	12	
10	Binding wire Проволока вязальная	d=2mm	m м	24	
11	Clutch Зажим плашечный	PS-2 ПС-2	pieces шт	1	
12	Round steel Сталь круглая	d=10mm	m м	2	



Review of Railways Rehabilitation
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NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE
10 кВ ЛЭП

ANGLE POLE INSTALLATION
ОПОРА ПРОМЕЖУТОЧНАЯ УГЛОВАЯ

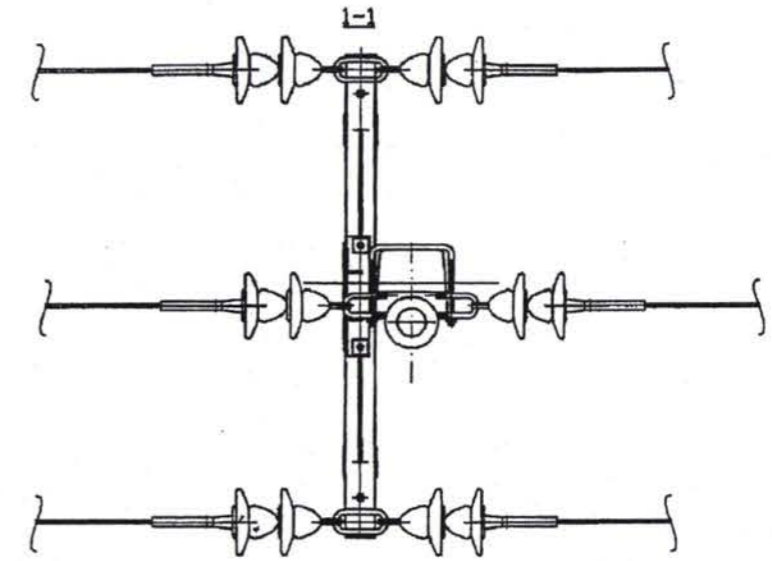
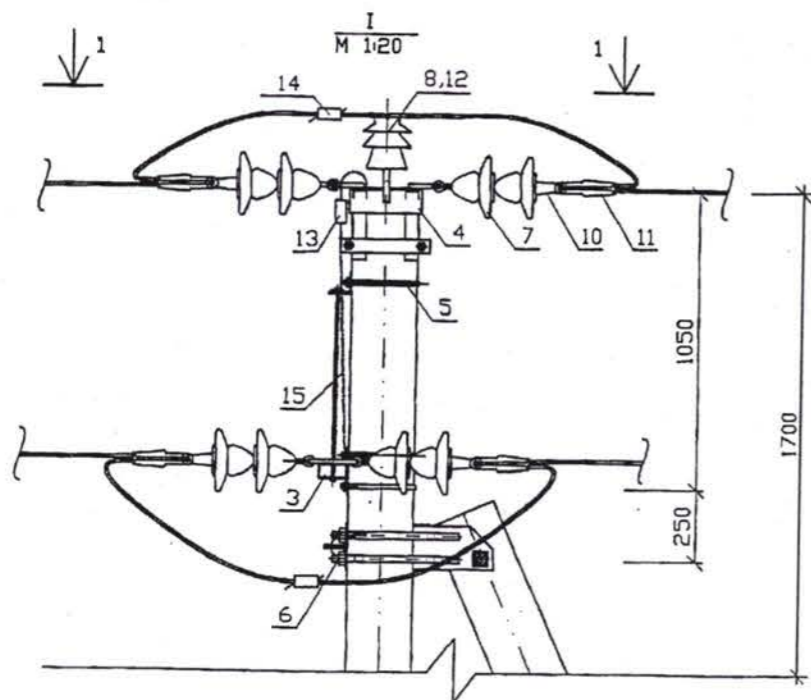
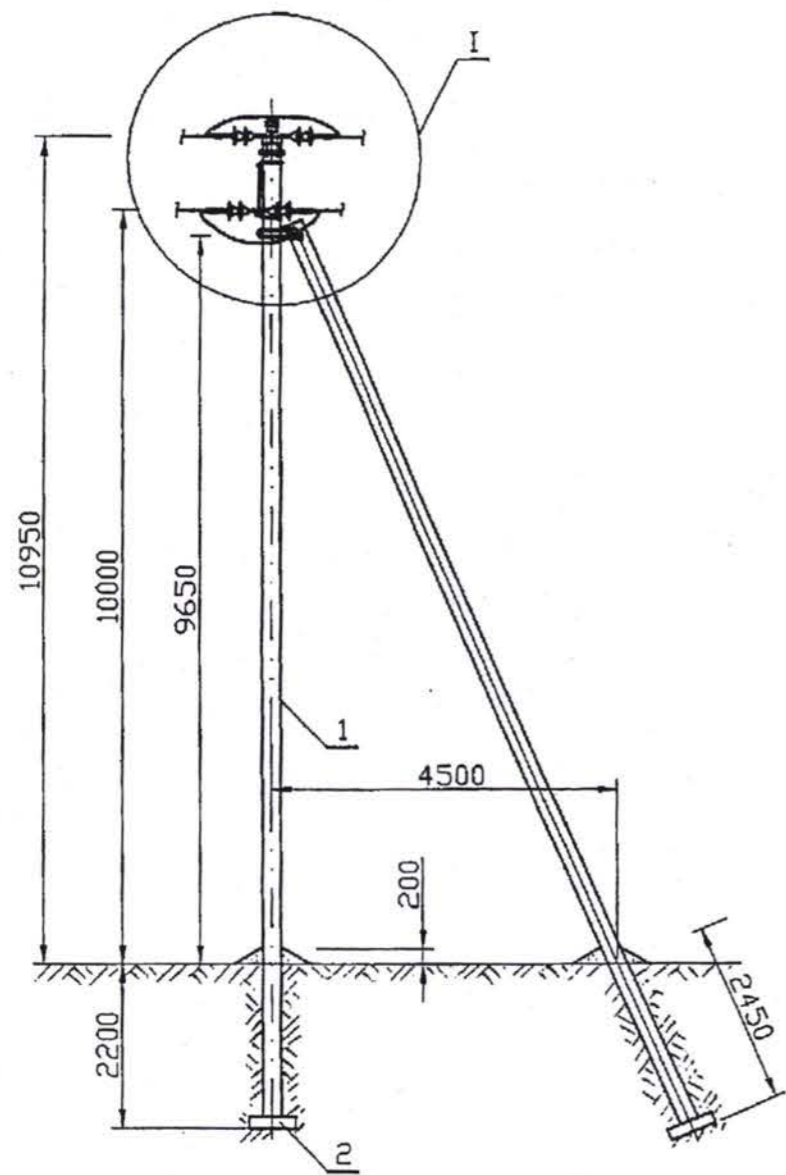
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Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized

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Referred Tables



№№	Designation Наименование	Type, description, model Тип, марка, характеристика	Unit Ед. Изм	Quantity Количество	Notes Примечания
1	Post Стойка ж/б	SNV-7-13 СНВ-7-13	pieces шт	2	
2	Base plate Плита опорная	P-2I П-3И	pieces шт	2	
3	Cross-arm T-5 Траверса Т-5	Draft Черт	pieces шт	1	
4	Head OG-1 Оголовок ОГ-1	Draft Черт	pieces шт	1	
5	Yoke X-3 Хомут Х-3	Draft Черт	pieces шт	3	
6	Bracket K-2 Кронштейн К-2	Draft Черт	pieces шт	1	
7	Insulator Изолятор	PF70-V ПФ70-В	pieces шт	12	
8	Insulator Изолятор	SHF20V ШФ20В	pieces шт	1	
9	Cowl Колпачек	K6	pieces шт	1	
10	Tongue Ушко однолапчатое	Y1-6-16	pieces шт	6	
11	Strain bolted clamp Зажим натяжной болтовой	NKK-1-16 НKK-1-16	pieces шт	6	
12	Binding wire Проволока вязальная	d=2mm	m м	2	
13	Clutch Зажим плащечный	PS-2 ПС-2	pieces шт	2	
14	Clutch Зажим	PA-1 ПА-1	pieces шт	3	
15	Round steel Сталь круглая	d=10mm	m м	2	



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NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE
10 КВ ЛЭП

ANCHORAGE POLE OF SINGLE 10KV LINE
ОПОРА ПЕРЕХОДНАЯ

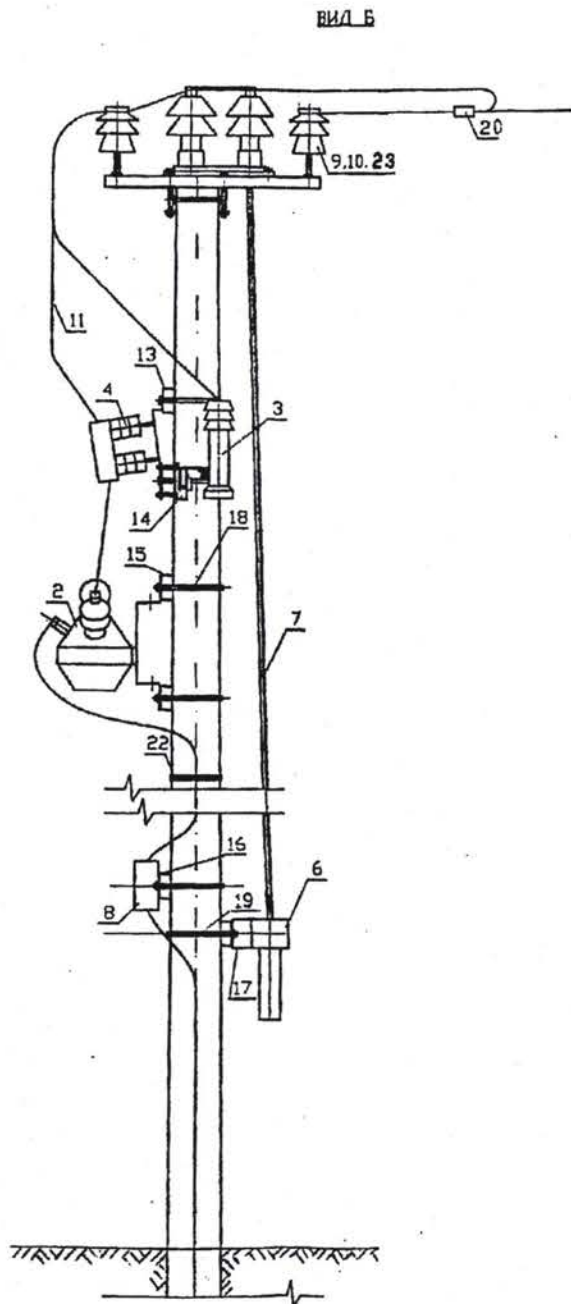
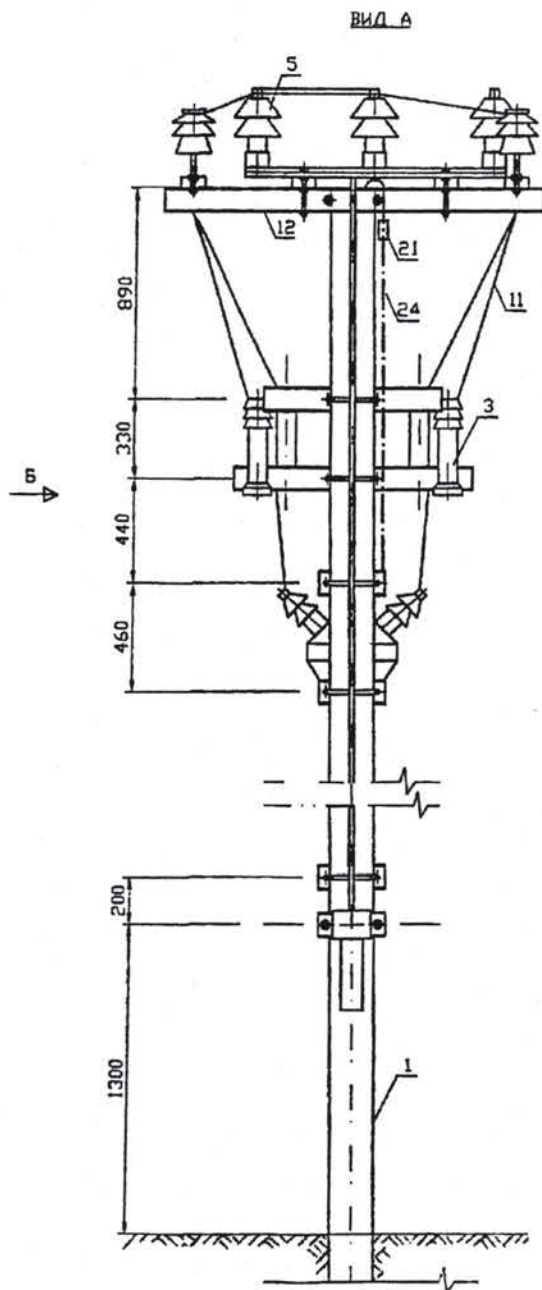
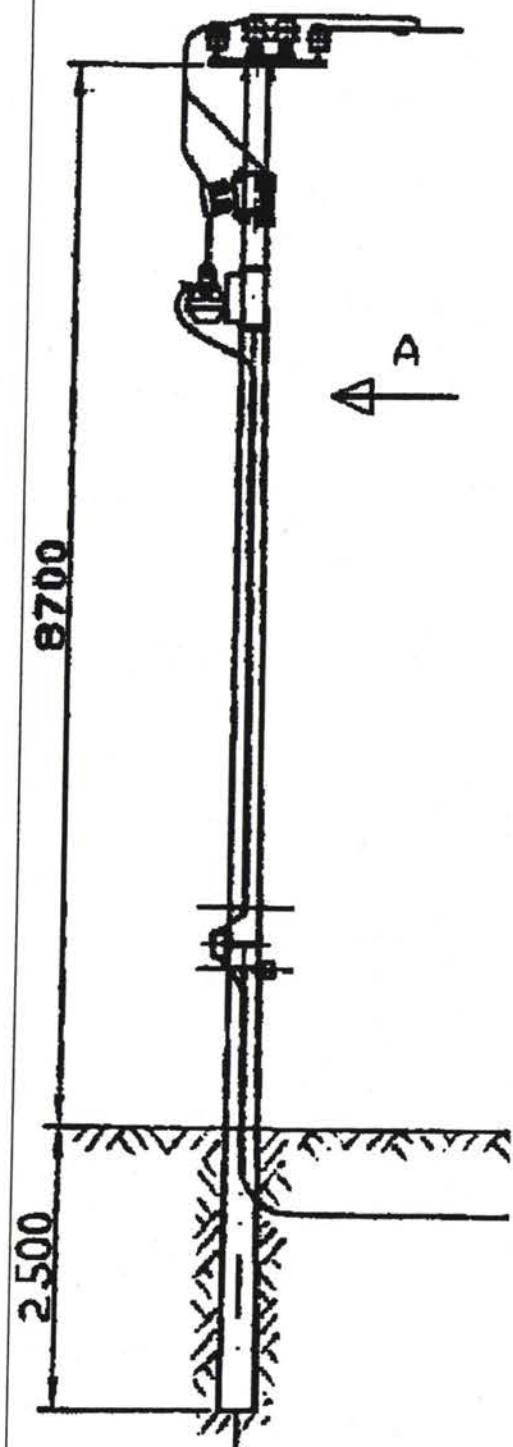
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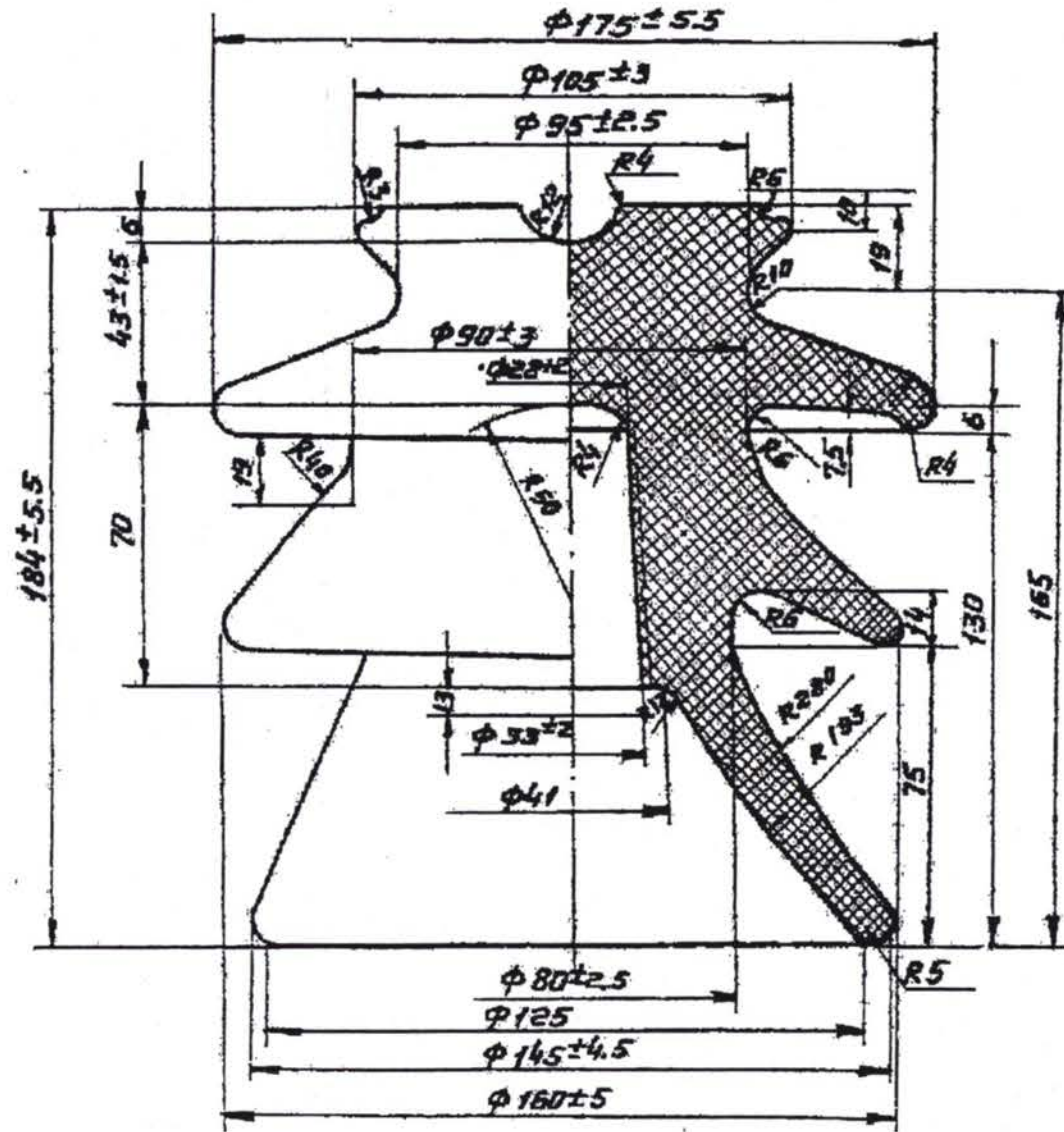
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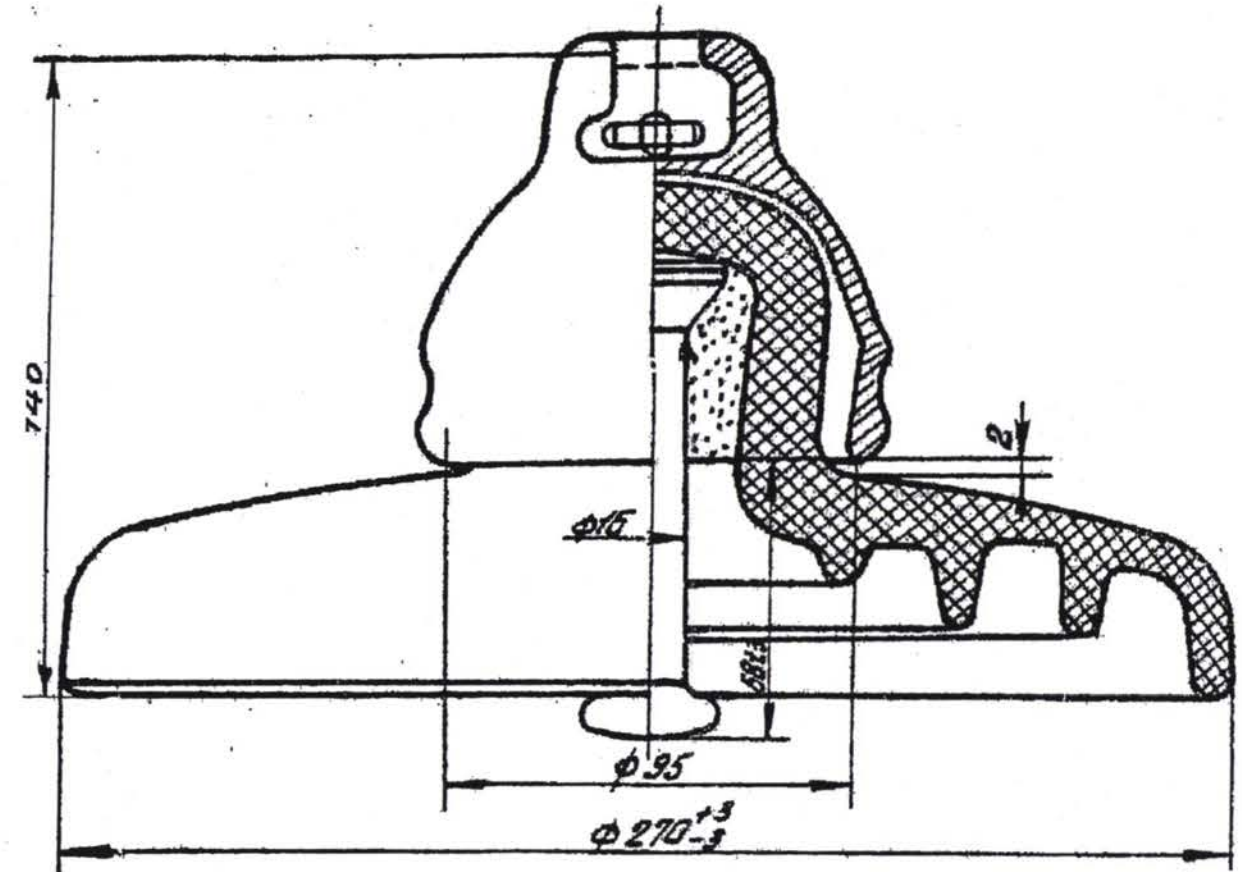
№ №	Designation Наименование	Type, description, model Тип, марка, характеристика	Unit Ед. Изм	Quantity Количество	Notes Примечания
1	Post Стойка ж/б	SV110-3.5 CB110-3,5	pieces шт	1	
2	Nonlinear resistance arrester Вентильный разрядник	RVO10Y1 PBO-10Y1	pieces шт	2	
3	oily monophasе power transformer 0,63кВА 10/0,23кВ Трансформатор силовой одно фазный масляный 0,63кВА 10/0,23кВ	OM-0,63 OM-0,63	pieces шт	1	
4	Fuse Предохранитель	PKT-101-20-2-12.5Y1 PKT-101-20-2-12.5Y1	pieces шт	2	
5	Three-pole disconnecter Разъединитель трехполюсный	RLND-10 РЛНД-10	pieces шт	1	
6	Hand drive of disconnecter Привод ручной разъединителя	PRN-10MY1 ПРН-10МУ1	pieces шт	1	
7	Rod of drive disconnecter Тяга привода разъединителя	Steel pipe d=25 труба стальная d=25	m м	4	
8	Link box Кабельный ящик	ТУС-342-64 ТУЦШ-342-64	pieces шт	1	
9	Insulator Изолятор	SHF20V ШФ 20В	pieces шт	4	
10	Cowl Колпачек	K6	pieces шт	4	
11	Aluminum wire Провод алюминиевый	AC-50	m м	10	
14	Bracket K-3 Кронштейн К-3	Draft Черт	pieces шт	1	
13	Bracket K-4 Кронштейн К-4	Draft Черт	pieces шт	1	
14	Bracket K-5 Кронштейн К-5	Draft Черт	pieces шт	2	
15	Bracket K-6 Кронштейн К-6	Draft Черт	pieces шт	2	
16	Bracket K-7 Кронштейн К-7	Draft Черт	pieces шт	1	
17	Bracket K-8 Кронштейн К-8	Draft Черт	pieces шт	1	
18	Yoke X-1 Хомут X-1	Draft Черт	pieces шт	4	
19	Yoke X-2 Хомут X-2	Draft Черт	pieces шт	2	
20	Clutch Зажим	PA-1 ПА-1	pieces шт	2	
21	Clutch Зажим плащечный	PS-2 ПС-2	pieces шт	1	
22	Steel wire Проволока стальная	d=5mm	m м	5	
23	Binding wire Проволока вязальная	d=2mm	m м	8	
24	Round steel Сталь круглая	d=10mm	m м	5	

		Review of Railways Rehabilitation in Central Asia - Module B (EUROPEAID/116161/C/SV/MULTI)			A project implemented by: 			
NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE 10 КВ ЛЭП POLESUPPORTING TRANSFORMER FEEDING AB POST ОПОРА СИЛОВАЯ							L1.2-8	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>							Scale:	
Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized
File:							Referred Tables	

Insulator ShF20-V

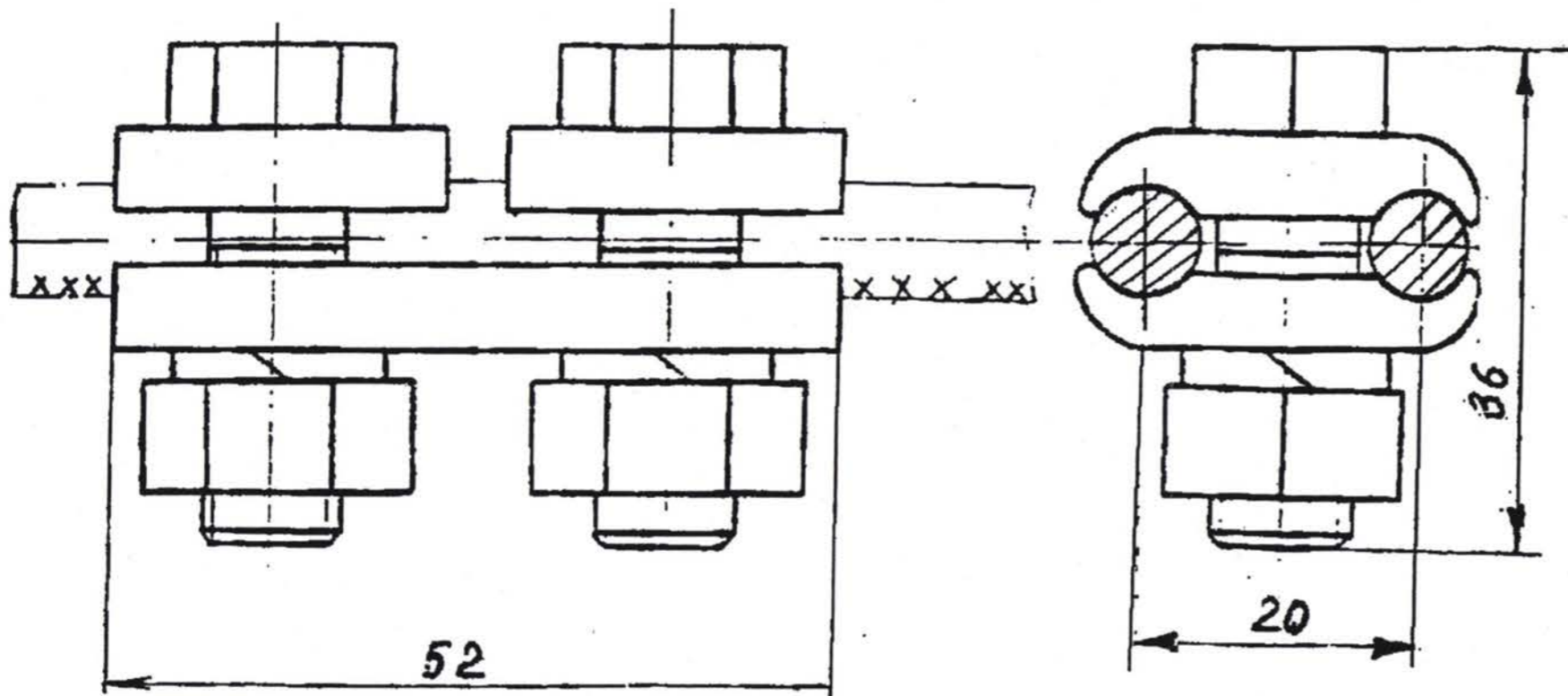


Insulator PF70-V

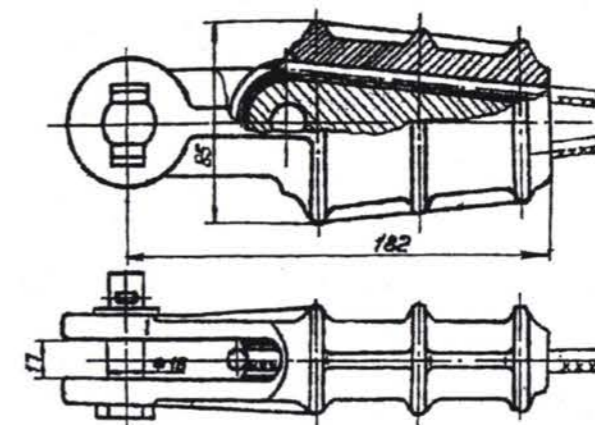


		Review of Railways Rehabilitation in Central Asia - Module B (EUROPEAID/116151/C/SV/MULTI)				A project implemented by: 			
NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE 10 КВ ЛЭП INSULATORS ИЗОЛЯТОРЫ									
								L1.2-9	
Scale:									
Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized	
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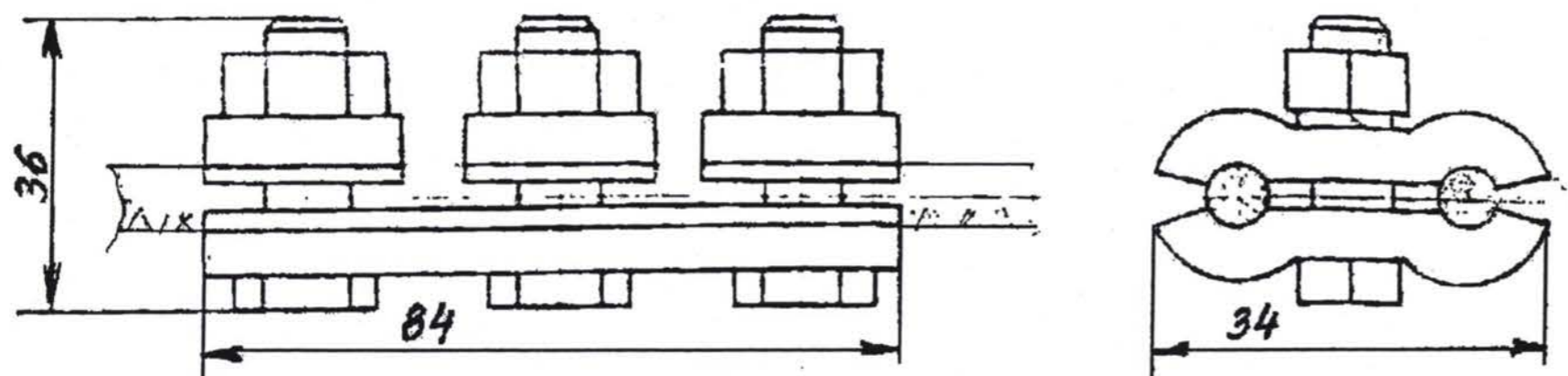
Clamp PA-1



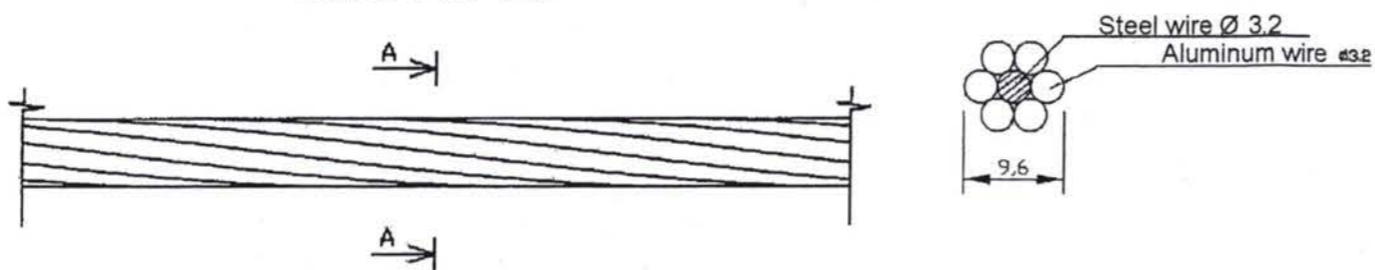
Anchor clamp NKK-1-16



Joint clamp PS-2



Wire AS-50



	Review of Railways Rehabilitation in Central Asia - Module B (EUROPEAID/116161/C/SV/MULTI)		A project implemented by: 					
	NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE 10 КВ ЛЭП Conductor aluminum-steel type 6x3.2+1x3.2 (50mm ²), joint clamp, anchor clamp Изоляторы, зажимы, стале-алюминевый провод				L1.2-10			
Scale:				[] [] [] [] [] [] [] [] [] []				
Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized
File:				Referred Tables				

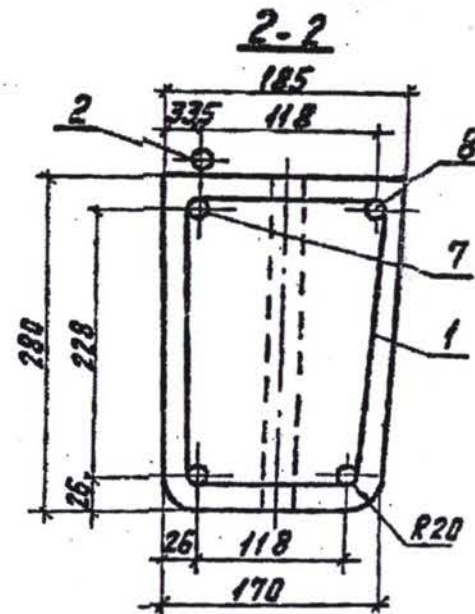
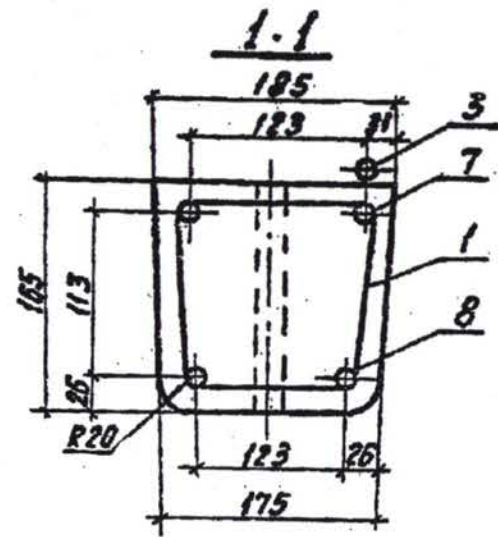
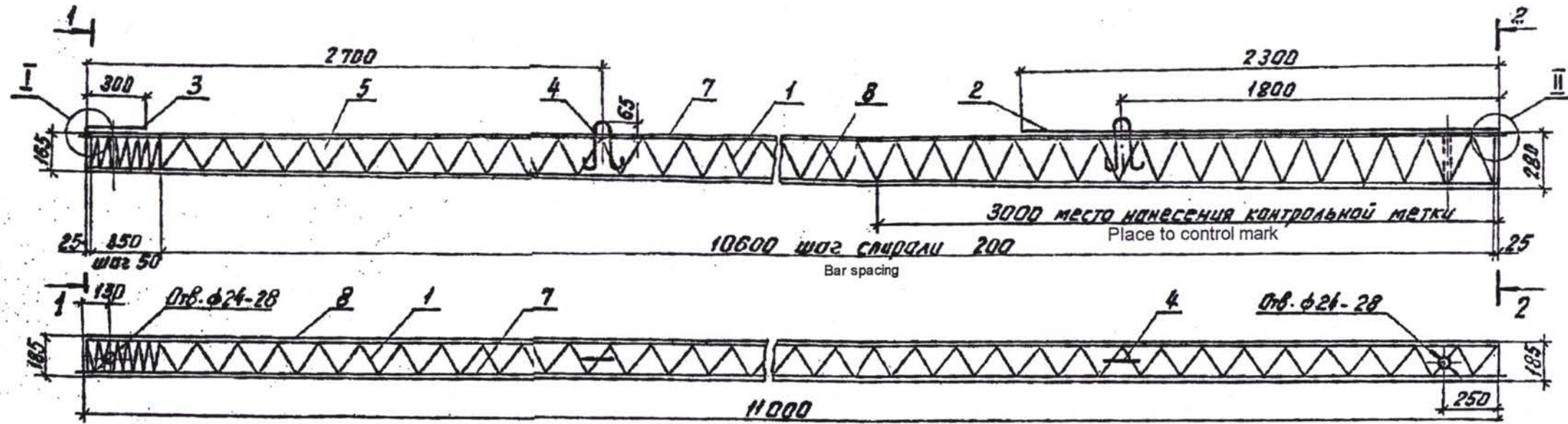


Table of the steel used for the pole armature, kg

Mark of the rack	Class of the armature					Wire	Total weight
	At-VI	At-V	At-IV	A-I	B-1		
	GOST 10884-81		GOST 5781-82		GOST 6727-80	GOST 3282-84	
	d=12	d=14	d=14	d=10	d=4	GOST 2.0-0-4	
CB110-3.5	39.2	-	-	2.6	4.7	0.1	46.6
	-	53.4	-				60.8
	-	-	53.4				60.8

- The spiral 1 at the ends of the armature is connected by wire to the main armature due to the change of the helix pitch.
- Grounding conductors 2 and 3 are welded to the main reinforcement 7 after removing the frame work and moreover the conductor 2 is welded to the loop.
Prestress for steel of the classes: At-VI-700 MPa (7000kg/cm²), At-IV, At-V-500 MPa (5000 kg/cm²).
- The butt end of the armature stretching out should be protected from rust with two layers of BT-577 GOST 5631-79 paint or other coating.
- On demand of the customer the pole can be manufactured with additional holes for bracing metalworks.
- The thickness of the protective layer of concrete of the pretensioned reinforcement has to be not less than 20 mm.

	Review of Railways Rehabilitation in Central Asia - Module B (EUROPEAID/116151/C/SV/MULTI)		A project implemented by: 					
	NEW DOUBLE 3-PHASE OVERHEAD 10KV LINE 10 КВ ЛЭП ARMATURE FOR POLE CB 110-3.5 Армирование ж/б стойки				L1.2-11			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>				Scale:				
Rev.	Description	Designed	Date	Verified	Date	Approved	Date	Authorized
File:								Referred Tables

PART 3 – Contract

Section VII. General Conditions of Contract

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- 1. Definitions**
- 1.1 The following words and expressions shall have the meanings hereby assigned to them:
- (a) "Contract" means the Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
 - (b) "Contract Documents" means the documents listed in the Agreement, including any amendments thereto.
 - (c) "Contract Price" means the price payable to the Supplier as specified in the Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
 - (d) "Day" means calendar day.
 - (e) "Delivery" means the transfer of the Goods from the Supplier to the Purchaser in accordance with the terms and conditions set forth in the Contract.
 - (f) "Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
 - (g) "Eligible Countries" means the countries and territories eligible as listed in Section V.
 - (h) "GCC" means the General Conditions of Contract.
 - (i) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
 - (j) "Purchaser's Country" is the country specified in the Special Conditions of Contract (SCC).
 - (k) "Purchaser" means the entity purchasing the Goods and Related Services, as specified in the SCC.
 - (l) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other similar obligations of the Supplier under the

Contract.

- (m) "SCC" means the Special Conditions of Contract.
- (n) "Subcontractor" means any natural person, private or government entity, or a combination of the above, including its legal successors or permitted assigns, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- (o) "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Agreement, and includes the legal successors or permitted assigns of the Supplier.
- (p) "The ADB" is the Asian Development Bank.
- (q) "The Site," where applicable, means the place named in the SCC.

- 2. Contract Documents**
 - 2.1 Subject to the order of precedence set forth in the Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory.

- 3. Corrupt Practices**
 - 3.1 ADB's Anticorruption Policy requires borrowers (including beneficiaries of ADB-financed activity), as well as bidders, suppliers, and contractors under ADB-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the ADB:
 - (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means the offering, giving receiving, or soliciting, directly or indirectly, of any thing of value to influence the action of any party in the procurement process or the execution of a contract;
 - (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;

(iii) "collusive practices" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to influence the action of any party in a procurement process or the execution of a contract;

(iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;

(b) will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract; and

(c) will sanction a party or its successor, including declaring ineligible, either indefinitely or for a stated period of time, to participate in ADB-financed activities if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, an ADB-financed contract.

3.2 The Supplier shall permit the ADB to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the ADB, if so required by the ADB.

4. Interpretation

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms

(a) The meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.

(b) EXW, CIF, CIP, and other similar terms, shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce at the date of the Invitation

for Bids or as specified in the SCC.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

- (a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the

language specified in the SCC. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the SCC, in which case, for purposes of interpretation of the Contract, this translation shall govern.

5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.

6. Joint Venture, Consortium or Association

6.1 Unless otherwise specified in the SCC, if the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.

7. Eligibility

7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted or incorporated, and operates in conformity with the provisions of the laws of that country.

7.2 All Goods and Related Services to be supplied under the Contract and financed by the ADB shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its imported components.

8. Notices

8.1 Any Notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term "in writing" means communicated in written form with proof of receipt.

8.2 A Notice shall be effective when delivered or on the Notice's effective date, whichever is later.

- 9. Governing Law** 9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser's country, unless otherwise specified in the SCC.
- 10. Settlement of Disputes** 10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 10.2 If the parties fail to resolve such a dispute or difference by mutual consultation within twenty-eight (28) days from the commencement of such consultation, either party may require that the dispute be referred for resolution to the formal mechanisms specified in the SCC.
- 11. Scope of Supply** 11.1 Subject to the SCC, the Goods and Related Services to be supplied shall be as specified in Section VI, Schedule of Supply.
- 11.2 Unless otherwise stipulated in the Contract, the Scope of Supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Delivery and Completion of the Goods and Related Services as if such items were expressly mentioned in the Contract.
- 12. Delivery** 12.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Section VI, Schedule of Supply. The details of shipping and other documents to be furnished by the Supplier are specified in the SCC.
- 13. Supplier's Responsibilities** 13.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 11, and the Delivery and Completion Schedule, as per GCC Clause 12.
- 14. Purchaser's Responsibilities** 14.1 Whenever the supply of Goods and Related Services requires that the Supplier obtain permits, approvals, and import and other licenses from local public authorities, the Purchaser shall, if so required by the Supplier, make its best effort to assist the Supplier in complying with such requirements in a timely and expeditious manner.

14.2 The Purchaser shall pay all costs involved in the performance of its responsibilities, in accordance with GCC Sub-Clause 14.1.

15. Contract Price

15.1 The Contract Price shall be as specified in the Agreement subject to any additions and adjustments thereto, or deductions therefrom, as may be made pursuant to the Contract.

15.2 Prices charged by the Supplier for the Goods delivered and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the SCC.

16. Terms of Payment

16.1 The Contract Price shall be paid as specified in the SCC.

16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 12 and upon fulfillment of all the obligations stipulated in the Contract.

16.3 Payments shall be made promptly by the Purchaser, no later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and the Purchaser has accepted it.

16.4 The currency or currencies in which payments shall be made to the Supplier under this Contract shall be specified in the SCC.

17. Taxes and Duties

17.1 For goods supplied from outside the Purchaser's country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's country.

17.2 For goods supplied from within the Purchaser's country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax

savings to the maximum allowable extent.

- 18. Performance Security**
- 18.1 The Supplier shall, within twenty-eight (28) days of the notification of Contract award, provide a Performance Security for the due performance of the Contract in the amounts and currencies specified in the SCC.
- 18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 18.3 The Performance Security shall be denominated in the currencies of the Contract, or in a freely convertible currency acceptable to the Purchaser, and shall be in one of the forms stipulated by the Purchaser in the SCC, or in another form acceptable to the Purchaser.
- 18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the SCC.
- 19. Copyright**
- 19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
- 20. Confidential Information**
- 20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the Contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the design, procurement, or other work and services required for the performance of the Contract.

20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:

- (a) the Purchaser or Supplier need to share with the ADB or other institutions participating in the financing of the Contract;
- (b) now or hereafter enters the public domain through no fault of that party;
- (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
- (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

21. Subcontracting

21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the Bid. Subcontracting shall in no event relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. Specifications and Standards**22.1 Technical Specifications and Drawings**

- (a) The Supplier shall ensure that the Goods and Related Services comply with the technical specifications and other provisions of the Contract.
- (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
- (c) The Goods and Related Services supplied under this Contract shall conform to the standards mentioned in Section VI, Schedule of Supply and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the country of origin of the Goods.

22.2 Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Section VI, Schedule of Supply. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

23. Packing and Documents

23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination of the Goods and the absence of heavy handling facilities at all points in transit.

23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for

in the Contract, including additional requirements, if any, specified in the SCC, and in any other instructions ordered by the Purchaser.

- 24. Insurance** 24.1 Unless otherwise specified in the SCC, the Goods supplied under the Contract shall be fully insured, in a freely convertible currency from an eligible country, against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the SCC.
- 25. Transportation** 25.1 Unless otherwise specified in the SCC, obligations for transportation of the Goods shall be in accordance with the Incoterms specified in Sections VI, Schedule of Supply.
- 26. Inspections and Tests** 26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in Sections VI, Schedule of Supply.
- 26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the final destination of the Goods, or in another place in the Purchaser's country as specified in the SCC. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.
- 26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.
- 26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but

deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications, codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.

- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.
- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.

27. Liquidated Damages

- 27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the SCC of the Contract Price for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the SCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

28. Warranty

- 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

- 28.2 Subject to GCC Sub-Clause 22.1, the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- 28.3 Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for eighteen (18) months after the date of shipment or loading in the country of origin, whichever period concludes earlier.
- 28.4 The Purchaser shall give Notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such Notice, the Supplier shall, within the period specified in the SCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the SCC, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29. Patent Indemnity

- 29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
- (b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

- 29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- 29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.
- 29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.
- 29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any

design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

30. Limitation of Liability

30.1 Except in cases of gross negligence or willful misconduct :

- (a) neither party shall be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and
- (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort, or otherwise, shall not exceed the amount specified in the SCC, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Supplier to indemnify the Purchaser with respect to patent infringement.

31. Change in Laws and Regulations

31.1 Unless otherwise specified in the Contract, if after the date of the Invitation for Bids, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

32. Force Majeure

32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force

Majeure.

32.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

33. Change Orders and Contract Amendments

33.1 The Purchaser may at any time order the Supplier through Notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipment or packing;
- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery and Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates

charged to other parties by the Supplier for similar services.

34. Extensions of Time

- 34.1 If at any time during performance of the Contract, the Supplier or its Subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 12, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.
- 34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 27, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

35. Termination

- 35.1 Termination for Default
- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by Notice of default sent to the Supplier, may terminate the Contract in whole or in part:
- (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34; or
 - (ii) if the Supplier fails to perform any other obligation under the Contract.
- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance

of the Contract to the extent not terminated.

- (c) if the Supplier, in the judgment of the Purchaser has engaged in corrupt, fraudulent, collusive, or coercive practices, as defined in GCC Clause 3, in competing for or in executing the Contract.

35.2 Termination for Insolvency

The Purchaser may at any time terminate the Contract by giving Notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

35.3 Termination for Convenience

- (a) The Purchaser, by Notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The Notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of the Notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
 - (i) To have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

36. Assignment 36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

Section VIII. Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 1.1(j)	The Purchaser's country is: _____
GCC 1.1(k)	The Purchaser is: _____
GCC 1.1 (q)	The Site is: _____
GCC 4.2 (b)	The version of Incoterms shall be: _____
GCC 5.1	The language shall be: _____
GCC 6.1	The individuals or firms in a joint venture, consortium or association _____ jointly and severally liable.
GCC 8.1	For notices , the Purchaser's address shall be: Attention: _____ Street Address: _____ Floor/ Room number: _____ City: _____ ZIP Code: _____ Country: _____ Telephone: _____ Facsimile number: _____ Electronic mail address: _____
GCC 9.1	The governing law shall be: _____
GCC 10.2	The formal mechanism for the resolution of disputes shall be: _____ _____
GCC 11.1	The scope of supply shall be defined in : _____ _____
GCC 12.1	Details of shipping and documents to be furnished by the Supplier shall be: _____
GCC 15.2	The price adjustment shall be: _____
GCC 16.1	The terms of payment shall be: _____

GCC 16.4	The currencies for payments shall be: _____
GCC 18.1	The Supplier shall provide a Performance Security of _____ percent of the Contract Price. The Performance Security shall be denominated in the following amounts and currencies: _____ _____
GCC 18.3	The types of acceptable Performance Securities are: _____ _____
GCC 18.4	Discharge of Performance Security shall take place: _____ _____
GCC 23.2	The packing, marking and documentation within and outside the packages shall be: _____ _____
GCC 24.1	The insurance coverage shall be in accordance with: _____ _____
GCC 25.1	Obligations for transportation of the Goods shall be in accordance with: _____ _____
GCC 26.2	Tests and Inspections specified in Section VI, Schedule of Supply, shall be carried out at the following times or milestones, and places : _____ _____
GCC 27.1	The liquidated damage shall be: _____ % per week or part thereof
GCC 27.1	The maximum amount of liquidated damages shall be: _____
GCC 28.3	The period of validity of the Warranty shall be: _____
GCC 28.5	The Supplier shall correct any defects covered by the Warranty within : _____ of being notified by the Purchaser of the occurrence of such defects
GCC 30.1	The amount of aggregate liability shall be: _____

Section IX. Contract Forms

Table of Forms

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Agreement

THIS AGREEMENT made the _____ day of _____, _____, _____ between _____ of _____ (hereinafter "the Purchaser"), of _____ the one part, and _____ of _____ (hereinafter "the Supplier"), of the other part:

WHEREAS the Purchaser invited bids for certain Goods and Related Services, viz., _____ and _____ has accepted a Bid by the Supplier for the supply of those Goods and Related Services in the sum of _____ (hereinafter "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) the Purchaser's Notification to the Supplier of Award of Contract;
 - (b) the Bid Submission Sheet and the Price Schedules submitted by the Supplier;
 - (c) the Special Conditions of Contract;
 - (d) the General Conditions of Contract;
 - (e) the Schedule of Supply; and
 - (f) _____.

This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.

3. In consideration of the payments to be made by the Purchaser to the Supplier as indicated in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Related Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Related Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of _____ on the day, month and year indicated above.

Signed by _____ (for the Purchaser)

Signed by _____ (for the Supplier)

Performance Security

Date: _____

Contract Name and No. : _____

To: _____

WHEREAS _____ (hereinafter "the Supplier") has undertaken, pursuant to Contract No. _____ dated _____, _____ to supply _____ (hereinafter "the Contract").

AND WHEREAS it has been stipulated by you in the aforementioned Contract that the Supplier shall furnish you with a security _____ issued by a reputable guarantor for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS the undersigned _____, legally domiciled in _____, (hereinafter "the Guarantor"), have agreed to give the Supplier a security:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the _____ Supplier, _____ up _____ to _____ a _____ total _____ of _____ and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract, without cavil or argument, any sum or sums within the limits of _____ as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This security is valid until the _____ day of _____, _____.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the security for and on behalf of _____

Date _____

Advance Payment Security

Date: _____

Contract Name and No. : _____

To: _____

In accordance with the payment provision included in the Contract, in relation to advance payments, _____ (hereinafter called "the Supplier") shall deposit with the Purchaser a security consisting of _____, to guarantee its proper and faithful performance of the obligations imposed by said Clause of the Contract, in the amount of _____.

We, the undersigned _____, legally domiciled in _____ (hereinafter "the Guarantor"), as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligor and not as surety merely, the payment to the Purchaser on its first demand without whatsoever right of objection on our part and without its first claim to the Supplier, in the amount not exceeding _____.

This security shall remain valid and in full effect from the date of the advance payment received by the Supplier under the Contract until _____, _____.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the security for and on behalf of _____

Date _____

APPENDIX

to Section VI. Schedule of Supply

Procurement of Goods



This project is funded by
the European Union



A project implemented by
Italferr S.p.A.

GOST 6490-83

Line suspension disk insulators

This standard covers line suspension disk porcelain and glass insulators for the voltage over 1000 V, intended for isolation and fastening of conductors and lightning protection ropes on the overhead power lines, switching centers of the stations and substations of DC and AC with the voltage over 1000 V with frequency to 100Hz at ambient temperature from plus 50 to minus 60 degrees C in the regions with atmosphere of different pollution.

1. TYPES AND BASIC PARAMETERS

- 1.1. Type of the insulator is determined by class, material and design.
- 1.2. Insulator class corresponds to the value of normed destructive mechanical (electromechanical) stretching force(stress) of the insulator and is chosen from the row: 40, 70, 120, 160, 210, 300, 400 and 530 kH.
- 1.3. Values of basic parameters which characterized insulators class should not be less the norms indicated in table.

Table 1

Insulators class	Mechanical (electromechanical) destructive stress, kH		Disruptive voltage of industrial frequency in insulation medium, kV
	insulator	remainder of the insulator From glass	
70	70	56	130

1.4 Insulator legend should contain type and code of the insulator.

Letters and numerals of the insulator type mean

the first - П – means view(form) of the insulator, suspension;

the second – Ф or С – mean material of insulation component (porcelain or glass);

the third – В, Д, К, Р, С – configuration of insulation component, correspondingly – with elongated rib, double leaf, conic, normal performance (with undeveloped surface of insulation component), spherical;

numerals – 40, 70 – mean class of insulator;

the fourth – А, Б, В, Г ... modification of the insulator

Code should contain numerals which mean:

first - view of the insulator connection(joining)

1. – spherical hinging (pinning);
2. – hanging (link) – eye
3. - core –eye;
4. - hanging(link)- cap
5. - thread

second – building height

0 –design made with one building height

1. – big;

2. – small

third – current kinds, for which the insulator is intended to be used

1. - DC (direct current)
2. - AC (alternating current)

fourth – mark or group of material

1. – glass 7;
2. – glass 13B;
3. - porcelain of group II;
4. - porcelain of group III;

fifth – climatic performance in accordance with GOST 15150-69;

1. - УХЛ;
2. - ТВ;
3. - ТС;
4. - Т;
5. - О

sixth – view of lock with which the insulator is completed

1. – М type;
2. – Ш type;
- 0 – without lock

Example of legend of the suspension disk porcelain with spherical form, class 70, A modification, with spherical connection, with big building height, for AC, from porcelain group II, climatic performance УХЛ with lock type Ш:

ПФС 70А 112312 GOST..... or Technical Conditions ... for the insulator of definite type)

2. TECHNICAL REQUIREMENTS

2.2 Insulators should withstand ambient climatic factors effect and should be made as climatic performance УХЛ6 Тс6О 1-4 categories of placement under GOST 15150-69. Climatic performance and placement categories should be indicated in standard or technical conditions and in design documentation for definite types of insulators.

2.3 Insulators mass should be indicated in standard, technical conditions and design documents for the definite type of insulators.

2.4 Limit tolerances from the rated building height should be : $\pm(0,03h + 0,3)$ mm, where h is rated building height of insulator, mm.

Limit tolerances from the rated length of leakage should be :

$(0,040L + 1,5)$ mm at $L \leq 300$ mm,

$(0,025L + 6,0)$ mm at $L > 300$ mm,

where L is the rated length of leakage, mm

2.6 Insulators should withstand during 1min of mechanical stretching force effect equal to 50% of rated destructive mechanical(electromechanical) stretching force of the insulator of the corresponding class.

- 2.8 Insulators should withstand mechanical (electromechanical) stretching force effect during 1 hour equal 75 % of rated mechanical (electromechanical) destructive force of insulator of the corresponding class.
- 2.9 Insulators should be heat resistant.
- 2.11 Insulators should be heat mechanical strong (durable)
- 2.12 Insulators should withstand the effect of alternating voltage of such value at which on the surface of the insulator continuous flow(flux) of electrical sparks which do not turn into electrical arc.
- 2.14 At the rated voltage on the insulator the value of the radiointerference level should not exceed the allowable level. The value of the allowable radioninterference level should be indicated in the standard or technical conditions for the insulator of the definite type.
- 2.15 Insulators in the rain should withstand during 1 min without overlap and disruption voltage effect of the industrial frequency.
The value of withstand voltage should be indicated in the standard or technical conditions for the insulator of the definite type.
- 2.16 Insulators in dry condition should withstand without overlap and disruption the voltage of standard of lightning impulse of both polarity. The value of withstand voltage should be indicated in the standard or technical conditions for the insulator of the definite type.
- 2.19 Indications which can determine the reliability of insulators:
- ◆ average annual level of failures for electric strength;
 - ◆ average annual level of failures for mechanical strength;
 - ◆ possibility of reliability on electric strength;
 - ◆ possibility of reliability on mechanical strength.
- Reliability indicators are standardized at the insulators work in atmosphere of type I and II under GOST 15150-69.
- 2.20 Insulator's internal electric strength derating up to the vale of electric strength on the surface is taken as the failure by electric strength.
- 2.21 Destruction of any element of the insulator which can bring to the disruption of the insulator chain is taken as the failure for mechanical strength.
- 2.22 Average annual level f failures for electric strength (A1) is taken from the e following row: 0,0005; 0,0010; 0,0030; 0,0050; 0,01000.
Rated value of A1 should be indicated in standard and technical conditions for the specific type of insulator in dependence of operation conditions.
- 2.23 Average annual level of failures of insulators for mechanical strength (A2) is chosen from the row: 0,000001; 0,000005; 0,000010; 0,000050. Rated value of A2 should be indicated in standard and technical conditions forthe specific type of insulator in dependence of operation conditions.
- 2.24 Possibility of no-failure operation on electric strength P1 is defined under the equation
- $$P1(t) + -A1 X t,$$
- where t is the time from the beginning of operation , year.

2.25 Possibility of no-failure operation on mechanical strength P2 is defined under the equation

$$P2(t) = 1 - A2 \times t$$

2.26 Operation length during which the indications given in p.p. 2.22 – 2.25 should be provided for the period not less than 25 years.

2.27 Insulation components should be made from electro technical porcelain under GOST 204 -83 or insulating glass subject to toughening under the normative-technical documentation.

2.28 The surface of insulation components from porcelain except the places indicated on the drawings should be covered by glazing.

Requirements to the insulators components surface quality are under GOST 13873 -81.

2.29 Insulators' porcelain should not have open porosity in the fracture

3. RULES OF ACCEPTANCE

3.1 For control of insulators to meet the requirements of this standard the manufacturer carries out acceptance, sampling and conventional tests

Insulators are accepted by lots. Each lot consists of the insulators of the same type, made in the same technological conditions. The volume of insulators should be 1200 – 10 000 pieces.

Acceptance tests are carried out in accordance with table 2.

The value of acceptance defect level for the rated mechanical (electromechanical) destructive force and rated mechanical destructive force of the insulators remainder is determined 1,5 %, for other indications – 4%. In accordance with GOST 18242 -72 there are established three types of control – normal, intensive and relaxed ones.

Table 2

Index	Succession of insulators test	Number of insulators in sampling					
		At normal level of control		At intensive level of control		At relaxed level of control	
		I sampling	II sampling	I sampling	II sampling	I sampling	II sampling
1. Quality of surface	100% (complete control)						
2. Effect of mechanical stress during 1 min	100% of suitable ones under p.1						

3.	Effect of continuous sparks flow	100% of suitable ones under p.2						
4.	Dimensions	Insulators tested under p.3	8	8	13	13	3	3
5.	length of leakage	Insulators tested under p.4	8	8	13	13	3	3
6.	Mass	Insulators tested under p.5	8	8	13	13	3	3
7.	Heat resistance	Insulators tested under p.p.6, 3	10	10	16	16	4	4
8.	Effect of mechanical stress during 2 hour	Insulators tested under p.3	10	10	16	16	4	4
9.	Rated mechanical (electromechanical) destructive force	Insulators tested under p.p.7 and 8	20	20	32	32	8	8
10.	Thermal blow	Insulators tested under p.3	8	8	13	13	3	3
11.	Disruptive voltage	Glass insulators ,tested under p.10 or porcelain insulators tested under p.3	8	8	13	13	3	3
12.	Rated mechanical destructive stress of remainder of the glass insulator	Insulators tested under p.3	20	20	32	32	8	8
13.	Quality of connections	Insulators tested under p.p.9,12 Insulators tested under p.11 Pieces of porcelain of insulators	8	8	13	13	3	3

14. Quality of zinc covering	of	tested under p.9	8	8	13	13	3	3
15. Porosity			8	8	13	13	3	3

3.2.4 Control of the insulators lot are carried out in the following order:
 at complete control due to index 1 table 2 defect insulators are rejected, the rest are considered to be accepted. If at complete control under point 2 table 2 the amount of defect insulators exceeds 1% or at control under p/3 table 2 exceeds 3% then the lot can not be accepted.

From the lot gone through complete control a number of insulators indicated in table 2 are selected for testing due to indices, in succession and volume of the first sampling in accordance of established for each parameter level of control.

If on some of the indices the unsatisfactory results were received then the repeated control is carried out for this from the same lot the second random sampling is selected. The number of insulators in the sampling should correspond to the indicated one in table 2 for this index.

Control is carried out on that parameter for which the unsatisfactory result was received. At the second sampling control for parameter 9, it is necessary to do control on the parameters 7 and 8.

Control type (normal, intensive or relaxed) should be kept until new conditions of transition from one type of control to another one arise.

Transition from normal control to intensive one should carry out when at normal control there are two from five consecutive lots were rejected.

Transition from intensive control to normal should be carried out in the cases when at intensive control not less than five consecutive lots were accepted. If for ten consecutive lots the intensive control remained then the insulators acceptance is stopped until the finding out the reasons of quality reducing.

Transition from the normal level of control to the relaxed one is carried out when at normal control not less than ten consecutive lots were accepted.

Transition from relaxed control to the normal one should be carried out if at least one of the following conditions is carried out:

- regular lot was rejected at the first acceptance
- in regular lot one defected insulator was found(the lot was accepted due to the results of control of the second sampling);
- the stability of technological process or rhythmic production of insulators was broken

The normal control should only used for the lots with the volume of 50 lots a year production.

The Client controls the insulators quality under the program of acceptance testing.

The lot is considered insulators of one type, with the attached document about the quality where there should be indicated:

- ◆ trademark of the manufacturer
- ◆ type and code of the insulator;
- ◆ designation of the standard or technical conditions for the insulator of the definite type;

- ◆ year of production;
- ◆ amount of the insulators
- ◆ data and number of the Certificate of acceptance testing;
- ◆ State Quality Sign for the insulators of the highest category of quality.

Sampling tests should be carried out not less than once a year within 2 years.

Sampling test are carried out due to the parameters in succession and the volume indicated in table 3.

Table 3

Index	Amount of insulators in sampling for carrying out			
	sampling tests		Sampling test of insulators, delivered to the regions with tropical climate	
	glass	porcelain	glass	porcelain
1. Quality of the surface	60	40	75	55
2. Dimensions	60	40	75	55
3. Length of leakage	60	40	75	55
4. Mass	60	40	75	55
5. Heat resistance	40	20	10	10
6. Rated mechanical (electromechanical) destructive stress of the insulator	20	20	20	20
7. Thermal blow	10	-	10	-
8. Disruptive voltage	10	10	10	10
9. Rated mechanical destructive stress of remainder of glass insulator	20	-	20	-
10. Thermal mechanical durability	10	10	10	10
11. Porosity	-	10	-	10
12. Moisture resistance, rapid mode of operation (it is allowed to replace by continuous service)	-	-	15	15
13. Effect of sun radiation	-	-	15	15
14. Effect of salt fog	-	-	15	15

15. Heat resistance	-	-	15	15
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At first sampling testing are carried out not later than in 2 years after acceptance of trial-industrial lot.

Conventional tests are carried out when the design, raw material, material recipes or technical processes of production of components and insulators assembling for the evaluation of effect of the changes done on the characteristics and quality of insulators.

4. TEST METHODS

Insulators should go through mechanical tests, electrical tests, tests for stability against climatic effects, test for checking reliability, checking for compliance to the requirements to components of the insulator, materials and raw material, quality of chromate covering.

GOST 839 -80

Uninsulated wires (conductors) for overhead power lines.

1. MARKS AND DIMENSIONS

1.1 Marks(types), codes ОКП and preferred areas of usage of the conductors(wires) should be in compliance with table 1.

Table 1

Mark of the conductor	Code of ОКП	Structure of the conductor	Preferred areas of usage
AC	35 1151	Conductor which consists of the support strand and aluminum wires	In atmospheric air of types I and II provided that in the atmosphere the content of sulfurous gas is not more than 150mg/m ² · a day (1,5 mg/m ³) on land of all the macro climatic regions under GOST 15150-69 of performance YXЛ, except TC and TB.
ACKC	35 1151	Conductor of AC mark, but inter-wire area of the support strand, including its outer surface, is filled by neutral lubricant(grease) of improved heat resistance	At the sea coasts, salty lakes, in industrial areas and the regions of salinity sands, as well as in the areas adjusting to them with atmospheric air of types II and III provided that in the atmosphere the content of sulfurous gas is not more than 150mg/m ² · a day (1,5 mg/m ³) and chlorous salt is not more than 200 mg/m ² · a day on land of all the macro climatic regions under GOST 15150-69 of performance YXЛ, except TB.
ACKП	35 1151	Conductor of AC mark, but inter-wire area of the whole conductor, excluding its outer surface, is filled by neutral lubricant(grease) of improved heat resistance	At the sea coasts, salty lakes, in industrial areas and the regions of salinity sands, as well as in the areas adjusting to them with atmospheric air of types II and III on land and sea of all the macro climatic regions under GOST 15150-69 performance YXЛ.
ACK	35 1151	Conductor of AC mark, but the support strand is insulated with two bands of polyethylenterephthalate film. Multiwire support strand under	At the sea coasts, salty lakes, in industrial areas and the regions of salinity sands, as well as in the areas adjusting to them with

		polyethylenterephthalate bands should be covered with neutral lubricant(grease) of improved heat resistance	atmospheric air of types II and III provided that in the atmosphere the content of sulfurous gas is not more than 150mg/m ² · a day (1,5 mg/m ³) and chlorous salt is not more than 200 mg/m ² · a day on land of all the macro climatic regions under GOST 15150-69 of performance УХЛ, except TB.
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Note. When galvanized steel wire is used, group 2, for production of AC mark conductor in the legend of the conductor numeral 2 is added to letter C. Under the request of the Client steel aluminum conductors of ACKП mark can be done with the outer surface covered with heat resistance lubricant (grease). In this case the letter "3" is added to the legend of the conductor mark.

Table 2

Number of wires		Coefficient of twist take-up(splicing) of AC mark wire for calculation		
aluminum	steel	aluminum mass K'2	steel mass,K''2	electrical resistance, K1
18	1	18.08	1,00	0,05648
45	7	45,92	7,03	0,02314
72	7	73,24	7,03	0,1408

Table 3

Rated section of the conducting part of the conductor, mm ²	Factory length of the conductors marks, m, not less than
	AC, ACKП, ACЛC, ACK
50	3000

Note. Conductors with the support strand of improved mechanical strength can be made with the following factory length:

Until 4000 m for the conductors with the section 70/72, 95/141, 185/128 mm²;

-"- 3500m - " - - " - 300/204, 500/204 mm²

-"- 3000m - " - - " - 500/336 mm²

Factory length should be not less than indicated in table 3. Due to the request of the client it is allowed to produce the conductors with another factory length.

The example of the legend of steel aluminum conductor filled up with neutral grease of the improved heat resistance, with rated sections of aluminum part 450mm² and support strand 56mm²:

Conductor ACKC 450/56 GOST 839-80

The same for steel aluminum conductor with the usage of support strand of 2 group, with rated sections of the aluminum part 450 mm² and support strand 56 mm²:

Conductor AC2 450/56 GOST 839-80

2. TECHNICAL REQUIREMENTS

- 2.2 In the conductor there should not be foldover, protrusions, breaks (ruptures) and fractures of individual wires. In the place of the support strand end the wire should be cut with application of the bands
- 2.3 Splicing(strand) of lay should be done in opposite sides, moreover outer lay should have right direction of splicing. **(Changed edition , change № 1)**
- 2.4 Filling the wires with the grease and application of the grease on the support strand should be done without gaps.
- 2.5 Repetition factor of pitch of strand of the outer lay of aluminum wires should be not less than 10 and not more than 15, repetition factor of pitch of strand of the internal lay of aluminum wires should be not less than 10 and not more than 16. Repetition factor of pitch of strand from 6 wires and 19 wire support strand should be not less than 16 and not more than 26; repetition factor of pitch of strand from 12 wires of 19-wire support strand should be not less than 14 and not more than 22. In 19-wire support strand repetition factor of pitch of strand from 12 wires should not be more than repetition factor of pitch of strand from 6 wires. In conductors which have several lays from aluminum wires, repetition factor of pitch of strand of any lay should not be more than repetition factor of the previous pitch of strand, considering from the conductor axis.

Repetition factor of pitch of strand for the conductors with the section, indicated in table 2 and 3 in the brackets, should be in compliance with the values given in tables 4

and 6.

Table 4

Number of wires		Repetition factor of pitch of strand for the conductors of marks AC, ACKП, ACKC, ACK															
Aluminum or aluminum alloy	steel	Support strand								Lay of aluminum wire (considering from wire axis)							
		6-wires		12-wires		18-wires		24-wires		first		second		third		fourth	
		mi n	ma x	mi n	m ax	mi n	ma x	mi n	ma x	mi n	ma x	mi n	ma x	mi n	ma x	mi n	ma x

- 2.6 Connection of wires at pitch of strands of the support strand with the number of wires from 1 to 19 including is not allowed

At splicing (twist) of factory length of the conductor the replacement of bobbins with aluminum wire is not allowed. It is allowed the welding of the wires when they are broken during the process of lay (twist) not more than in four places on one factory length. The distance between the welded places of different or the same wires should be not less than 15 m. The wires after electrical welding should be annealed from each side at 250mm from the place of welding.

- 2.8 Electrical resistance of the conductors to DC of aluminum and steel aluminum conductors are given in table 5 of Annex 1.
- 2.9 Breaking tension of conductors should be in compliance with the indicated in table 1-4 of mandatory Annex 1.
- 2.10 Period of useful life should be not less than:
 45 years – for the conductors of marks M, A, AC;
 10 years – for the conductors of marks ACKC, ACK.
- 2.11 Materials used for conductors production should be correspond

Steel galvanized wire – to mark OC or MC under GOST 9850 -72 1 and 2 groups for the conductors of mark AC and only 2-nd group – for the conductors of marks ACKC, ACKП, ACK;

Aluminum conductor – to Technical conditions 16-7-5.472 -87 and Annex 4

3. RULES OF ACCEPTANCE

- 3.4 The client carries out acceptance tests on 3% of factory length from the lot but not less than on one factory length.
When there are unsatisfactory results at least on one of the features then repeated tests on double sampling which taken from the same lot are carried out. Results of repeated tests cover the whole lot.
- 3.5 Sampling tests for the compliance to the requirements of p.p. 2.8 and 2.9 are carried once a year on 5% of the factory length from the lot gone through acceptance tests.
When there are unsatisfactory results or sampling tests the repeated tests on double sampling are carried out. When the repeated tests result unsatisfactorily the acceptance of the conductors is stopped.
- 3.6 Conventional tests to meet all the requirements of this standard should be done under the program approved in the established order.

4. TESTS METHODS

- 4.1 Checking of construction, number of wires in the conductor and separate lays (p.1.2), conductor's length (p.1.4), lack of foldover, protrusions, breaks and fractures (p.2.2), direction and quality of pitch of strand(p.2.3), availability of neutral grease and quality of filling up of inter-wire area (p.2.4), repletion factor of spacing of pitch of strand(p.2.5), connection of separate wires, availability galvanized coating in places of welding (p.2.6) should be done visually and by measurements in the process of production or by disassembling and visual examination of the end of the conductor on the length not less than 0,5m.
- 4.2 Diameter of the conductor, the support strand and wire (p.1.2 and tables 1-4) of the mandatory Annex 1), factory length of the conductor (p.1.4) and spacing of pitch of strand(p.p. 2.3, 2.5) are measured under GOST 12177 -79.
- 4.3 Electrical resistance of the conductors is determined by calculation under the methodology given in reference Annex 2, due to factual values of electrical resistance of separate conductors. Measurement is carried out under GOST 7229-76 on 100% of wires of the conductors consisting of 7 and less wires, on 50 % of wires – for other conductors. On the conductors except steel aluminum the measurement on the conductors is allowed to be done.
- 4.4 Breaking strength of the conductor is done on the samples of the length not less than 0,2m. 100% of wires of the conductors and support strands consisting of 7 and less wires are subject to test, 50 % of wires for other conductors
Reducing of temporary resistance of separate values of the conductors taken from the twisted conductors is allowed up to 95% from the values under the corresponding standard or technical conditions on the conductor of the concrete type.
It is allowed to do the test on the conductor.
When testing the conductor on the whole the received value of breaking strength given in tables 1-4 of the mandatory Annex 1.

5. PACKING, MARKING, TRANSPORTATION AND STORAGE

- 5.1 Packing, marking, transportation and storage of the conductors is under GOST 18690-82.
- 5.2 Conductors should be reeled on the wooden or metallic spool (bobbin) with full boarding or in hanks, Conductors mass reeled on hanks should be not more than 50 kg.