

## **5. DATA, DRAWINGS AND DOCUMENTS**

### **5.1 Drawings Attached to the Bidding Document**

#### **5.1.1 Purchaser's Drawings**

(1) Purchaser's Drawings attached to the Bidding Document

The drawings contained in the Bidding Document shall be utilized for bidding purposes only. They are not considered as necessarily defining the design of the Goods to be furnished, but are merely illustrative to show the general layout of the equipment, except where limiting or mandatory dimensions and elevations are indicated.

The Works shall be executed in accordance with the detailed design drawings prepared by the Supplier.

(2) Copyright

Copyright for drawings of existing equipment shall be remained to the Purchaser.

#### **5.1.2 Proposal Drawings, Documents and Technical Schedules**

The Supplier shall submit the Technical Schedules fully completed together with documents and drawings specified in this Bidding Document and other documents which the Supplier deems useful to better evaluate his Bids.

### **5.2 Supplier's Drawings, Documents, Data and Instructions**

#### **5.2.1 General**

The Supplier shall submit to the Purchaser for approval or reference, drawings, plans, erection manuals, calculations, codes and standards, copies of all documents necessary for implementing the Works in accordance with the provisions of the Contract Document. The sequence of submission shall be such that information is available for review or approval of each drawing or document when it is received.

The scope of these submittals shall include, but not be limited to those specified and shall be sufficiently comprehensive to fully establish that all parts and procedures to be used in performing the Works comply with the objectives of the Contract. The Purchaser will have

the right to require the Supplier to submit such additional information as may reasonably be required.

The Supplier shall, within one (1) month after the effective date of the Contract, prepare and submit to the Purchaser for approval a schedule of documents which he proposes to submit in accordance with the requirements of Clause 5.2.3 below and the other clause of this Bidding Document, together with the dates on which he proposes to submit such drawings and documents.

The schedule of documents summarizing all existing and proposed drawings and documents of items intended for submission to the Purchaser shall be updated monthly to show the status of the drawings and documents submitted and any additional proposed drawings. These updated lists shall be submitted to the Purchaser by seventh (7<sup>th</sup>) day of the every month.

Any manufacturing, test and transportation of the Goods prior to the approval of drawings pertinent thereto shall be at the Supplier's risk. The Supplier shall be responsible for any extra cost that may arise in consequence to such risks.

When submitting drawings for approval, including drawings prepared by a sub-supplier (if any), the Supplier shall certify that the Supplier has fully examined such drawings and that drawings comply with the requirements of the Contract.

The Supplier shall be responsible for any discrepancies, errors, or omissions in the drawings, documents and data supplied by him whether these have been approved by the Purchaser or not.

The Purchaser shall have the right to require the Supplier to make any changes to the drawings, documents and data which may be necessary, in the opinion of the Purchaser, to make the Works conform to the intent of the Contract.

All revisions of drawings shall be clearly described in the revision column and be indicated on the drawing by means of a triangle bearing the revision number.

All drawings, documents, data and information to be submitted shall be in English language and be drawn using the metric system of measurements. Refer to Clause 7 (2).

Every drawing shall carry a title block with the Contract Number and a space shall be made in the title block for incorporating the Project Drawing Number.

The first lines of the title block shall read:

Rehabilitation Project of the 4<sup>th</sup> Power Plant in ULAANBAATAR, MONGOLIA (PHASE-II)

CONTRACT NO. \_\_\_\_\_

Where applicable, drawings shall show a graphic scale key plan and north arrow. Lettering, notes and title block shall be in English language. Dates on drawings shall be spelled out (e.g. 28 Dec. 2002).

### 5.2.2 Processing Drawings for Approval

Prior to fabrication of the Goods at the factory or to the award of order to the Sub-Suppliers, the Supplier shall submit to the Purchaser and the Engineer seven (7) copies of printed drawings and documents for approval, with a mark or stamp "FOR APPROVAL". All the others shall be submitted as "FOR INFORMATION".

The Approval procedure shall in principle be treated in accordance with following procedure.

- (1) The Purchaser will review the submitted drawings and documents within fifteen (15) days after receipt. The Supplier shall confirm the receipt date of submitted drawings and documents. It is noted that even for "FOR INFORMATION", the Purchaser treat it as "FOR APPROVAL" and send comment.
- (2) After the drawing and documents are approved or reviewed by the Purchaser, the Purchaser will send his comments to the Supplier by a facsimile discriminating with marks "APPROVED", "APPROVED WITH NOTES", "NOT APPROVED" or "FOR INFORMATION".  
In case that the Supplier has not received any comments from the Purchaser after twenty (20) days after submission, the Supplier shall be deemed that submitted drawings and documents are "APPROVED".
- (3) The drawings and documents "FOR INFORMATION" with the comments of the Purchaser are deemed to be "FOR APPROVAL".
- (4) The drawings and documents with the mark "APPROVED", "APPROVED WITH NOTES" will authorize the Supplier to proceed the Works if the Supplier completely accept the Purchaser's comments. Any design or manufacturing done before approval of the drawings shall be at the Supplier's own risk.

- (5) The drawings and documents marked with "NOT APPROVED" shall be revised by the Supplier and resubmitted for approval to the Purchaser.
- (6) In any case, the Purchaser shall not return the Supplier's drawings or documents
- (7) Initially supplied drawings and documents shall have the revision number "Rev.0". Subsequent revisions shall be numbered as Rev.1, Rev.2 . . . until approval. All revisions shall be clearly described in the revision column and indicated on the drawings with Rev number in framed by triangle.

### 5.2.3 Submission of Drawings, Documents and Data

The Supplier shall prepare and submit to the Purchaser for approval or reference, drawings and technical data/documents including but not limited to the following:

(1) Codes and Standards

The Supplier shall, within one (1) month after the effective date of the Contract, submit for approval by the Purchaser a list of the Codes and Standards which shall govern the design, manufacture, construction, erection and test of all the related Goods under this Contract.

Each one(1) copy of the applied code or standard shall be supplied to the Purchaser.

(2) Drawings, Documents and Specifications of the Goods for Approval.

The data, drawings and documents to be submitted by the Supplier for approval as listed below :

(a) Mill Certificate (Tubes)

Signed by an authorized representative of manufacturer, indicating the following items in English.

- 1) Plant name
- 2) Commodity
- 3) Contract No.
- 4) Specification, manufacturing method  
(including applicable standards)
- 5) Size, quantity and weight
- 6) Inspection No.
- 7) Steel making No.

- 8) Chemical composition (Standard values, results of heat analysis and results of product analysis)
- 9) Mechanical test results (Standard values and results)
- 10) Actual results of measurement (Indication of "Good")  
In case of smooth tubes, maximum and minimum values of outside diameter and wall thickness measure of one tube for each purchase No. (Line No. of order sheet) shall be recorded in the mill certificate.

- 11) Hydrostatic test results (specified value of pressure and "Good" indication)

\*Note: Eddy current testing is acceptable in lieu of the hydro testing.

The specified value of pressure (or the value of pressure specified by the applicable standards, if not specified) shall be entered in the hydrostatic test column of the mill certificate.

These test results shall be reported separately as manufacturing reports after delivery of the products.

- 12) Report of hardness test after cold drawn (steel plates)  
Average value of hardness measured at 5 points or more for each of 2 test pieces take from each charge and each size.

(b) Procurement and manufacturing schedule

(c) Other information on factory test and inspection.  
(Item, period, procedure, results and report)

(d) Specification of the Materials including welding rods.

(3) Drawings, Documents and Specifications of the Goods for Reference use

(a) Quality control procedure

(b) Information on delivery and transport

(4) Progress Report

(a) Monthly Reports

The Supplier shall submit to the Purchaser and the representative of the Purchaser (such as Engineers if required) by tenth(10th) day of every month, a written detailed

progress report, in an approved form, indicating the stage reached and anticipated completion dates for the design, ordering, procurement, manufacture, and testing of the components up to the completion date of transportation of the Goods. The report is to be forwarded promptly so that on receipt by the Purchaser the information is not unduly out of date.

(5) Instructions for Erection Works

The erection work will be undertaken by an Erection Contractor. The Supplier shall provide the instructions for the erection work of the Goods supplied by this Contract. The preliminary instructions for the erection work shall be submitted not later than three (3) months after the effective date of the Contract, and the following items shall be included at least and other necessary information shall be included:

- Outline of erection procedures
- Dimensions and weight of the Goods
- Other necessary information

The final erection instructions shall be submitted three (3) months before the commencement of the erection work and the following items shall be included at least:

- Erection procedures including welding procedures for superheater
- Arrangement drawing
- Outline drawings of all the Goods
- Special erection tools and machines to be recommended
- Other necessary information

(6) Test Procedures and Reports

The Supplier shall submit to the Purchaser comprehensive test procedures/ programs two (2) months prior to the start of the actual tests of the Goods.

The procedures shall include the following items, but not limited to:

- description on the test activities
- evaluation criteria for the test results
- form of test record

The Supplier shall submit reports or test results upon completion of the tests carried out in accordance with the Bidding Document including those in the manufacturer's factory.

**6. PATENTS, TRADE MARKS**

- (1) The Goods may bear patent numbers, trade marks or trade names in English of each one of the suppliers thereof.

Nothing contained herein shall be construed as transferring any patent or trademark rights or copyrights in such Goods, and all such rights are hereby expressly reserved to the true and lawful owners thereof. No copyright for drawings and documents of the Project in any case can be transferred to the Purchaser.

- (2) The Supplier shall defend the Purchaser and hold harmless the Purchaser from patent liability or claim of patent infringement of any nature or kind, including costs and expenses for, or on account of, any patent or unpatented invention made or used in such Goods, including the costs and expenses of litigation, if any.

**7. APPLICABLE STANDARD AND UNITS OF MEASUREMENT**

(1) Applicable standard

Unless otherwise specified in the Specification, all the Goods shall conform to the latest edition to one of the following standards or equivalent.

(a) Japanese standards

- JIS - Japan Industrial Standards
- JEC - Standards of the Japanese Electro-technical Committee
- JEM - Standards of Japan Electrical Manufacturer's Association
- JCS - Japanese Cable Maker's Association Standards

(b) U.S.A. standards

- ASME - American Standards of Mechanical Engineers
- ANSI - American National Standard Institute
- ASTM - American Society for Testing and Goods
- ISA - Instrument Society of America
- MSS - Manufacturers Standardization Society of the Valve and Fitting Industry
- NEMA - National Electrical Manufacturers Association
- NFPA - National Fire Protection Association
- IEEE - Institute of Electrical and Electronics Engineers
- OSHA - Occupational, Safety and Health Act
- NEC - National Electric Code
- UL - Underwriters Laboratories

(c) International standards

- ISO - International Organization for Standardization
- IEC - International Electro-Technical Commission

(2) Units of measurement

Weights and measures shall be given in the metric system and the following symbols shall be used for the drawings and documents submitted by the Supplier.

- mm : millimetre
- cm : centimetre
- m : metre



km	:	kilometre
cm <sup>2</sup>	:	square centimetre
cm <sup>3</sup>	:	cubic centimetre
kg	:	kilogram
kgf	:	kilogram force
kgf/cm <sup>2</sup>	:	kilogram force per square centimetre
t	:	metric ton (1,000 kilogram)
sec.	:	second
m/s	:	metre per second
A	:	ampere
V	:	volt
kV	:	kilovolt
kVA	:	kilovolt-ampere
MVA	:	megavolt-ampere
kW	:	kilowatt
MW	:	megawatt
MWH	:	megawatt-hour
N-m	:	Newton-meter
ppm	:	Parts per million
Micro-S	:	Micro-Siemens
°C	:	degree Celsius
rpm	:	revolution per minute
Hz	:	hertz
g/kW-h	:	gram per kilowatt-hour
kcal/kg	:	kilocalorie per kilogram
%	:	per cent

## 8. SHIPPING INSTRUCTION

### (1) Packing

All the Goods shall be packed and then containerized along all the routes to Mongolia, unless otherwise specified.

The Supplier shall take suitable precaution for the packing of Goods to ensure safe handling during the transportation up to the Site.

The packing shall be sufficiently strong to avoid loss or damage and adequately sealed for cold weather condition so that each item will be kept serviceable at least sixty (60) days after the arrival thereof at the Site.

Woodwool shall be avoided as far as possible. Straw packing shall be prohibited.

Wooden boxes for export packing shall fulfil the requirements of JIS-Z-1402, 1403 and 1405 or equivalent.

All stencil marks on the outside of casings shall be either of waterproof materials or protected by shellac or varnish to prevent erasure in transport.

Where practicable, all indoor items to damage by moisture such as instruments and panels, machine components, etc., shall be covered in polyethylene sheeting, sealed at the joints and the enclosure provided internally with an appropriate desiccant. In addition, for the Goods of less durability to low temperature shall be fully insulated.

All items of the Goods shall be clearly marked for easy identification on the packing. The container shall each contain a list of packages included in it on the outside, and shall bear an identification mark relating them to the appropriate shipping documents.

All packages shall be clearly marked on the outside to show where the weight is concentrated and the correct position of the slings.

If the Supplier ships dangerous goods as defined in the International Maritime Organization (IMO) code, he shall pack them in accordance with the authorized rules issued by the organization of the Supplier's country or equal to "Rules for the Carriage and Storage of Dangerous Goods in Ships" issued by the Ministry of Transportation of

Japan and shall submit the following documents two (2) weeks prior to cargos becoming available for shipment, with one (1) copy to the Purchaser.

- (a) Advance notice of dangerous goods to the Port Authority (4 copies)
- (b) Declaration of dangerous goods to a shipping company (4 copies)

Any items not stipulated herein shall be according to the Supplier's Standard of export packing for cold weather condition.

(c) Packing (Tubes)

- Straight tubes shall be transported in commercial standard length (for example, 8m) and bundled for packing. Bent tubes shall be packed in wooden crate or other suitable package such as to avoid deformation during transportation.
- Two labels shall be attached to each bundle and the labels bearing the following items shall be attached to each tube.

Items to be clarified in the label:

Order No., applicable standards, material designation, manufacturer's heat No., size (O.D. x thickness x length) and quality designated by the Supplier

(2) Packing List and Container Stuffing List

All container shall have a copy of packing list for the packages contained which shall be covered in a waterproof envelope and be placed outside of the container. The packing list shall give all information on the package, such as package number, packing appearance, net weight, gross weight, dimension, measurement, name of the Site (4th Thermal Power Plant, Ulaanbaatar, Mongolia) and description of Goods which is contained in each package.

In case that the containers having serial numbers of packages are contained, the master packing list shall be placed inside the container which has the lowest package number.

The Supplier shall submit for each delivery the Container Stuffing List indicating the numbers of packages in each container.

(3) Marking

- (a) Each package shall be clearly marked on two (2) sides in black with a stencil and water proof ink or oil paints by means of block letters not less than 30 mm high as follows:

The marking for each package shall be of Supplier's standard.

CONSIGNEE :				The 4th Power Plant in Ulaanbaatar, Mongolia			
PROJECT :				Rehabilitation Project of the 4th Power Plant (Phase-II)			
LOAN NO. :				JBIC Loan MON – P6			
DESCRIPTION OF CONTENTS :							
PORT OF SHIPMENT :							
NET WEIGHT :				(kg)			
GROSS WEIGHT :				(kg)			
DIMENSION :		(L) x		(W) x		(H) (cm)	
PACKAGE SERIAL NO. :							
SUPPLIER :							

These marks shall be protected against weathering by clear water-resistance varnish.

- (b) Bags, bundles, other packages and loose pieces, which cannot practically be marked as aforesaid, shall have two metal labels securely fastened thereto by wire, and each label shall be stamped or printed with the above markings.

(c) Marking (Tubes)

The following items and items specified on the applicable standards shall be stenciled on each tube.

Manufacturer's name  
 Name of specification  
 Dimensions (O.D. x WT x L)  
 Heat No.  
 Date of manufacturing (Year-month)  
 Inspection No.

**9. SHIPMENT AND INLAND TRANSPORTATION**

- (1) The Supplier shall, on his responsibility and at his own cost, ship, transport and unload all the Goods to the Site.
- (2) The Supplier shall, on his responsibility and his cost, send the documents specified Section II Clause 9 to the Purchaser upon shipment one(1) week before arrival of the Goods.
- (3) The Supplier shall notify the Purchaser of the following information by fax upon shipment.
  - (a) Loan agreement (with JBIC) Number and Project Name.
  - (b) Items Shipped.
  - (c) Name of Company Responsible for all Transport.
  - (d) Number of Packages and Containers Shipped.
  - (e) Name of Ship and Train Number for the place at the border.
  - (f) Name of Shipping Company and its Agent in Mongolia and other country if any.
  - (g) Bill of Lading Number.
  - (h) Port of loading in the country of the Supplier and Expected Date of Arrival in China or Russia.
  - (i) Date of Shipment in the country of the Supplier and in China or Russia.
  - (j) Expected Date and Place of Arrival at the Border and Ulaanbaatar.
  - (k) Total Gross Weight and Measurement of Each Container Shipped.
- (4) The Supplier shall be responsible for clearance of all Goods supplied under the Contract. The Supplier shall submit to the Purchaser six (6) copies of bills of lading of the Goods immediately after the customs clearance.
- (5) The Supplier shall observe all regulations which limit loads on wharves, rails, and roads over which the Goods will be transported. The handling and storage of any Goods supplied under the Contract during transportation thereof shall be at the risk of the Supplier and without responsibility to the Purchaser.

(6) Inspection of the Goods

- (a) Upon arrival of the Goods, the Supplier shall unpack, check and inspect them for verification of loss, shortage and/or damage, at the presence of the Purchaser.
- (b) The Purchaser and Supplier shall sign the checklist to be prepared by the Supplier.
- (c) If loss, shortage or damage of any Goods is found in the packages, the Supplier shall forthwith supply a substitute of the Goods on his account to the checklist thus mutually signed.

10.

(Not used)

## 11. TECHNICAL REQUIREMENT

### 11.1 General

Replacement of the economizer elements of vertical type and bent tube of horizontal type shall be applied to three (3) boilers (#5,6,8 boilers) and horizontal type with header (three (3) section) shall be applied to one (1) boiler (#7 boiler).

Replacement of the 4<sup>th</sup> superheater tube including the header shall be applied to one (1) boiler (#8 boiler) and the 4<sup>th</sup> superheater lower bent portion shall be applied to three (3) boilers (#5,6,7 boilers).

### 11.2 Quality

- (1) All the Goods to be used for the Project shall be new, unused, free of any defect in quality and workmanship, and of first-class quality in strength, reliability and other necessary features.  
Any defect and imperfection will not be acceptable.
- (2) The inspection of the Goods or the waiving of the inspection thereof shall in no way relieve the Supplier of the responsibility for furnishing the Goods meeting all the requirements of the Specification. For all the Goods supplied, except otherwise specified in the Specification, name of manufacturer and country of origin shall be clarified in the Technical Schedules of the Bids.

### 11.3 Goods and Services Supplied by the other Supplier

Following Suppliers/Contractor shall cooperate each other in implementation of this Rehabilitation Project.

Package-1 Supplier : Conversion of firing system for boiler No.5 to No.8

Package-2 Supplier : Rehabilitation of C&I for boiler No.5 to No.8

Package-3 Supplier : Rehabilitation of boiler tubes for boiler No.5 to No.8

Package-4 Supplier : Replacement of exciter for generator No.1 to No.4

Package-5 Contractor : Erection work for the Goods supplied by Package-1 to Package-4



#### **11.4 Tube and Welding Rod Material**

Tube and welding rod materials shall be based on the Russian standard as specified in the attached table TS-3-01 or equivalent to.

The Supplier shall submit a comparison tables for Purchaser's approval, if he apply any other standard than original Russian standards or JIS specified.

Both carbon steel tube and alloy steel tube shall be of seamless.

#### **11.5 Manufacturing Process (Tube)**

Tubes shall be free from bloom or slabs and shall be made of the ingot casting or by the continuous casting method.

The Supplier using the continuous casting method shall give a technical explanation to the Purchaser on its bounds and quality.

Moreover, prior to cutting work of tubes , the Supplier shall carry out a quality confirmation test to affirm its quality. The Purchaser and/or the Engineer may witness the test.

The Supplier who has already been qualified by the Purchaser need not carry out the quality confirmation test again.

The Supplier shall submit the quality control procedure of manufacturing prior to its commencement for the Purchaser's approval.

#### **11.6 Heat Treatment at the Factory**

##### **(1) Heat Treatment (Tubes)**

Heat treatment shall be in accordance with the requirement of the applicable standards.

Heat treatment temperature and time period (range and holding shall be reported on the manufacturer's document separate from the mill certificate.)

#### **11.7 Rust Prevention (Tubes)**

- (1) Long-term rust prevention oil shall be applied over the outside surface of each tube.

- (2) Polyethylene cap shall be set at both ends of each tube.

Pay attention so that the polyethylene cap does not become detached during transportation.

However, if such sealing is instructed when the order is submitted, or if there is any possibility of rusting during manufacture, transportation and Site storage, the Supplier shall seal VCI or apply other rust preventive measures on Supplier's responsibility.

Table TS-3-01

## (1) Chemical Composition and Mechanical Properties of tubes

	Material	Chemical Composition %									Tensile strength N/mm <sup>2</sup>	Yield points or proof stress N/mm <sup>2</sup>
		C	Si	Mn	Ni	Cr	Mo	Ti	S	P		
Superheater tube	Original <sup>(*)</sup> 12×1812T	≤0.12	≤0.8	≤2	8-9.5	17-19	-	0.8	≤0.02	≤0.02	eq. SUS321HTB	
	JIS SUS321HB	0.04-0.10	≤0.75	≤2.00	9-13	17-20	-	0.4-0.6	0.03	0.03	520	205
Superheater header	Original <sup>(*)</sup> 12×1M Φ	0.08-0.15	0.17-0.37	0.4-0.7	-	0.9-1.2	0.25-0.35	-	<0.025	<0.025	441.5	255.1
	JIS STPA 22	≤0.15	≤0.50	0.30-0.60	-	0.80-1.25	0.45-0.65	-	≤0.030	≤0.030	-	-
Economizer tube	Original <sup>(*)</sup> CTαrnb20	0.17-0.24	0.17-0.37	0.35-0.65	-	-	-	-	≤0.02	≤0.02	eq.STB410	
	JIS STB410	≤0.32	≤0.35	0.30-0.8	-	-	-	-	≤0.035	≤0.035	410	255

(\*) Russian standard JIS: Japanese Industrial Standard

## (2) Chemical Composition of Welding Rod (for final stage superheater)

Chemical Composition %								
C	Si	Min	P	S	Ni	Cr	Mo	Note
≤0.08	≤0.90	≥2.50	≤0.040	≤0.030	9.0-11.0	18.0-21.0	-	Nb 8 ×C %-1.00

12. SCOPE OF THE GOODS

12.1 Tube Materials

(1) Carbon steel material (Russian standard material or equivalent)

Item	Quantity
#5,6,8 Boiler Economizer vertical tube 38mm(+ 0.5 mm) O.D. x 4.0mm thickness	2 x 144 pieces for one Boiler Length 7,000 mm MON-K-3-11 (approx. 21,000 kg (3 Boilers total))
Economizer bent tube 32mm(+ 0.5 mm) O.D. x 4.0mm thickness	3,370 pieces for one Boiler Length 800 mm MON-K-3-10 (approx. 30,000 kg (3 Boilers total))
#7 Boiler 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> Economizer tube together with the headers tubes : 32mm(+ 0.5 mm) O.D. x 4.0mm thickness header : 219mm O.D. x 36mm thickness	tubes : 2 x 144 pieces for one section MON-K-3-07~09 (approx. 240,000 kg(3 section))
Subtotal	291,000 kg

(2) Alloy steel material (Russian standard material or equivalent)

Item	Quantity
#5,6,7 Boiler 4 <sup>th</sup> Superheater tube of lower bent portion up to 2,240mm from the bottom of the 4 <sup>th</sup> Superheater 38.0mm(+ 0.5 mm) O.D. x 5.0 mm thickness	(A-E) type x 54 each for one boiler MON-K-3-05 (approx. 78,000 kg (3 Boilers total))
Stiffeners (special alloy steel)	A type 2,800 pcs (MON-K-3-06) B type 2,000 pcs
#8 Boiler 4 <sup>th</sup> Superheater tube including the header tubes : 38mm(+ 0.5 mm) O.D. x 5mm thickness inlet header : 273mm O.D. x 36mm thickness outlet header : 325mm O.D. x 50mm thickness	MON-K-3-01~04 (approx. 33,500 kg)
Welding rods	400 kg
Subtotal	Approx. 111,500 kg

(Note) The supply shall be based on the quantity and not on the weight except for welding rod.

## 12.2 Test and Inspection

### (1) Witness Inspection (Tubes) at the Factory

The Purchaser has the right to witness the tests of materials and element at the manufacturer's factory without additional cost. The Supplier shall provide all necessary assistance for these visits, inspections and checks and give all the information requested.

Expenses needed for these Purchaser's personnel, related the following witness tests shall be included in his Bids:

- Superheater : one (1) engineer, one time
  - dimensional inspection
  - material inspection
- Economizer assembly : one (1) engineer, one time
  - dimensional inspection
  - material inspection

## (2) Test and Inspection Method and Evaluation Criteria

No.	Item	Test and Inspection Method	Evaluation Criteria	Quantity to be tested
1.	Appearance	Visual inspection of inside and outside appearance over the entire length	Straightness shall be less than 3mm/7,000 mm and shall not interfere with actual service.	Each tube
2.	Dimensional inspection	Use the following instruments to measure the various dimensions.  1) Outside and inside diameter } To be measured over the entire length using ultrasonic gauge. 2) Thickness } 3) Length } Steel measuring tape or automatic measuring machine	Specified values of applicable standard for outside diameter, thickness and length	Each tube
3.	NDT	Ultrasonic inspection, eddy current inspection shall be conducted for welded part.		10%, but if any defective part is found at the first test, all the remains shall be tested

No.	Item	Test and Inspection Method	Evaluation Criteria	Quantity to be tested
4.	Hydrostatic test	Hydrostatic test shall be conducted according to the applicable standards.	The product shall withstand the test pressure and must not leak.	Each element
5.	Heat analysis	Comply with the applicable standards.	The values specified by the applicable standards shall be met.	Comply with the applicable standards.
6.	Product analysis	Comply with the applicable standards.	The values specified by the applicable standards shall be met.	Comply with the applicable standards.
7.	tension test	Comply with the applicable standards.	The values specified by the applicable standards shall be met.	Comply with the applicable standards.
8.	Flattening, flaring, reverse flattening and flange test (Actual service test)	Comply with the applicable standards.	The values specified by the applicable standards shall be met.	Comply with the applicable standards.
9.	Impact test	Impact test shall be made using Charpy V-notch type A specimen.	Impact value specified by the applicable standards shall be met.	
10.	Hardness test	Comply with the applicable standards.	The values specified by the applicable standards shall be met.	Same as for tension test. Steel plates.

**Attachment --A TECHNICAL SCHEDULES**

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1. Material
2. Nominated Manufacturer List
3. Delivery Schedule



Technical Schedules

1. Material

Material	Code/standard and Class/Grade
1. Carbon steel Material	
Economizer tube	
2. Alloy Steel Material	
Superheater tube	
Superheater header	
3.Welding rod for Superheater tube	

## Technical Schedules

## 2. Nominated Manufacturer List

Item	Manufacturer	Country
1. Carbon steel Material		
2. Alloy Steel Material		
3. Manufacturing		

## Technical Schedules

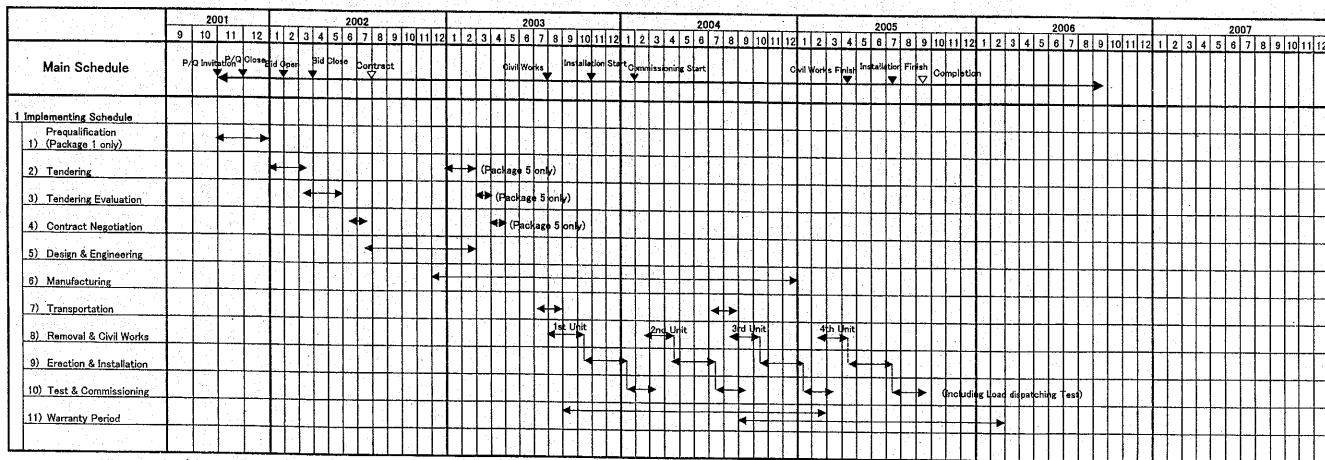
## 3. Delivery Schedule

Delivery	months after Effective Date of Contract
Delivery 1	
Delivery 2	

**Attachment –B BID DRAWINGS****TABLE OF DRAWINGS**

1. MON-K-0-01 Implementing Schedule
2. MON-K-0-02 Start-up Dates of Boiler and Turbine/Generator
3. MON-K-0-03 Main Specification of Boiler
4. MON-K-0-08 General Arrangement of Boiler
5. MON-K-0-12 Main Feedwater Flow Diagram
6. MON-K-0-13 Main Steam Flow Diagram
  
7. MON-K-3-01 Fourth Superheater (1)
8. MON-K-3-02 Fourth Superheater (2)
9. MON-K-3-03 Fourth Superheater (3)
10. MON-K-3-04 Fourth Superheater (4)
11. MON-K-3-05 Fourth Superheater bent tube element
12. MON-K-3-06 Stiffener for Fourth Superheater
13. MON-K-3-07 Economizer (1)
14. MON-K-3-08 Economizer (2)
15. MON-K-3-09 Economizer (3)
16. MON-K-3-10 Economizer bent tube element
17. MON-K-3-11 Economizer vertical tube element

## Implementing Schedule



	Unit No.	Capacity	Start-up Date
Boiler	#1	420t/h	30 - 8 - 1983
	#2	420t/h	16 - 1 - 1984
	#3	420t/h	9 - 12 - 1984
	#4	420t/h	25 - 12 - 1985
	#5	420t/h	27 - 12 - 1986
	#6	420t/h	31 - 10 - 1987
	#7	420t/h	7 - 2 - 1990
	#8	420t/h	23 - 12 - 1991
Turbine generator	#1	80 MW	18 - 10 - 1983
	#2	100 MW	26 - 11 - 1984
	#3	100 MW	27 - 12 - 1985
	#4	100 MW	27 - 12 - 1986
	#5	80 MW	17 - 2 - 1990
	#6	80 MW	25 - 12 - 1991

Rehabilitation project of the 4th Power Plant  
in ULAANBAATAR, MONGOLIA (Phase-II)

Start-up Dates of Boiler and  
Turbine/Generator

Dwg. No. MON-K-0-02

August 20 '01

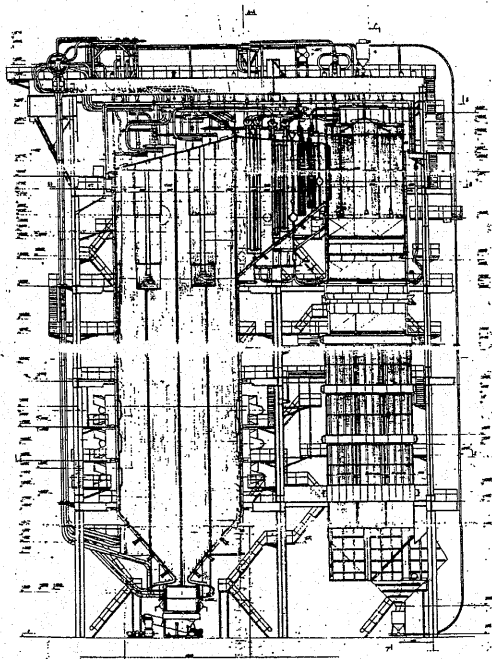
Manufacturer		ex-Soviet Union
Type		Indoor, radiant, single drum, natural circulation type
Unit No.		#1 - #8
Boiler Steam Condition	Boiler capacity	420 t/h(Superheater outlet)
	Steam pressure	140 kgf/cm <sup>2</sup> (14MPa)(Superheater outlet)
	Steam temperature	560 °C(Superheater outlet)
Fuel	Description	Mongolian coal(Baganuur, Shivee-Ovoo)
	Hight calorific value	3,500 kcal/kg-2,600 kcal/kg
Type	Superheater	Pendant type
	Boiler fumace	Single fumace, water wall
	Air heater	Tubular type
	Coal burner(Numbers)	Comer firing(4×3 stages)
	ESP	Electrostatic type
	Ash treatment system	Slurry ash with water circulation system
	Coal pulverizer (Numbers)	Vertical bowl mill for #1~4 Boilers Horizontal tube mill for #5~8 Boilers
Pulverized coal firing system	Direct firing type for #1~4 Boiler Semi-direct storage bin type for #5~8 Boiler	
Ventilation system		Balanced draft.

Rehabilitation Project of the 4th Power Plant  
in ULAANBAATAR, MONGOLIA(Phase-II)

Main Specification of Boiler

Dwg. No. MON-K-0-03

August 20 '01



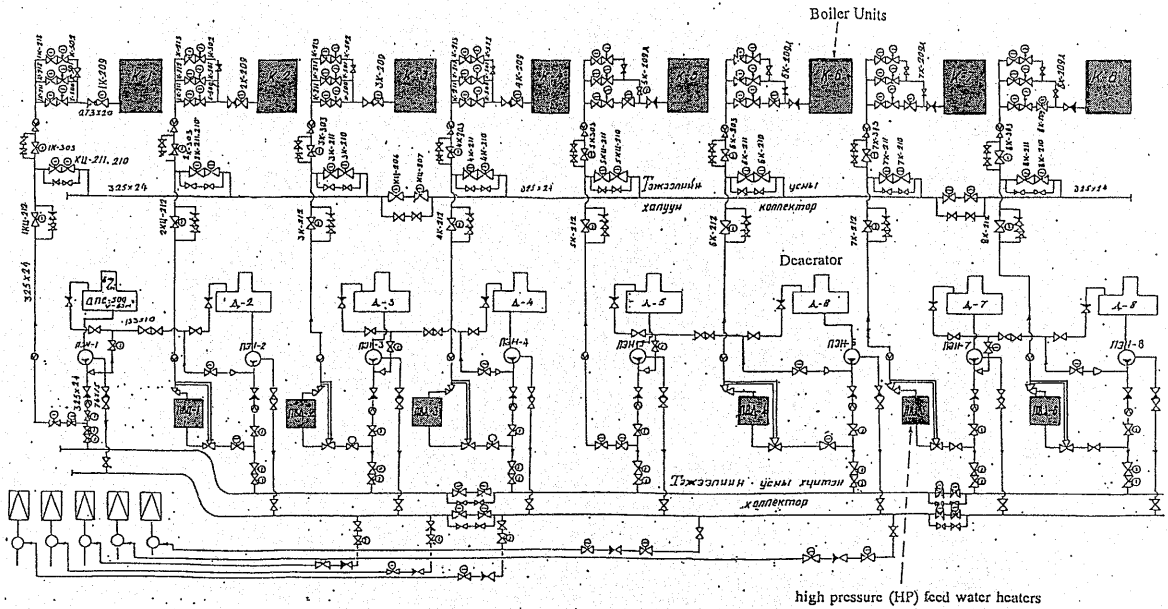
Rehabilitation Project of the 4th Power Plant in  
 ULAANBAATAR, MONGOLIA (Phase-II)

General Arrangement of Boiler

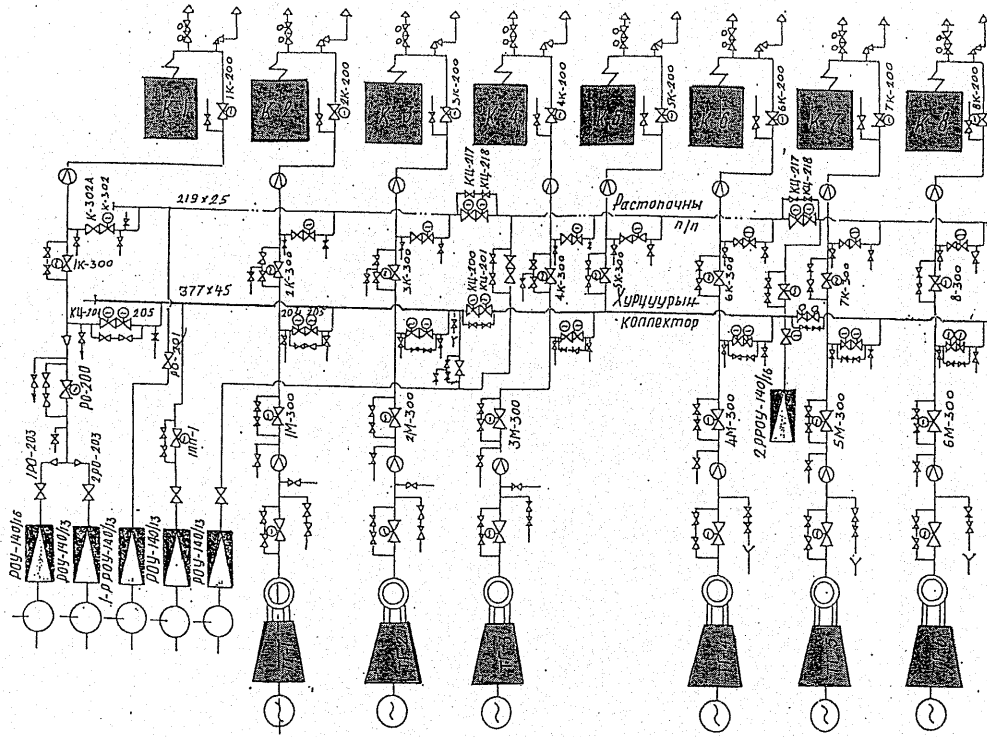
Dwg. No. MON-K-0-08

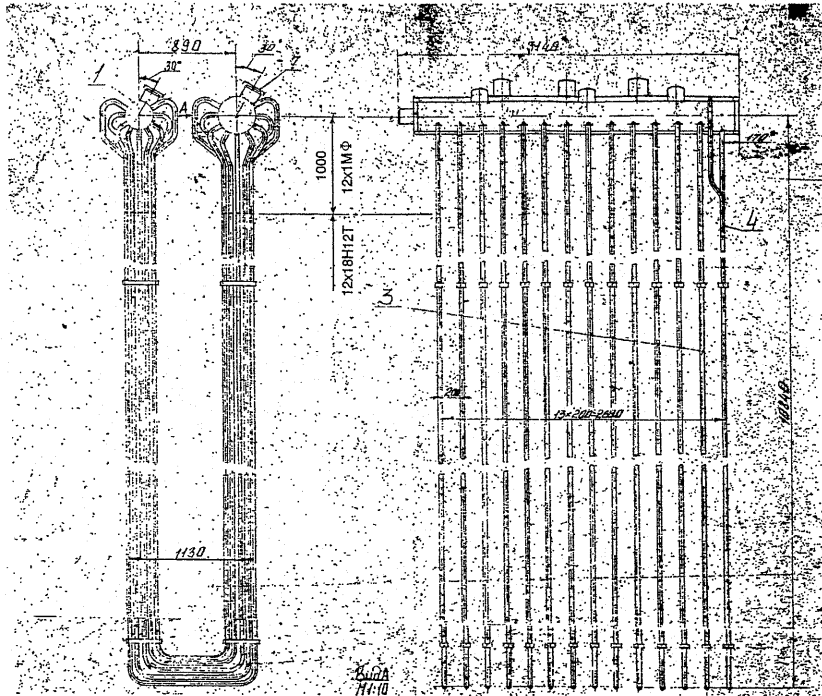
August 20 '01





Rehabilitation Project of the 4th Power Plant in ULAANBAATAR, MONGOLIA (Phase-II)	
Main Feedwater Flow Diagram	
Dwg. No. MON-K-0-12	August 20 '01

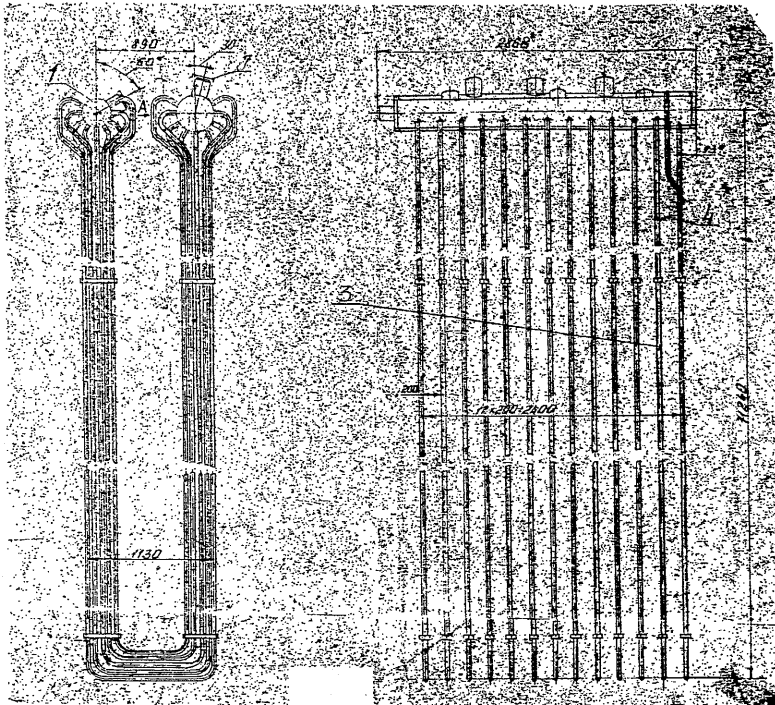




Rehabilitation Project of the 4th Power Plant in  
ULANBAATAR, MONGOLIA (Phase-II)

Fourth Superheater (1)

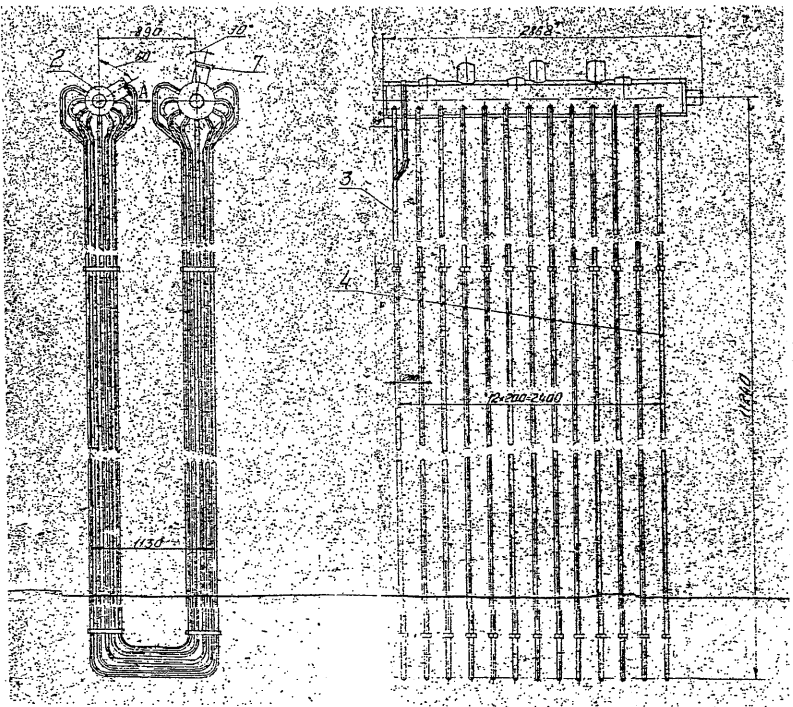
Dwg. No. MUN-K-3-01 | August 20'01



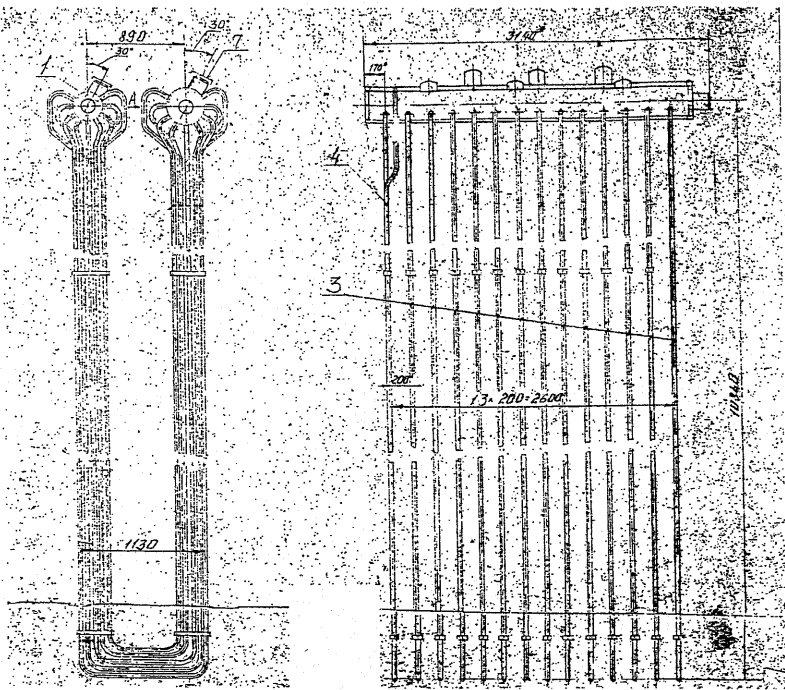
Rehabilitation Project of the 4th Power Plant in  
 ULAANBAATAR, MONGOLIA (Phase - II)

Fourth Superheater (2)

Dwg. No. MON-K-3-02 | August 20 '01



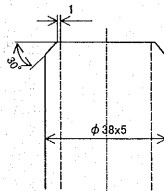
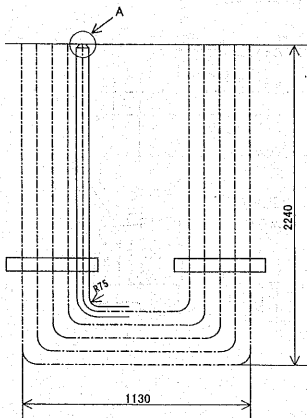
Rehabilitation Project of the 4th Power Plant in ULAANBAATAR, MONGOLIA (Phase-II)	
Fourth Superheater (3)	
Dwg. No. MON-K-3-03	August 20 '01



Rehabilitation Project of the 4th Power Plant in  
 ULAANBAATAR, MONGOLIA (Phase - II)

Fourth Superheater (4)

Dwg. No. MON-K-3-04 August 20 '01



Detail A

Rehabilitation Project of the 4th Power  
Plant in ULAANBAATAR, MONGOLIA (Phase-II)

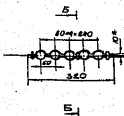
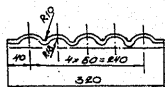
Fourth Superheater bent tube element

Dwg. No. MON-K-3-05

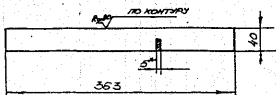
August 20 '01

A Type

Пос. 6

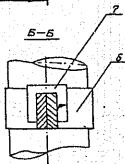
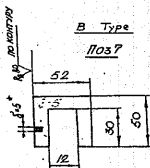


Развернутая линия



B Type

Пос. 7



material

Материал  
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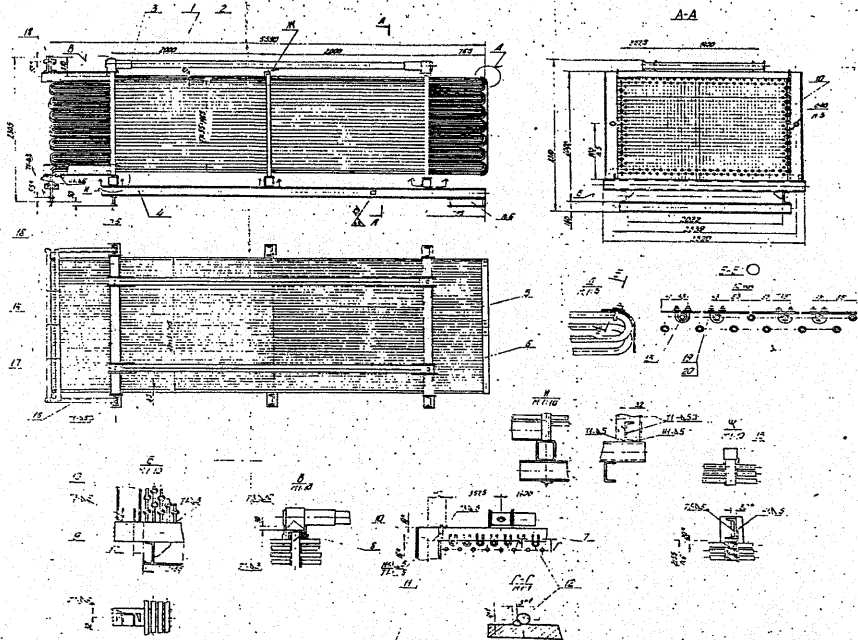
Rehabilitation Project of the 4th Power Plant in  
ULANBAATAR, MONGOLIA (Phase-II)

Stiffener for Fourth Superheater

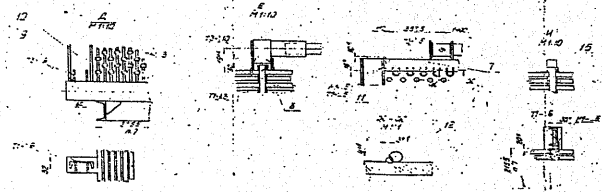
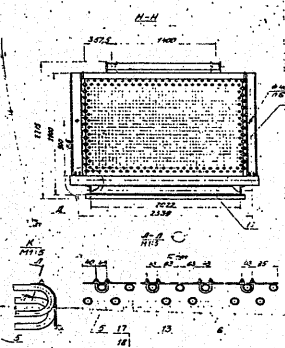
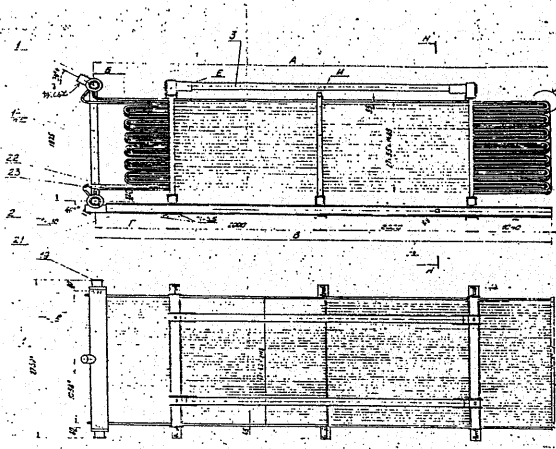
Dwg. No. MON-K-3-06

August 20 '01





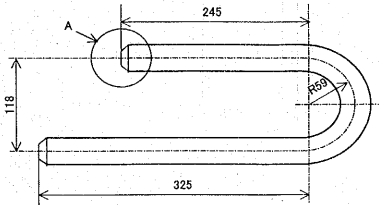
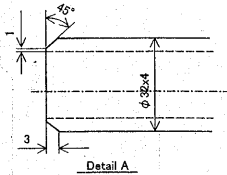
1. Покрытия для защиты.  
 2. Утепление на случай нарушения теплоизоляции от 10 мм.  
 3. Подвесные кронштейны для труб в соответствии с требованиями к устройству котельной. В зависимости от конструкции и условий эксплуатации кронштейны должны быть выполнены из легированной стали или нержавеющей стали.  
 4. В зависимости от типа конструкции и условий эксплуатации кронштейны должны быть выполнены из легированной стали или нержавеющей стали.  
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 6. В зависимости от типа конструкции и условий эксплуатации кронштейны должны быть выполнены из легированной стали или нержавеющей стали.  
 7. В зависимости от типа конструкции и условий эксплуатации кронштейны должны быть выполнены из легированной стали или нержавеющей стали.  
 8. В зависимости от типа конструкции и условий эксплуатации кронштейны должны быть выполнены из легированной стали или нержавеющей стали.  
 9. В зависимости от типа конструкции и условий эксплуатации кронштейны должны быть выполнены из легированной стали или нержавеющей стали.  
 10. В зависимости от типа конструкции и условий эксплуатации кронштейны должны быть выполнены из легированной стали или нержавеющей стали.



1. Технические данные  
 2. Составление & оформление в проект  
 3. Проверка  
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 100. Проверка

Обозначение	Количество				Примечание
	A	B	C	F	
ЭКОНОМИЗАТОР	27	27	112	100	
КОИЛЫ	27	27	112	100	

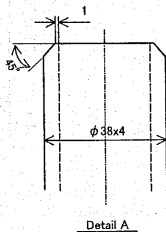
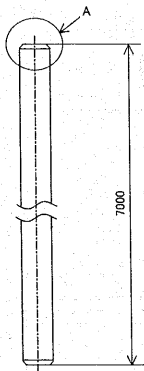




Rehabilitation Project of the 4th Power  
Plant in ULAANBAATAR, MONGOLIA (Phase-II)

Economizer bent tube element

Dwg. No. MUN-K-3-10 | September 03 '01



Rehabilitation Project of the 4th Power Plant in ULAANBAATAR, MONGOLIA (Phase-II)
Economizer vertical tube element
Dwg. No. MON-K-3-11   August 20 '01

## Section V

# FORMS

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5. Advance Payment Security From .....	V -15
6. General Information .....	V -16
7. General Experience Records .....	V -17
8. Particular Experience Record .....	V -21
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10. Personnel Capability .....	V -24
11. Financial Capability .....	V -26
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### 1. Bid Form and Price Schedules

To: Ts. Altangadas (Project Manager)

Project Implementing Unit  
The 4<sup>th</sup> Thermal Power Plant  
P.O Box-37  
Ulaanbaatar, Mongolia

Gentlemen and/or Ladies:

Having examined the Bidding Documents for the above Contract, including the Specifications, the receipt of which is hereby duly acknowledged, we the undersigned, offer to supply and deliver (Description of Works) in conformity with the said Bidding Documents, including Addenda Nos. (Insert Numbers), for the sum of (Total Bid Amount in Words and Figures), or such other sums as may be ascertained in accordance with the Price Schedules attached hereto and made part of this Bid.

We undertake, if our Bid is accepted, to commence delivery within (Number) days, and to complete delivery of all the items specified in the Contract within (Number) days, calculated from the date of receipt of your Notification of Award and in accordance with the Contract Execution Schedule provided in the Special Conditions of Contract/Specification.

If our Bid is accepted, we will provide the performance security in the sum of (Amount), equal to ten (10) per cent of the Contract price, for the due performance of the Contract.

We agree to abide by this Bid for the period of (Number) days from the date fixed for bid closing pursuant to Clause 25 of the Instructions to Bidder, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof in your Notification of Award, shall constitute a binding contract with us.

We understand that you are not bound to accept the lowest-priced or any Bid that you may receive.

Date this \_\_\_\_\_ day of \_\_\_\_\_ (state year) .

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(in the Capacity of )

Duly Authorized to sign Bid for and on behalf of \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Signature of Witness)

Witness \_\_\_\_\_

Address \_\_\_\_\_



**Price Schedule for Works (Price Form PS-1)**

Name of Bidder \_\_\_\_\_

( Unit : x 1,000 Japanese Yen)

Item	FOB Price at the Port of Loading (Specify Port)  ①	CIF Price at the Port of Entry (Specify Port)  ②	Price for Inland Transportation from Port of Entry to the Site and Unloading at the Site  ③	Price for custody at the Site, supervision for erection, test and commissioning, trial run at the Site and any expenses during warranty period.  ④	Total Amount for each item  (②+③+④)
For Boiler No.1					
For Boiler No.2					
For Boiler No.3					
For Boiler No.4					
Total Amount					

Signature of Bidder \_\_\_\_\_

## Note:

1. The Price Form PS-1 is for the Works which is pursuant to the requirements of the Specification.
2. The Price in Column ③ shall include taxes and duties which may be incurred to the Goods by the third country through which the Goods will be transported.
3. The Price in Column ④ shall include income taxes, corporation taxes, etc. which will not be exempted by the Mongolian Government under the Contract.
4. The Price Forms (PS-1-5 to PS-1-8) are for break down of the Works for each Boiler.

**Price Schedule for Works (Price Form PS-1-5)**  
(For Boiler No. 5)

Name of Bidder \_\_\_\_\_

(Unit : x 1,000 Japanese Yen)

Item	Quantity	Unit FOB Price at the Port of Loading	FOB Price at the Port of Loading (Specify Port)	CIF Price at the Port of Entry (Specify Port) for Item ③	Price for Inland Transportation from Port of Entry to the Site and Unloading at the Site for Item ④	Total Amount for each item ((4)+⑤)
	①	②	① x ②=③	④	⑤	
1 Economizer Straight Tube (Carbon Steel)						
2 Economizer Bent Tube (Carbon Steel)						
3 Economizer Element with header (Carbon Steel)						
4 4 <sup>th</sup> Superheater Tube of lower bent (Alloy Steel)						
5 Stiffeners						
6 4 <sup>th</sup> Superheater Header (Alloy Steel)						
7 4 <sup>th</sup> Superheater Element (Alloy Steel)						
8 Welding Rods						

Bidder's Signature \_\_\_\_\_

(Note) For Tube diameter, length and quantity, refer to Clause 12 of the Specification (Section IV).

**Price Schedule for Works (Price Form PS-1-6)**  
(For Boiler No. 6)

Name of Bidder \_\_\_\_\_

(Unit : x 1,000 Japanese Yen)

Item	Quantity	Unit FOB Price at the Port of Loading	FOB Price at the Port of Loading (Specify Port)	CIF Price at the Port of Entry (Specify Port) for Item ③	Price for Inland Transportation from Port of Entry to the Site and Unloading at the Site for Item ④	Total Amount for each Item (④+⑤)
	①	②	① x ②=③	④	⑤	
1 Economizer Straight Tube (Carbon Steel)						
2 Economizer Bent Tube (Carbon Steel)						
3 Economizer Element with header (Carbon Steel)						
4 4 <sup>th</sup> Superheater Tube of lower bent (Alloy Steel)						
5 Stiffeners						
6 4 <sup>th</sup> Superheater Header (Alloy Steel)						
7 4 <sup>th</sup> Superheater Element (Alloy Steel)						
8 Welding Rods						

Bidder's Signature \_\_\_\_\_

(Note) For Tube diameter, length and quantity, refer to Clause 12 of the Specification (Section IV).

**Price Schedule for Works (Price Form PS-1-7)**

(For Boiler No. 7)

Name of Bidder \_\_\_\_\_

(Unit : x 1,000 Japanese Yen)

	Item	Quantity	Unit FOB Price at the Port of Loading	FOB Price at the Port of Loading (Specify Port)	CIF Price at the Port of Entry (Specify Port) for Item ③	Price for Inland Transportation from Port of Entry to the Site and Unloading at the Site for Item ④	Total Amount for each Item
		①	②	① x ② = ③	④	⑤	(④+⑤)
1	Economizer Straight Tube (Carbon Steel)	/	/	/	/	/	/
2	Economizer Bent Tube (Carbon Steel)	/	/	/	/	/	/
3	Economizer Element with header (Carbon Steel)	/	/	/	/	/	/
4	4 <sup>th</sup> Superheater Tube of lower bent (Alloy Steel)	/	/	/	/	/	/
5	Stiffeners	/	/	/	/	/	/
6	4 <sup>th</sup> Superheater Header (Alloy Steel)	/	/	/	/	/	/
7	4 <sup>th</sup> Superheater Element (Alloy Steel)	/	/	/	/	/	/
8	Welding Rods	/	/	/	/	/	/

Bidder's Signature \_\_\_\_\_

(Note) For Tube diameter, length and quantity, refer to Clause 12 of the Specification (Section IV).

**Price Schedule for Works (Price Form PS-1-8)**  
(For Boiler No. 8)

Name of Bidder \_\_\_\_\_

(Unit : x 1,000 Japanese Yen)

Item	Quantity ①	Unit FOB Price at the Port of Loading ②	FOB Price at the Port of Loading (Specify Port) ① x ②=③	CIF Price at the Port of Entry (Specify Port) for Item ③ ④	Price for Inland Transportation from Port of Entry to the Site and Unloading at the Site for Item ④ ⑤	Total Amount for each Item (④+⑤)
1 Economizer Straight Tube (Carbon Steel)						
2 Economizer Bent Tube (Carbon Steel)						
3 Economizer Element with header (Carbon Steel)						
4 4 <sup>th</sup> Superheater Tube of lower bent (Alloy Steel)						
5 Stiffeners						
6 4 <sup>th</sup> Superheater Header(Alloy Steel)						
7 4 <sup>th</sup> Superheater Element (Alloy Steel)						
8 Welding Rods						

Bidder's Signature \_\_\_\_\_

(Note) For Tube diameter, length and quantity, refer to Clause 12 of the Specification (Section IV).

**Price Schedule for Works (Price Form PS-2)**  
(Bids for Plural Package)

Name of Bidder: \_\_\_\_\_

Pursuant to Clause 21 of Instructions to Bidders, we offer combined Package xxxxx (insert Package Number) and also offer the price reduction of the sum of total said packages as follows;

1. Combined Package : \_\_\_\_\_

2. Total of Price Offered in Price Form (PS-1) :

\_\_\_\_\_ Yen ( \_\_\_\_\_ in words)

4. Discount Price for the Total Price in Item 2 above.

\_\_\_\_\_ Yen ( \_\_\_\_\_ in words)

Sign of Bidder \_\_\_\_\_

## 2. Bid Security Form

WHEREAS \_\_\_\_\_ (hereinafter called "the Bidder") has submitted its bid dated \_\_\_\_\_ for the supply of Package-3 of Rehabilitation Project of the 4<sup>th</sup> Thermal Power Plant in Ulaanbaatar, Mongolia (Phase-2), (hereinafter called "the Bid").

KNOW ALL MEN by these present that WE \_\_\_\_\_ of having our registered office at \_\_\_\_\_ (hereinafter called "the Bank") are bound unto the 4<sup>th</sup> Thermal Power Plant (hereinafter called "the Purchaser") in the sum of US\$ 30,000 (USD thirty thousand) for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successor and assigns, by these presents. Sealed with the Common Seal of the Bank this \_\_\_\_\_ day \_\_\_\_\_ of (state year).

THE CONDITIONS of this obligation are:

1. if the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. if the bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity:
  - (a) Fails or refuses to execute the Contract Form, when requested; or
  - (b) Fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders;

We undertake to pay to the Purchaser up to the above amount, according to, and upon receipt of, its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two above-stated conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to 28 days after the period of bid validity, and any demand in respect thereof should reach the Bank not later than such date.

[NAME OF BANK]

By \_\_\_\_\_  
(Title)  
**Authorized Representative**

\_\_\_\_\_  
(Signature of Witness)

Name of Witness \_\_\_\_\_

Address of Witness \_\_\_\_\_  
\_\_\_\_\_



### 3. Contract Form

THIS CONTRACT made the \_\_\_\_\_ day of \_\_\_\_\_ (state year), between the 4<sup>th</sup> Thermal Power Plant of Mongolia (hereinafter referred to as "the Purchaser") of the one part and [Name of Supplier] of [City and Country of Supplier] (hereinafter "the Supplier") of the other part.

WHEREAS the Purchaser is desirous that certain works be provided by the Supplier, viz., Package-3 of Rehabilitation Project of the 4<sup>th</sup> Thermal Power Plant in Ulaanbaatar, Mongolia (Phase-2), (hereinafter "Works") and has accepted a Bid by the Supplier for the provision of those Works in the sum of [Contract Price in Words and Figures] (hereinafter "the Contract Price").

NOW THIS CONTRACT WITNESSETH AS FOLLOW:

1. The Contract shall consist of this Contract Form; and the following documents, and the exhibits, drawings, specifications and other documents referred to therein (hereinafter the "Contract documents"), all of which by this reference are incorporated herein and made part hereof:
  - (a) Contract Agreement;
  - (b) Minutes of Meeting of contract negotiation;
  - (c) Letter of Acceptance;
  - (d) Bid Form and Price Schedules;
  - (e) Special Conditions of Contract;
  - (f) General Conditions of Contract; and
  - (g) Specifications and Drawings.

This Contract sets forth the entire contract and agreement between the parties pertaining to the supply of the Goods described herein and supersedes any and all earlier verbal or written agreements pertaining to the supply of the Goods.

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.

2. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

3. The Purchaser hereby covenants to pay the Supplier, in consideration of the provision of the Works 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.
4. Any notice under this Contract shall be in the form of letter, telex, cable or facsimile. Notices to either party shall be given at such address or addresses as such party shall specify from time to time by written notice to the other. In the absence of such notice to the contrary, notice to the Purchaser shall be properly addressed to:

Ts. Altangadas (Project Manager)

Project Implementing Unit  
The 4<sup>th</sup> Thermal Power Plant  
P.O Box-37  
Ulaanbaatar, Mongolia

Phone : 976-11-633332  
Fax : 976-11-633081  
E-mail : [piu4pp@mongol.net](mailto:piu4pp@mongol.net)

and notice to the Supplier shall be properly addressed to:

[Supplier's address and electronic transmission address]

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

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed in accordance with their respective laws the day and year first above written.

\_\_\_\_\_  
Signature of Purchaser

\_\_\_\_\_  
Signature of Supplier

Signed, Sealed and Delivered by the said \_\_\_\_\_

(For the Purchaser) in the presence of \_\_\_\_\_

Signed, Sealed and Delivered by the said \_\_\_\_\_

(For the Supplier) in the presence of \_\_\_\_\_

**4. Performance Security Form (Bank Guarantee)**

THIS AGREEMENT is made on the \_\_\_\_ day of \_\_\_\_\_ 19\_\_ between \_\_\_\_\_ [name of bank] \_\_\_\_\_ of [address of bank](hereinafter called "the Guarantor") of the one part and the 4<sup>th</sup> Thermal Power Plant (herein after called "the Purchaser" of

Ts. Altangadas (Project Manager)

Project Implementing Unit  
The 4<sup>th</sup> Thermal Power Plant  
P.O Box-37  
Ulaanbaatar, Mongolia

of the other part.

**WHEREAS**

(1) this agreement is supplemental to a contract (hereinafter called "the Contract") made between \_\_\_\_\_ [name of Supplier] of \_\_\_\_\_ [address of Supplier](hereinafter called "the Supplier") of the one part and the Purchaser of the other part whereby the Supplier agreed and undertook to execute the Works \_\_\_\_\_ of [name of Supplier and brief description of the Works] for the sum of \_\_\_\_\_ [amount in Contract currency] being the Contract Price; and

(2) the Guarantor has agreed to guarantee the due performance of the Contract in the manner hereinafter appearing.

NOW, THEREFORE, the Guarantor hereby agrees with the Purchaser as follows:

(a) If the Supplier (unless relieved from the performance by the clause of the Contract or by statute or by the decision of a tribunal of competent jurisdiction) shall in any respect fail to execute the Supplier or commit any breach of his obligations thereunder then the Guarantor will indemnify and pay the Purchaser the aggregated sum of \_\_\_\_\_, such sum being payable in the types and amounts of currencies in which the Contract Price is payable, provided that the Purchaser or his authorized representative has notified the Guarantor to that effect and has made a claim against the Guarantor before the issue of the Defects Liability Certificate.

(b) The Guarantor shall not be discharged or released from his guarantee by an arrangement between the Supplier and the Purchaser, with or without the consent of the Guarantor, or by any alteration in the obligations undertaken by the Supplier, or by any forbearance on the part of the Supplier, whether as to payment, time, performance, or other wise, and any notice to the Guarantor of any such arrangement, alteration, or forbearance is hereby expressly waived.

This Guarantee shall be valid until *until expiration of the Warranty Period.*

Given under our hand on the date first mentioned above.

SIGNED BY \_\_\_\_\_  
for and on behalf of the  
Guarantor in the presence of

SIGNED BY \_\_\_\_\_  
for and on behalf of the  
Purchaser in the presence of

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Witness)

**5. Advance Payment Security Form**

To: Ts. Altangadas (Project Manager)

Project Implementing Unit  
The 4<sup>th</sup> Therma Power Plant  
P.O Box-37  
Ulaanbaatar, Mongolia

Package-3 of Rehabilitation Project of the 4<sup>th</sup> Thermal Power Plant in Ulaanbaatar, Mongolia  
(Phase-2)

Gentlemen and/or Ladies:

In accordance with the payment provision included in the Special Conditions of Contract, which supplements Clause 14 of the General Conditions of Contract to provide for advance payment, *[name and address of Supplier]* (hereinafter called "the Supplier") shall deposit with the Purchaser a bank guarantee to guarantee its proper and faithful performance under the said Clause of the Contract in an amount of *[amount of guarantee in figures and words]*.

We, the *[bank or financial institution]*, as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligator 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 *[amount of guarantee in figures and words]*.

We further agree that no change or addition to or other modification of the terms of the Contract to be performed thereunder or of any of the Contract documents which may be made between the Purchaser and the Supplier, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition, or modification. This guarantee shall remain valid and in full effect from the date of the advance payment received by the Supplier under the Contract until the Goods are delivered in accordance with the terms and conditions of the Contract.

Yours truly,

Signature and seal of the Guarantors:

\_\_\_\_\_  
*[name of bank or financial institution]*

\_\_\_\_\_  
*[address]*

\_\_\_\_\_  
*[date]*

## 6. GENERAL INFORMATION

All individual firms and each partner of a joint venture applying for qualification are requested to complete the information in this form. Nationality information should be provided for all owners or applicants who are partnerships or individually-owned firms.

Where the Applicant proposes to use named manufacturers for critical components of the works, the following information should also be supplied for the specialist manufacturer(s), together with a brief description of their specialized input.

1.	Name of firm	
2.	Head office address	
3.	Telephone	Contact
4.	Fax	Telex
5.	Place of incorporation / registration	Year of incorporation / registration

<i>Nationality of owners</i>		
<i>Name</i>	<i>Nationality</i>	
1.		
2.		
3.		
4.		
5.		

## 7. GENERAL EXPERIENCE RECORD

Name of Applicant or partner of a joint venture

All individual firms and all partners of a joint venture are requested to complete the information in this form. The information supplied should be the annual turnover of the Applicant (or each member of a joint venture), in terms of the amounts billed to clients for each year for work in progress or completed, converted to U.S. dollars at the rate of exchange at the end of the period reported.

Use a separate sheet for each partner of a joint venture.

*Applicants should not be required to enclose testimonials, certificates and publicity material with their applications; they will not be taken into account in the evaluation of qualifications.*

Annual turnover data		
Year	Turnover	US\$ equivalent
1.		
2.		
3.		
4.		
5.		

**7-a. JOINT VENTURE SUMMARY**

<i>Names of all partners of a joint venture</i>	
1. Lead partner	
2. Partner	
3. Partner	
4. Partner	
5. Partner	
6. Partner	

*Total value of annual turnover, in terms of sales billed to clients, in US\$ equivalent, converted at the rate of exchange at the end of the period reported:*

<i>Annual turnover data (US\$ equivalent)</i>						
<i>Partner</i>	<i>Form 2 page no.</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>1. Lead partner</i>						
<i>2. Partner</i>						
<i>3. Partner</i>						
<i>4. Partner</i>						
<i>5. Partner</i>						
<i>6. Partner</i>						
<i>Totals</i>						



## 7-b. JOINT VENTURE AGREEMENT

To: Ts. Altangadas (Project Manager)  
Project Implementing Unit

The 4<sup>th</sup> Thermal Power Plant  
P.O.Box 37  
Ulaanbaatar, Mongolia

The undersigned of this declaration of cooperation are by means of attached Powers of Attorney legally authorized to act with regard to Package-3 of Rehabilitation Project of the 4<sup>th</sup> Thermal Power Plant in Ulaanbaatar, Mongolia (Phase-2) and on behalf of their organizations.

They hereby declare:

1. that they will legalize a Joint Venture Agreement in case that a Contract for Package-3 of Rehabilitation Project of the 4<sup>th</sup> Thermal Power Plant in Ulaanbaatar, Mongolia (Phase-2) is awarded to their group;
2. that they have nominated \_\_\_\_\_ [*name of the lead partner*] as the Sponsor Firm of the group for the purpose of this Bid;
3. that they authorized Mr./Ms. \_\_\_\_\_ [*name of the person who is authorized to act as the Representative on behalf of the Joint Venture*] to act as the Bidder's Representative in the name and on behalf of their group.
4. that all partners of the Joint Venture shall be liable jointly and severally for the execution of the Contract;
5. that this Joint Venture is an association constituted for the purpose of the execution of Package-3 of Rehabilitation Project of the 4<sup>th</sup> Thermal Power Plant in Ulaanbaatar, Mongolia (Phase 2) under this Contract;
6. that if the Purchaser accepts the Bid of this Joint Venture, it shall not be modified in its composition or constitution until the completion of Contract without the prior consent of the Purchaser;
7. that each partner's share of the Work, stated as percentage of the total contract amount, shall be as follows:

Name of Partner	Share of the Work (as percentage of the contract amount)
1. Lead Partner	
2. Partner	
3. Partner	
4. Partner	
Total	100

Give names and positions of the proposed Joint Venture Representatives, as well as organization's names and addresses:

1.	Name:	Signature
	Position:	Date
	Representative of: (Organization's Name)	

2.	Name:	Signature
	Position:	Date
	Representative of: (Organization's Name)	

3.	Name:	Signature
	Position:	Date
	Representative of: (Organization's Name)	

4.	Name:	Signature
	Position:	Date
	Representative of: (Organization's Name)	

5.	Name:	Signature
	Position:	Date
	Representative of: (Organization's Name)	

## 8. PARTICULAR EXPERIENCE RECORD

Name of Applicant or partner of a joint venture

To qualify, the Applicant shall be required to pass the specified requirements applicable to this form, as set out in the "Prequalification Instructions to Applicants".

On a separate page, using the format of Form (8a), the Applicant is requested to list all contracts of a value relating to supply of boiler tubes for coal fired Power Plants in overseas for which the Applicant wishes to qualify and undertaken during the last five years. The partners of a joint venture should provide details of similar contracts proportionate to their share in the joint venture. The value should be based on the currencies of the contracts converted into U.S. dollars, at the date of substantial completion, or for current contracts at the time of award. The information is to be summarized, using Form (8a), for each contract completed or under execution, by the Applicant or by each partner of a joint venture.

Where the Applicant proposes to use named subcontractors for critical components of the works, the information in the following forms should also be supplied for each specialist subcontractor.

### 8-a. DETAILS OF CONTRACTS OF SIMILAR NATURE AND COMPLEXITY

Name of Applicant or partner of a joint venture

Use a separate sheet for each contract.

1.	Number of contract	
	Name of contract	
	Country	
2.	Name of Purchaser	
3.	Purchaser address	
4.	Nature of works and special features relevant to the contract for which the Applicant wishes to prequalify.	
5.	Contract role (check one) <input type="checkbox"/> Sole contractor <input type="checkbox"/> Management Contractor <input type="checkbox"/> Subcontractor <input type="checkbox"/> Partner in a joint venture	
6.	Value in specified currencies at completion, or at date of award for current contracts,	
	<ul style="list-style-type: none"> <li>• Total Contract Amount: _____ (name of currency)</li> <li>• Sub-Contract Amount (if the role was sub contractor): _____ (name of currency)</li> <li>• Responsible Contract Amount (if the role was partner in a joint venture):            _____ (name of currency) _____ (percentage of share)%</li> </ul>	
7.	Equivalent value US\$	
8.	Date of award	
9.	Date of completion	
10.	Contract/subcontract duration (years and months) _____ years _____ months	
11.	Specified requirements	

**9. SUMMARY SHEET: CURRENT CONTRACT COMMITMENTS /  
WORKS IN PROGRESS**

Name of Applicant or partner of a joint venture

*Applicants and each partner to an application should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.*

<i>Name of contract</i>	<i>Value of outstanding work (current US\$ equivalent)</i>	<i>Estimated completion date</i>
1.		
2.		
3.		
4.		
5.		
6.		

## 10. PERSONNEL CAPABILITIES

Name of Applicant
-------------------

For specific positions essential to contract implementation, applicants should provide the names of at least two candidates qualified to meet the specified requirements stated for each position. The data on their experience should be supplied in separate sheets using one Form (5a) for each candidate.

1.	Title of position <b>PROJECT MANAGER</b> Name of prime candidate  Name of alternate candidate
2.	Title of position <b>SITE MANAGER</b> Name of prime candidate  Name of alternate candidate
3.	Title of position <b>ENGINEER (A)</b> Name of prime candidate  Name of alternate candidate
4.	Title of position <b>ENGINEER (B)</b> Name of prime candidate  Name of alternate candidate

(Note) If necessary, add column to fill up another candidates.

**10-a. CANDIDATE SUMMARY**

Name of Applicant
-------------------

Position	Candidate	
	Prime	Alternate
<i>Candidate information</i>	1. Name of candidate	2. Date of birth
	3. Professional qualifications	
<i>Present employment</i>	4. Name of employer Address of employer	
	Telephone	Contact (manager / personnel officer)
	Fax	Telex
	Job title of candidate	Years with present employer

*Summarize professional experience over the last 20 years in reverse chronological order. Indicate particular technical and managerial experience relevant to the Project.*

From	To	Company / Project / Position / Relevant technical and management experience

**11. FINANCIAL CAPABILITY**

Name of Applicant or partner of a joint venture
---

*Applicants, including each partner of a joint venture, should provide financial information to demonstrate that they meet the requirements stated in the Instructions to Applicants. Each applicant or partner of a joint venture must fill in this form. If necessary, use separate sheets to provide complete banker information. A copy of the audited balance sheets and statement of profit and losses should be attached.*

<i>Banker</i>	Name of banker		
	Address of banker		
	Telephone	Contact name and title	
	Fax	Telex	

*Summarize actual assets and liabilities in U.S. dollar equivalent (at the rates of exchange current at the end of each year) for the previous five years. Based upon known commitments, summarize projected assets and liabilities in U.S. dollar equivalent for the next two years, unless the withholding of such information is justified by the Applicant to the satisfaction of the Purchaser.*

<i>Financial information in US\$ equivalent</i>	<i>Actual: previous five years</i>					<i>Projected: next two years</i>	
	1.	2.	3.	4.	5.	6.	7.
<i>1. Total assets</i>							
<i>2. Current assets</i>							
<i>3. Total liabilities</i>							
<i>4. Current liabilities</i>							
<i>5. Sales</i>							
<i>6. Ordinary Profits</i>							
<i>7. Profits before taxes</i>							
<i>8. Profits after taxes</i>							



**Specify proposed sources of financing to meet the cash flow demands of the Project, net of current commitments for other contracts (Instructions to Applicants' Clause 4.5).**

<i>Source of financing</i>	<i>Amount (US\$ equivalent)</i>
1.	
2.	
3.	
4.	

Attach audited financial statements for the last five years (for the individual applicant or each partner of a joint venture).

Firms owned by individuals, and partnerships, may submit their balance sheets certified by a registered accountant, and supported by copies of tax returns, if audits are not required by the laws of their countries of origin.

Applicants should be requested to submit a bank reference letter from a reputable commercial bank to the effect that such bank certifies the financial capability of the applicants to meet their financial obligation to perform the said contract and considers to issue a specific line of credit when and if the contract is awarded to the applicants.

**12. LITIGATION HISTORY**

Name of Applicant or partner of a joint venture

*Applicants, including each of the partners of a joint venture, should provide information on any history of litigation or arbitration resulting from contracts executed in the last five (5) years or currently under execution (Instructions to Applicants, Clause 4.7). A separate sheet should be used for each partner of a joint venture.*

<b>Year</b>	<b>Award FOR or AGAINST Applicant</b>	<b>Name of client, cause of litigation, and matter in dispute</b>	<b>Disputed amount (current value, US\$ equivalent)</b>