

CEYLON ELECTRICITY BOARD

(Established by Act of Parliament No. 17 of 1969)

BIDDING DOCUMENT FOR SUPPLY AND DELIVERY OF SENSORS FOR THE VIBRATION MONITORING SYSTEMS FOR SAMANALAWEWA POWER STATION

Bid No: SC/DGM/BID/SWPS/2022/07

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CEYLON ELECTRICITY BOARD Bid Data Sheet

BIDS ARE INVITED FOR:

The Supply & Delivery of the items stated in the Schedule of Prices (Appendix VI-A), manufactured in accordance with the technical specification given in Appendix V of the Bidding Document.

BID NUMBER & THE NAME: : SC/DGM/BID/SWPS/2022/07

Supply and Delivery of Sensors for the Vibration Monitoring System for Samanalawewa Power Station, Ceylon Electricity Board, Sri Lanka.

BID SECURITY:

Value of the Bid Security is **Sri Lanka Rupees Fifty Thousand** only (**LKR 50,000.00**). The Bid security shall be valid for **Two Hundred and Ten (210)** days from the date of the Bid closing.

BID VALIDITY

All bids shall be held good for acceptance for a minimum period of **One Hundred and Eighty (180)** days from the date of the closing the bidding

TIME & DATE OF THE CLOSING OF BIDDING:

at 14.00 hrs on 17 November 2022

BIDS SHALL BE ADDRESSED TO:

The Chairman.

Samanala Complex Procurement Committee

Office of the Deputy General Manager (Samanala Complex)

Ceylon Electricity Board

158/5

New Town

Ratnapura

Sri Lanka.

OPENING OF BIDS:

Bids received will be opened immediately after the time of closing of bidding, at the Office of DGM (Samanala Complex), Ceylon Electricity Board, 158/5, New Town, Rathnapura, Sri Lanka.

PLACE OF ACCEPTANCE OF BIDS:

Office of DGM (Samanala Complex), Ceylon Electricity Board, 158/5, New Town, Rathnapura, Sri Lanka.

SAMPLES

None

DEPUTY GENERAL MANAGER – IN - CHARGE OF THE PROCUREMENT UNIT

Deputy General Manager (Samanala Complex), Tel 94-45 222 5003, Fax- 94-45 222 25005

PLACE/S OF DELIVERY OF GOODS

Bandaranayake International Airport, Colombo.

DELIVERY SCHEDULE:

Total quantity of the items shall be shipped within 12 weeks from the date of Letter of Credit.

VAT REGISTRATION NUMBER OF THE CEYLON ELECTRICITY BOARD

409000010-7000

CEYLON ELECTRICITY BOARD General Conditions of Contract (ICB)

1. SCOPE:

This document covers the general conditions applicable for procurement of goods, using Ceylon Electricity Board Funds through International Competitive Bidding (ICB).

2. LANGUAGE OF THE BID & ELEGIBLE BIDDERS:

The language of the Bid and all documents related to the bid shall be in English language. All Foreign & Local prospective suppliers/manufacturers are eligible to bid.

3. SUBMISSION OF BIDS:

The bids may be submitted for all or selected number of items specified in the Schedules of Prices (Appendix VI-A/VI-B) of this document. However bids submitted shall be for the full quantities of each item selected. Bids submitted for partial quantities will be rejected.

Bids shall be submitted in duplicate using the Schedules of Prices (Appendix VI-A/VI-B) attached to this document. The Original and Duplicate copy of the Bid shall be placed in two separate envelopes marked "Original" and "Duplicate". Both envelopes shall be enclosed in one securely sealed envelope. Name and number of the Bid shall be marked on the top left hand corner of the envelope as indicated in the Data Sheet (page 1) of this document. The Name and Address of the Bidder shall also be clearly marked on the envelope. The Bids shall be addressed as stated in the Data Sheet (Page 1)

Bids sealed, marked and addressed as aforesaid could be deposited in the Box provided for this purpose at the Place of Acceptance of Bids, stated in the Data Sheet (Page 1)

The Bidders shall bear all costs associated with the preparation and submission of the Bid and Ceylon Electricity Board will in no way be responsible or liable for any of those costs.

4. CLOSING OF ACCEPTANCE OF BIDS & OPENING OF BIDS:

The bids shall be accepted only till the Closing Time of the bidding specified in the Data Sheet (page 1 of the bidding document). Any Bid received after the Bid closing time will be rejected and returned unopened to the Bidder or to the duly authorized Agent.

Bids will be opened immediately after the closing time of bidding, at the Place of Opening of Bids stated in the Data Sheet (Page 1). Bidders or their duly authorised representative/s may be present at the time of opening of Bids.

The Chairman of Bid Opening Committee (BOC) will open the Bids and read out or cause to be read out the Prices offered, Name and Address of each Bidder, whether Samples (if applicable) and a Bid Security are submitted, the amount of Bid Security and the amount of discount declared if any, as indicated in the original Schedule of Prices (Appendix VI-A/VI-B). Detailed Prices, Technical Data, Specifications or other particulars of the Bid will not be divulged.

5. LOCAL AGENTS:

Foreign Principals, who have a Local Agent in respect of the Bid, shall furnish a Letter of Authorisation along with the offer. If they do not have a Local Agent shall specifically declare that they are not represented by any Local Agent and no **Local Agent's Commission is payable** in respect of the Bid. Nomination of Agent/s after the submission of the Bid will not be valid. The Agent nominated at the time of Bidding shall not be changed within the period of contract.

Bids received from Local Agents representing Principals abroad **shall not be considered** for evaluation of the Bid unless they hold a duly executed Power of Attorney from the Principal empowering the Agent to make an offer, enter into a valid agreement on behalf of the Principal, to fulfil all the terms and conditions of the contract. Under any circumstances a letter of authorisation from the principals **will not be accepted** instead of a duly executed Power of Attorney when the Local Agent makes an offer.

6.BID SECURITY:

Each Bid shall be accompanied with a Bid Security to the value as indicated in the Data Sheet (Page 1), undertaking that the Bid will be held valid for the period specified in Clause (8) of this document and that the Bid shall not be withdrawn during that period. Bid Security shall be in the form of a Bank Draft or a Bank Guarantee issued by a commercial Bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka or a Bank based out side Sri Lanka but "confirmed" by a commercial Bank operating in Sri Lanka and payable to the Ceylon Electricity Board. The Bid Security shall be substantially in accordance with the specimen at Appendix III. Failure to submit the Bid Security at the time or before the closing of the bidding and in accordance with above requirements will result in the Bid being rejected. Bid Securities from unsuccessful Bidders will be returned after the award is made to the successful Bidder. The Bid Securities of the successful Bidders will be returned only after the receipt of their Performance Securities as stipulated in the clause (12) of this document.

The Bid Security shall be unconditionally encashable on the receipt of first written demand of the Ceylon Electricity Board. No alternate offers will be accepted under one Bid Security.

7.SCHEDULE OF PRICES:

The bids shall be submitted using the Schedule of Prices furnished in Appendix VI-A /VI-B. The Schedule of Prices must be completed without any alterations to its format and no substitute shall be accepted. All blank spaces shall be filled with the information required. If any space is not applicable it shall be stated so.

Bids not in the prescribed form will be rejected.

The prices quoted shall be written clearly in indelible ink or type written. The total amount of each item of the offer shall be given in words (in English) as well as in figures. The amounts written in words will be taken as correct in case of a discrepancy in the amounts written in words and in figures. The Bidder shall authenticate any alterations in the bids.

Failure to do so will result in the offer being rejected.

Only the Prices indicated in the Schedule of Prices (VI-A /VI-B) shall be taken for evaluation.

7.1 Foreign Bidders

- (a) Foreign Bidders shall fill in and sign the prescribed form of the **Schedule of Prices (Foreign)** given in **Appendix (VI-A)** as per the instruction given below in (b) & (c)
- (b) Customs Duty, Value Added Tax (VAT), & Other applicable Levies such as Stamp Duty, Cess, Excise Duty, Surcharge on Customs Duty payable to the Sri Lanka Customs will be paid by the Ceylon Electricity Board at the prevailing rates at the time of clearing of goods and the same shall **not be included** in the column provided for "Total cost of clearing Handling & Delivery charges"
- (c) The Bidders are allowed to quote in Sri Lankan currency or/and maximum of three (03) foreign currencies that are freely convertible in Sri Lanka. The total cost of clearing, handling and delivery charges requested in the schedule of prices shall be quoted only in Sri Lankan Currency.

7.2 Local Bidders

- (a) Local bidder of the following categories shall fill and sign the prescribed form of the schedule of prices (local) given in the appendix (VI-B) and as per the instructions given below in (b)
- (i) Local Bidders of Locally manufactured Goods (only if bidder is the manufacturer)
- (ii) Local Bidders of Locally manufactured Goods (if the bidder is not the manufacturer)
- (iii) Local Bidders of Imported Goods
- (b) The prices quoted shall be either in local currency or in foreign currencies subject to a **maximum of three (03)**Foreign Currencies that are freely convertible in Sri Lanka and the Payments will be made in Sri Lankan Currency or/and foreign currency as per the clause 15.2 .The total cost of delivery requested in the Schedule of Prices shall be quoted only in Sri Lankan currency.

8. MINIMUM VALIDITY PERIOD OF BIDS:

All bids shall be held good for acceptance for a minimum period of Hundred and Twenty days (120 days) from the date of the closing the Bidding specified in the Data Sheet (page 1). Prices indicated in the Schedule of Prices shall be firm and shall not be subject to any variation within the validity period of the Bid specified above.

9. DOCUMENTS AND DETAILS TO ACCOMPANY THE BID:

9.1 Mandatory Documents

The following documents shall be submitted with the Bid. Failure to furnish the following documents and details along with the offer will result in the offer being rejected.

- (a) Duly signed "Certificate of Purchase of Bidding Document" (Appendix I) of this document
- (b) Duly signed "Form of Bid" (Appendix II) of this document.
- (c) Bid Security vide Clause (6) substantially in accordance with the given format (Appendix III)
- (d) Duly completed and signed "Schedule of Prices" (Appendix VI-A / Appendix VI-B) of the bidding document.
- (e) Duly completed and signed "Schedule of Guaranteed Technical Particulars" attached to the CEB Specification (Appendix V).
- (f) Certified copies of relevant Test Certificates, Mill certificates etc. including Type Tests in English language as per the CEB Specification.
- (g) Name and Address of Manufacturer and Certificate of Country of Origin.
- (h) If the Bidder is not the Manufacturer, the Bidder shall furnish documentary evidence of arrangements with the Manufacturer for the supply of goods offered.
- (i) Power of Attorney vide Clause 5 (If applicable)
- (j) Documents of proof of ability referred to in Clause (23)
- (k) A letter from the Commissioner of Inland Revenue Department, vide Clause 35 certifying that his/her company has not been registered for VAT (if applicable)
- (I) Any other document stated in the CEB specification given in Appendix (V), as required to be submitted
- (m) Certification by the Bidder that the goods shall be delivered according to the Delivery Schedule stated in the Data Sheet.
- (n) Certification of registration under Public Contracts Act No 3 of 1987 .(if applicable)

9.2 Other Documents

The following documents will also be submitted with the Bid.

- (a) Manufacturer's Guarantees, Illustrations, Catalogues and full particulars of the items offered in English language.
- (b) Details of variations and/or deviations from the Technical Specifications if any. If there are no variations / deviations a Certificate of compliance should be furnished with the offer.
- (c) Signed Pro forma Invoices indicating the full description of items offered and prices.
- (d) Freight Certificate obtained from a shipping line or their agents and a certificate indicating approximate weight, measurement of the consignment and the number of Containers etc. as described in Clause 18 (Applicable only for Foreign Bidders)
- (e) Lists of Directors vide Clause (33).
- (f) Documentary evidence to show any preferential Customs Duty applicable in Sri Lanka under the International Trade Agreements. Failure to furnish necessary documents will result in the applicable preferential Customs Duty not being considered for the evaluation.

10 POWER TO ACCEPT OR REJECT BIDS AND INTIMATION OF ACCEPTANCE:

CEB reserves the right to reject any or all bids, without adducing any reasons. CEB may accept any or all items of the bids and reserves the right to increase or decrease the quantity of goods, provided this does not exceed 25% of the total quantity, at prices indicated in the Schedule of Prices.

The decision of the Procurement Committee on the award of the contract to the **Lowest Evaluated Substantially Responsive Bid** will be final.

The notice of acceptance of Bid will be sent by registered post to the successful Bidder as soon as possible, after the decision of the Procurement Committee is made. Intimation of the acceptance of bid may alternatively be made by Facsimile if circumstances so require, and **such intimation should be considered as sufficient notice for acceptance.**

11 METHOD OF EVALUATION OF BIDS:

Ceylon Electricity Board may seek in writing clarifications or additional information on any bid. In the absence of any response from the Bidder within the specified period, Ceylon Electricity Board reserves the right to make its own decision.

All responses to requests for clarifications or additional information shall be in writing and no change in the bid price shall be sought, offered or permitted.

The offers received shall be evaluated item wise and for the purpose of the determination of lowest evaluated substantially responsive bid out of the bids received, the bid evaluation process would be carried out in two stages: i.e. (i) Bid Examination, (ii) Bid Evaluation.

(i) Bid Examination

- (a) All bids opened by the Bid Opening Committee will be examined to determine the eligibility of bidders responded and to determine the substantial responsiveness of the bids received commercially.
- (b) During the bid examination process in respect of commercial aspect, the bids will be checked to see whether they are complete, any computational errors have been made, required Bid Securities have been furnished, all the documents have been properly signed, the bids are generally in compliance with the requirements stipulated in the Bidding document and bids are generally in order. All deviations observed during the bid examination would be noted. Bids with deviations such as incomplete bids, non compliance with the specified delivery schedule, inclusion of price escalation when fixed priced bids are called, proposal of subcontracting when subcontracting is not allowed, absence of bid security, lack of proper signature on the form of bid, lack of critically important supporting documents, shall be rejected and shall not be taken for further evaluation as those bids are considered to be substantially non responsive.

(ii) Bid Evaluation

(a) General Principle

All the bids determined as substantially commercially responsive during the bid examination stage shall be evaluated for technical compliance and ranked in the lowest cost basis. The lowest ranking bid shall then be selected as the lowest evaluated substantially responsive bid.

(b) Correction of Errors

During detailed bid evaluation, if there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate will govern. However, if the total bid price increases due to this correction, the unit rate will be adjusted within the total bid price. If the bidder does not agree for such adjustment, his bid will be rejected without affecting his bid security.

(c) Currency Conversion

All prices quoted in foreign currencies by foreign suppliers as well as local suppliers will be converted to Sri Lanka Rupees at the Official Indicative Exchange Selling Rate obtained from the Central Bank of Sri Lanka, prevailing on the day of opening of Bids.

11.1 EVALUATION CRITERIA

(A) When there are foreign Bidders only

The total evaluated Cost of each item shall be the sum of following components.

- Offered FOB Cost
- Offered Freight Cost
- Offered Clearing Handling & Delivery Charges from Port of Colombo to CEB Stores(excluding VAT)
- Local Agent's Commission. (excluding VAT)
- (B) When there are foreign Bidders and Local Bidders of Locally manufactured goods that are not eligible for domestic preference and Local Bidders of Imported Goods the following costs shall be taken for evaluation
 - (i) For Foreign Bidders,
 - Offered FOB Cost
 - Offered Freight Cost
 - 1.5% of the FOB Cost. (hypothetical value for cost of Insurance)
 - Offered Clearing Handling & Delivery Charges from Port of Colombo to CEB Stores (excluding VAT)
 - Local Agent's Commission (excluding VAT)
 - Duty and other charges payable at Sri Lanka Customs (excluding VAT) this component will be calculated based on the current Duty
 - (ii) For the Local Bidders of Locally manufactured goods that are not eligible for domestic preference stated in column 11.2
 - Total Ex-Works Cost (excluding VAT)
 - Cost of delivery to the CEB Stores(excluding VAT)
 - (iii) For , Local Bidders of imported goods
 - Total ex- Show Room price (excluding VAT)
 - Cost of delivery to the CEB Stores (excluding VAT)
- (C) When there are foreign Bidders, Local Bidders of Locally manufactured goods that are eligible for Domestic preference stated in Clause 11.2, Local Bidders of Locally manufactured goods that are not eligible for Domestic preference stated in Clause 11.2 and Local Bidders of imported goods,
 - (i) For foreign Bidders
- Offered FOB Cost
- Offered Freight Cost
- Offered Clearing & Delivery Charges from Port of Colombo to CEB Stores (excluding VAT)
- Local Agent's Commission (excluding VAT)
- 1.5 % of the FOB Cost. (hypothetical value for cost of Insurance)
- Duty and other charges payable at Sri Lanka Customs (excluding VAT) this
 component will be calculated based on the current Duty
- 20 % of the CIF Cost.

(ii) For , Local Bidders of Locally manufactured goods that are eligible for domestic preference

- Total Ex-Works Cost (excluding VAT)
- Cost of delivery to the CEB Stores(excluding VAT)

(iii) For , Local Bidders of Locally manufactured goods that are not eligible for domestic preference

- Total ex- Works Cost (excluding VAT)
- Cost of delivery to the CEB Stores(excluding VAT)
- 20% of Lowest CIF Cost offered by a Foreign Bidder.

(iv) For , Local Bidders of imported goods

- Total ex- Show Room price (excluding VAT)
- Cost of delivery to the CEB Stores(excluding VAT)
- 20% of Lowest CIF Cost offered by a Foreign Bidder.

11.2 DOMESTIC PREFERNCE

When Locally manufactured Goods are offered in competition with Imported Goods, a 20% preference will be granted for Local Bids subject to following.

Application of the margin of preference stated above would apply only to locally manufactured goods, if the bidder establishes to the satisfaction of the Procurement Committee that,

The input of local labour, local raw material and local components in any locally manufactured article accounting for at least 30% of the ex-factory price.

The Production facility in which those goods would be manufactured or assembled has been engaged in manufacturing/assembling such goods at least since the time of Bid Submission.

In addition to the above, the Bidder should satisfy one of the followings,

- (i) For an Sole Proprietorship, the bidder shall be a Sri Lankan
- (ii) For Partnership, 50% of the members of the Partnership shall be Sri Lankan.
- (iii) For an Individual Firm, shall be registered in Sri Lanka and should have more than 50% ownership by Sri Lankan.
- For a Joint Venture, each firm shall be registered in Sri Lanka and should have more than 50% ownership by Sri Lankan.

It is the responsibility of the Bidder to provide acceptable evidence along with his bid in addition to completion of Appendix VII that shall be certified by independent auditors registered with the Institution of Chartered Accountants, Sri Lanka, to the satisfaction of the Procurement Committee. Bidders who fail to comply with this condition will not be considered for domestic preference.

To grant the domestic preference in the evaluation of Bidders, the following method shall be adopted

In the first instance all the Bidders shall be divided into two groups, ie. Preference entitled group and preference not entitled group.

At the next step, in the case of foreign bidders an amount equal to 20% of CIF price of each bid shall be added to the respective evaluated bid price of preference not entitled group, hypothetically for comparison purpose. In the case of locally manufactured articles, which are not entitled for domestic preference, 20% of the lowest CIF cost of Foreign bids shall be added. and bidders shall be re—ranked on the above basis.

Successful bidder shall be decided according to the re-ranking order. However, the award price shall not be the evaluated bid price computed for determination of domestic preference.

12. PERFORMANCE SECURITY, PRO FORMA INVOICE & CONTRACT OF SUPPLY:

Within (14) days of receipt of the Letter of Award the Successful Bidder (Henceforth known as the Supplier) shall furnish a Performance Security, Pro forma Invoice and duly completed and signed Contract of Supply.

If any of the documents mentioned above is submitted after 14 days as stated above the date of completion of the order will be brought forward by the number of days delayed in submitting it and If they are not submitted within 30 days Ceylon Electricity Board has the right to forfeit the Bid Security of the Bidder and cancel the award.

12.1 Performance Security

The Supplier shall furnish a Performance Security approximately equal to **Ten Percent (10%)** of the total contract sum. The Performance Security shall be in the form of a Bank Draft or a Bank Guarantee, substantially in accordance with the specimen at **Appendix IV** and issued by a commercial Bank operating in Sri Lanka, approved by the Central Bank of Sri Lanka or a Bank based out side Sri Lanka but "confirmed" by a commercial Bank operating in Sri Lanka. The Performance Security shall be in favour of the General Manager, Ceylon Electricity Board, Colombo, and shall be valid for a period not less than Sixty **(60) days** from the date of the anticipated final delivery.

In the event of default on the part of the Supplier resulting from breach of conditions hereto, the General Manager, or any person purporting to act under the authority of General Manager may by a written notice terminate the right of the Supplier to proceed with any or all remaining deliveries and forfeit the Performance Security without recourse to legal action

The Performance Security will be released after 60 days of satisfactory completion of final delivery

12.2 Pro forma Invoice

The Supplier shall furnish a Pro forma invoice indicating separately the FOB / Ex Works/Ex Show Room Price , freight Cost, HS Code, catalogue or Model No of each item, and packing details, Delivery Cost whichever are applicable.

12.3 Contract of Supply

After the Letter of Award is received the Supplier shall enter into an agreement with CEB to execute the order under the terms and conditions stated in the Letter of Award. Specimen Contract Form that shall be provided for the purpose is given in Appendix VIII.

13 CLEARING AND TRANSPORT OF GOODS:

13.1 For Foreign Suppliers

- (a) The Supplier shall be responsible for the expeditious clearing of goods from the Port and handing over the same to the CEB Stores or to any other destination specified in the Bid Data Sheet. If the Supplier is not agreeable for clearing of goods from the Port, delivery and unloading at the delivery point indicated in the Bid Data Sheet the offer will be rejected. In the event of the goods are required to be diverted to destinations other than the specified delivery point, the Supplier shall undertake such deliveries and payment will be made at prevailing transport rates.
- (b) The Supplier shall, within Forty Eight (48) hours of shipment, despatch or send through a Courier Service / Facsimile duplicate sets of shipping documents to the DGM –in-Charge of the Procurement Unit. If the original shipping documents are not available at the time of receipt of goods at the port, goods shall be cleared on a Shipping Guarantee, at a written request made by the supplier guaranteeing that in the event the items supplied are found to be non-compliance with the CEB specification, he will take full responsibility of replacing the items with items which conform to the CEB specification. The cost of the Shipping Guarantee (SG) including applicable interest shall be borne by the Supplier.
- (c) The Ceylon Electricity Board will furnish a Cheque in favour of the Director General of Customs to cover Customs Duty, Value Added Tax (VAT), other applicable Taxes & Levies payable to Sri Lanka Customs such as Stamp Duty, Cess, Excise Duty, surcharge on Customs Duty within Twenty Four (24) hours of presentation of necessary documents to the DGM-in-Charge of the Procurement Unit. The Supplier, through his Agent or Representative shall be responsible for the payment of all other charges to the Sri Lanka Port Authority, Container deposits and charges to Shipping Agents in connection with the clearance of goods and also the cost of transport to the places of delivery indicated in the Bid Data Sheet or any other location and off loading by providing necessary labour.

- (d) The total of all Clearing Handling and Delivery charges other than Taxes, Duties and Levies paid by the CEB referred to in (c) above shall be shown in the Column provided for, in the Schedule of Prices (Appendix VI-A) and this amount will be paid to the Supplier on satisfactory completion of delivery to CEB Stores. The CEB will not accept any responsibility for any additional expenses the Supplier may incur by way of double handling Rent, Crane hire charges etc. at the Port.
- (e) If the supplier fails to clear the goods expeditiously after discharge of Goods at the Port, the CEB reserves the right to make its own arrangements for clearance of the cargo and recover all charges incurred from any one or all proceeds of Supplier's Performance Security, Clearing Charges, Local Agent's Commission or the balance 15% C&F/FOB price, referred to at Clause 15.1 (a) of this document.
- (f) The Supplier or the Agent shall notify the Engineer or officer-in-charge of CEB Stores in writing at least 24 hours ahead of delivery of goods of his intention to do so to enable the CEB to make the necessary arrangements.
- (g) The supplier shall be responsible for attend to all customs requirement and hand over Customs Entries/
 Declarations to the DGM -in-charge of the procurement unit (as stated in the Data Sheet).

13.2 For Local Suppliers

- (a) The successful Bidders shall be responsible for the transport of Goods from the manufacturer's works or warehouse and handing over same to the CEB Stores or delivery point as specified in the Data Sheet(page1). If the Bidder is not agreeable for the delivery of goods to the CEB Stores, the offer will be rejected. In the event of the goods being diverted to any other destinations other than the place specified, the Bidder shall undertake such transport and payment will be made at prevailing transport rates.
- (b) The total delivery charges to CEB Stores shall be shown in column provided for, in the Schedule of Prices and this amount will be paid to the Supplier on satisfactory completion of delivery of Goods.
- (c) The Supplier or the Agent shall notify the Electrical Engineer or Officer-in-charge of CEB Stores in writing at least 24 hours ahead of delivery of goods of his intention to do so to enable the CEB to make the necessary arrangements.

14 DELIVERY OF GOODS:

The quantities awarded shall be delivered in accordance with the delivery schedule indicated in the Bid Data Sheet. Payments will be made only for the quantities delivered in accordance with the delivery schedule. **No Payments will be made for** any quantities delivered in excess to the stipulated in the delivery schedule.

15. MODE OF PAYMENT:

15.1 Foreign Suppliers

(a) Foreign Cost

Payment will be made by means of an **Unconfirmed, Irrevocable Letter of Credit** opened in favour of the Supplier, through the correspondent of the **People's Bank of Sri Lanka**, operating in the Country of Supplier. Letter of Credit will provide for payment to be made as indicated below against shipping documents, which will include clean on-board freight prepaid Marine Bills of Lading, signed invoices, certificate of origin, certificate of inspection, warranty and a certificate of quality and quantity from the inspector as per Clause (17).

First Instalment of 85% of the FOB/C&F price of each shipment on presentation of the shipping documents, etc

The balance Instalment of **15% of FOB/C&F** price will be paid at the end of the contract on issue of a certificate by the General Manager, Ceylon Electricity Board or his authorised officer to the correspondent of the People's Bank, Foreign Branch after the goods have been satisfactorily delivered.

If the beneficiary requires a confirmed Letter of Credit the confirmation charges have to be borne by the beneficiary.

All foreign Bank charges have to be borne by the beneficiary.

(b) Local Cost (Local Agent's Commission and Clearing Charges):

The Local Agent's Commission will be paid on **satisfactory completion of the contract** and duly furnishing the documents referred in clause 13.1 (g) of this document.

The Local Agent's Commission will be paid in Sri Lankan Currency based on the Foreign Exchange selling rate published by the Central Bank of Sri Lanka on the day of bid closing.

The amount payable as Clearing, Handling & Delivery Charges to Stores indicated in the Schedule of Prices (Appendix VI-A), and shall be paid on a Pro-rata basis for each shipment.

The Value Added Tax (VAT) payable on Local Agent's Commission and Clearing, Handling & Delivery Charges will be paid by the Ceylon Electricity Board at prevailing rates, if claimed by the Local Agent or Clearing Agent with the VAT Registration Number.

15.2 Local Suppliers

(a) Payment will be made after the satisfactory delivery of each instalment of goods as stipulated under "Delivery Schedule" in the Data Sheet. Payment will be made only after the total quantity for the instalment is delivered

(b) (i) Local Manufacturers (only if the Supplier is the manufacturer)

If any Foreign currency payments are envisaged under the bid , the local Bidder shall be eligible to quote in the Foreign Currency.

Local Suppliers shall be paid in Foreign Currency subject to the following conditions for the components for which, Foreign Currency is utilized, only if

- (a) The supplier is authorized by the Central Bank of Sri Lanka, to receive Foreign Currency payments and
- (b) The Supplier submits proof documents showing the Foreign Currency payments made with regard to this contract which shall be certified by Independent Auditors registered with the Institution of Chartered Accountants, Sri lanka, for the satisfaction of the purchaser.

In the event the local supplier is not eligible for foreign currency payment, the total ex-works price quoted in any currency or currencies will be converted to Sri Lankan rupees for the purpose of payment, based on the **Foreign Exchange selling rate**, obtained from Central Bank of Sri Lanka on the date of **closing the Tender**.

Payments to local suppliers will be made within 30 days on receipt of signed Invoices, together with the Certificate from the Engineer- in - charge of the CEB Stores, that the Goods have been received in terms of the Letter of Award.

(ii) Local suppliers of locally produced goods & Local suppliers of imported goods

The total Ex show room price quoted by local suppliers of locally produced goods or local suppliers of imported goods in any currency or currencies will be converted to Sri Lankan rupees for the purpose of payment based on the **Foreign Exchange selling rate**, obtained from Central Bank of Sri Lanka on the date of **closing the Tender**. This payment will be made for the above local suppliers in Sri Lankan Rupees by way of a cheque written in favour of the Supplier, within 30 days on receipt of signed Invoices, together with the Certificate from the Engineer- incharge of the CEB Stores, that the Goods have been received in terms of the Letter of Award.

- (c) The amount payable as Cost of Delivery to CEB Stores indicated in the Schedule of Prices (Appendix VI-B) only, shall be paid on a Pro-rata basis for each delivery.
- (d) Any applicable VAT will be paid by CEB at prevailing rates in addition to Total Ex-Work Price / Total Ex-Show Room Price, if claimed by the local manufacturer / supplier with the VAT Registration Number

16 PACKING, IDENTIFICATION AND MARKINGS:

(a) In addition to specific packing required as per Technical Specification, the Bid price shall include the cost of all necessary packing including cases, packing materials and labour. Export packing should be done in the best possible manner to withstand rough handling in transit. Packages should be suitable for export and to storage in the tropics. The Supplier is responsible for the adequate packing and handling over of Goods to the CEB Stores in good condition.

(b)	All packages should be marked and addressed legibly fairly in large characters in indelible ink as follows:
	CEYLON ELECTRICITY BOARD , COLOMBO, SRI LANKA.
	AWARD NO:

PACKAGE NO: OF PACKAGES DESCRIPTION OF CONTENTS:

GROSS WT: NET WT: CUBIC MEASUREMENTS:

17 INSPECTION OF GOODS:

- (a) Prior to shipment/delivery, the goods shall be inspected by an Engineer appointed by the CEB for the purpose of obtaining the certificate of quantity and quality.
- (b) Within 30 days of the receipt of the firm order, the Supplier shall give notice of the tentative date on which any particular item/items will be ready for test and inspection at works to enable the Ceylon Electricity Board to appoint the Inspector/s deemed necessary for tests. Items shall not be packed for dispatch until inspected, tested and approved by the Engineer. In the event the CEB inspection is waived off the supplier shall arrange to witness the acceptance test by an independent inspector and the goods will be acceptable with the test certificate signed by an independent inspector acceptable to the CEB certifying that the product has passed the acceptance test satisfactory.
- (c) The Supplier shall afford the Inspector all proper and reasonable facilities for examining, inspecting, testing or gauging of item/s ordered and shall also supply free of charge such apparatus, materials, tools, gauges, labour and assistance as may be required from time to time for the purpose of such examinations, inspections, tests or gauging. Goods will be subject for inspection both in the course of manufacture and at the time of acceptance.
- (d) The inspection carried out by the Engineer appointed by the CEB and the certification issued by the Engineer shall not relieve the Supplier from the liabilities to supply the goods in correct quantities and in accordance with the specifications stipulated.
- (e) The Purchaser's rights during the period of warranty to inspect, test and where necessary, reject the Goods after the arrival in the Purchaser's country shall in no way be limited or waived by reason of Goods having previously been inspected, tested and passed by the Purchaser or its representatives prior to shipment/delivery of Goods.
- (f) Nothing in this Clause (17) shall in any way release the Supplier from any warranty or other obligations under the Contract.

18 SHIPMENT: (APPLICABLE ONLY FOR FOREIGN SUPPLIES)

The Suppliers are allowed to quote freight charges on Vessels owned by any shipping line. This quoted freight charges will be considered to calculate CIF price for the purpose of evaluation. However before opening of Letter of Credit, the CEB will get a freight rate from the Ceylon Shipping Corporation Ltd (CSCL) Sri Lanka. If CSCL can offer a more economical freight rate, then the Letter of Credit will be opened on **FOB basis** and CSCL will undertake carriage of goods. When CSCL freight rate is higher than the Bidder's offered freight rate, then Letter of Credit will be opened on **C&F basis**.

Freight Submission:

The Supplier shall furnish the following details along with their Bid:

- (a) Documents from Shipping Line confirming Ocean Freight indicated in the Schedule of Prices
- **(b)** No. of Containers and Packages.
- (c) Number of Packages per Container, approximate weight and dimensions of Packages.
- (d) Description of the packing.
- (e) The Port/Ports of shipment.

Shipping Advice:

When the Goods are ready for shipment, the Supplier shall send the following details by Fax to the DGM –in-charge of the Procurement Unit

- (a) Name of the Ship
- (b) Number of Packages
- (c) Name and Address of the Shipping Agent in Sri Lanka

Within Two (2) days after issue of Bill of Lading and following documents shall be sent by Air Mail or preferably by courier.

- (a) Two copies of invoice.
- (b) Two copies of Freight Prepaid/Freight to pay Clean On-Board Marine Bill of Lading.
- (c) Two copies of packing particulars including the list of items, weight and measurement of each package.
- (d) One certificate of Country of Origin of Goods.
- (e) Certificate of quantity and quality; as per clause 17 (a).

Advance copies of above documents may be sent by Fax to expedite clearing of goods.

Delay in Shipping Documents, Discrepancies in Marking and Short Packing:

In case of delay in receipt of copies of Shipping Documents namely Invoice, Packing List, Bill of Lading etc. or if these Shipping Documents as well as Markings etc. on packages are not strictly in accordance with contract consequently causing undue delay in clearing from Port, the Supplier shall bear all extra charges and rent payable to the Port Authority. In case of short packing or short shipment, less than the quantities in the Invoice, the supplier shall make good all items short packed or shipped and also bear all duplicate payments of Customs Duty and other charges resulting thereof.

19. INSURANCE:

If considered necessary, the Supplier will be called upon to insure the goods from the Manufacturer's work to the CEB Stores. Such Insurance should be effected with a Government approved Insurance Company in Sri Lanka and should be in the name of the General Manager, CEB. The cost of such Insurance will be paid in Sri Lanka Rupees by the CEB to the Insurance Corporation/Company on production of their invoices.

20. DELIVERY WITHIN AGREED PERIOD AND DAMAGES FOR DELAY:

For Foreign Suppliers

- Should the supplier anticipate any delay at any time during the execution of the order that the supplier will be unable to deliver the items within the time specified in the Letter of Award, the supplier shall at once give notice accordingly in writing to the General Manager CEB Colombo explaining the cause for the delay and sent to Deputy General Manager in-charge of the procurement unit as stated in the bid data sheet. In the case of delay, the General Manager or the officer authorised by him, shall have the option of either granting an extension or terminating the award ruling the case as default of contract. If the extension is granted, the supplier shall effect shipment within the intended period but will in addition to any other liabilities incurred under this contract, be subject to a deduction from the contract sum and/or the amount covered by the Performance Security, for liquidated damages (and not as a penalty) of point one per cent (0.1%) of the C&F value of each item shipped late for each and every complete day that may lapse between the contracted date of shipment and actual date of shipment subject to a maximum of 10% of the total C&F contract value unless the liquidated damages is waived or reduced by the General Manager CEB in view of any special circumstances.
- (b) If the extension of time for delivery is granted the Supplier shall extend the period of validity of Performance Security in accordance with Clause (12)

For Local Suppliers

- Should the Supplier anticipate at any time during the execution of the order that he will be unable to deliver the items within the time specified in the Letter of Award, the supplier shall at once give notice accordingly in writing to the General Manger, CEB, Colombo, explaining the cause for the delay. In the case of delay, the General Manager or officer authorised by him shall have the option of either granting an extension or terminating the award, ruling the case as default of contract. If the extension is granted, the supplier shall effect delivery within the extended period, but will in addition to any other liabilities incurred by him under this contract, be subject to a deduction from the contract sum and/or the amount covered by the Performance Security for liquidated damages hereto (and not as a penalty) of point one percent (0.1%) of the value of each item delivered late for each and every complete day, that may lapse between the contracted date of delivery and actual date of delivery, subject to a maximum of 10% of the total contract value unless the liquidated damages is waived or reduced by the CEB in view of any special circumstances
- (b) In the case of grant of extension of time for delivery, the Supplier shall extend the period of validity of the Performance Security in accordance with Clause (13).

21. CONTRACT NOT TO BE SUBLET:

The Supplier shall not assign or sublet the Contract without a written authority from the General Manager, CEB. Even if any part of his obligation has been assigned or sublet by the Supplier with written authority from the General Manager, CEB, the Supplier will not be relieved from the responsibilities for the due performance of the part assigned or sublet.

22. FORCE MAJEURE:

The Supplier shall not be held responsible for any delay or non-performance of contractual obligations to sell, and the Ceylon Electricity Board shall not be held responsible for any delay or non-performance of its contractual obligations to purchase, all or any part of the supplies caused by Force Majeure, including war, civil insurrection, fires, flood, epidemics, earthquakes, quarantine restrictions and freight embargoes, such delay may be excused and the period of such delay may be added to the time of the performance of the obligation delayed

If a Force Majeure situation arises, the Supplier shall within **ten (10) days** 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.

Such notification of the Supplier shall be authenticated by the **Sri Lankan Embassy/Representative** in the respective **Country of origin** in the case of Force Majeure takes place outside Sri Lanka. The purchaser shall ascertain the facts including the extent of delay and the time for completion, provided the findings justified such an action.

23 PROOF OF ABILITY:

Bidders shall submit with their offer documents and/or other evidence of their ability to carry out the contract. Factors such as experience, plant facilities, nature of business, capital invested or authorised, turnover, availability of raw materials, guaranteed time of delivery and other relevant matters will be considered during evaluation of offers. Procurement Committee reserves the right to call for further documentary evidence of the ability of the Bidders to fulfil the terms and conditions of the Bid

24 WARRANTY:

- (a) The Supplier warrants to the purchaser that the Goods supplied under the Contract are new, unused, tested as per the standard specified in this document, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The Supplier further warrants to the purchaser that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except in so far as the design material is required by the Purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- (b) This Warranty shall remain valid for twelve (12) months after the completion of the final delivery.
- (c) The Purchaser shall promptly notify the Supplier in writing of any claims arising under this Warranty. Upon receipt of such notice, the Supplier shall, with all reasonable speed, repair or replace the defective Goods or parts thereof,

without costs to the Purchaser other than, where applicable, the cost of inland delivery of the repaired or replaced Goods or parts from the port of entry to the final destination.

(d) If the Supplier, having been notified, fails to remedy the defect(s) within a reasonable period, the Purchaser may proceed to take 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.

25 PATENT RIGHTS CLAIMS:

The Bidders shall indemnify the Ceylon Electricity Board against all claims if any, arising on account of patent rights or royalties, whether from manufacturers or others, as a consequent of the use by the Ceylon Electricity Board of royalty goods supplied.

26 ARBITRATION:

If during the continuance of this contract or within one month after the termination thereof, any differences or disputes, which may arise between the parties hereto in regard to the interpretation of any of the provisions herein contained or any other matter or thing relating to this contract (other than any difference or dispute in respect of which a decision of the General Manager, Ceylon Electricity Board is declared to be final and binding on the parties hereto) such difference or dispute shall be forthwith referred to an Arbitral Tribunal in Sri Lanka. Composition of the Arbitral Tribunal, Jurisdiction of the Arbitral Tribunal, Conduct of Arbitration Proceedings, Awards and any other matters relating to the Arbitration shall abide by Arbitration Act, No. 11 of 1995 of the Democratic Socialist Republic of Sri Lanka

27. LAW OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA:

The Bidders and any contracts resulting thereof shall be governed and abide by and construed according to the Law of the Democratic Socialist Republic of Sri Lanka.

28. BIDDER TO INFORM HIMSELF FULLY:

Bidders shall acquaint themselves fully with the conditions of bidding. No plea for lack of information or insufficient information will be entertained at any time.

29. BIDS TO BE ON OFFICIAL DOCUMENTS:

Offers will be rejected if Bidders fail to submit their bids on the official bidding documents and/or if the conditions laid down hereto have not been strictly fulfilled.

30. BIDDER'S STANDARD CONDITIONS:

Bidder's Standard Conditions of sale, usually printed on the reverse side of the Pro forma Invoice or in a separate format, will not be accepted. The Conditions of bid of the CEB shall prevail.

31. SAMPLES:

Samples offered shall be furnished as indicated in the CEB Specification (Appendix V of the bidding document), to the DGM-in-charge of the Procurement Unit stated in the Data Sheet (page 1) on or before the Time & Date stated in the Data Sheet (page 1).

If the samples are not required to be submitted, it shall be stated in the Data Sheet (Page 1)

32. DEFAULTED CONTRACTORS:

A Bid is liable to be rejected forthwith if it is submitted by a Contractor who has, in the past, failed to perform contract obligation satisfactorily in accordance with the terms and conditions of this contract with the CEB.

33. DECLARATION OF DIRECTORS:

When forwarding bids, Private Companies should declare the names of the Current Directors and the Share Holders of the Company. In the case of Public Companies, the Current Directors of such Public Company should be declared.

34. TAXES AND LEVIES:

Notwithstanding anything specified in the conditions of Contract, all taxes and levies as and when imposed or imposable by the Government will be taken into account for payment purposes.

35. VALUE ADDED TAX AND NATION BUILDING TAX (if applicable)

(a) VALUE ADDED TAX

If the Bidders are registered for the purpose of VAT, they should indicate the amount of VAT claimed separately in the bid documents along with the VAT registration number. Declaration of VAT registration number is a mandatory requirement for determination of Bidders and any Bidder who does not declare his/her VAT registration number will be liable for rejection of the Bid. If any Bidder is not registered for VAT, he/she should obtain a letter from the Commissioner of Inland Revenue Department, certifying that the company has not been registered for VAT, which should be attached to the Bid.

(b) NATION BUILDING TAX

If the NBT is included in the bid price it will be taken for bid evaluation as part of total cost. If the NBT is not charged the bidder shall clearly indicate as "**NBT is not applicable**" in the price schedule.

36. FURTHER INFORMATION:

Any further information and clarifications shall be sought, two (2) weeks before the Date of the closing of bidding, in writing from the DGM-in-charge of the Procurement Unit (as stated in the Data Sheet)

GENERAL CONDITIONS PART II - SPECIAL CONDITIONS OF PARTICULAR APPLICATION

These conditions of particular application shall be read in conjunction with the General conditions (ICB). Where this part II conditions are in conflict with General Conditions, Part II conditions shall prevail over the General Conditions.

Clause 3 Schedules of prices Appendix VI-B not applicable.

Clause 4 Schedules of prices Appendix VI-B not applicable.

Clause 5 - The Local Agent/representative shall be registered under public contract act

No.3 of 1987 and copies of such registration shall be attached to the bid.

Clause 7 Schedules of prices Appendix VI-B not applicable.

Clause 7.1 - Amended and replaced as below;

All Bidders

- (a) All bidders shall fill in and sign the prescribed form of the **Schedule of Prices** given in **Appendix (VI-A)** as per the instruction given below in (b) & (c)
- (b) Customs Duty, Value Added Tax (VAT), & Other applicable Levies such as Stamp Duty, Cess, Excise Duty, Surcharge on Customs Duty payable to the Sri Lanka Customs will be paid by the Ceylon Electricity Board at the prevailing rates at the time of clearing of goods. Clearing, handling and delivery to the site will be also done by Ceylon Electricity Board. Hence "Total cost of Clearing Handling & Delivery charges." shall not be applicable.

Note: Ceylon Electricity Board may request supplier for carrying out custom clearance and delivery of good to site. In such an instance, it is to be noted that only clearing charges, handling charges, transport charges and import taxes will be reimbursed as per the internally approved rates.

- (c) All bidders are allowed to quote in Sri Lankan currency or/and maximum of three (03) foreign currencies that are freely convertible in Sri Lanka.
- Clause 7.2 Deleted
- Clause 8.0 Minimum Validity Period of the bid shall be 180 days from the closing date.
- Clause 11.1 (A) Amended as follows,

All Bidders

The total evaluated cost of each item shall be the sum of following components.

- Offered FCA cost
- Offered Freight cost
- Local agent's commission (excluding VAT)
- SSCT (if applicable)

Clause 11.1 (B) - Not applicable
Clause 11.1 (C) - Not applicable

Clause 11.2 - Not applicable

Clause 13.1 - Applicable to all bidders

Supplier.

Clause 13.1 (a) - Not applicable.

Clause 13.1 (b)

- The bidders shall, within **Forty Eight (48) hours** of shipment, dispatch or send through a Courier Service / Facsimile duplicate sets of shipping documents to the **CE(Indent)**. If the original shipping documents are not available at the time of receipt of goods at the port, goods shall be cleared on a Shipping Guarantee, at a written request made by the supplier guaranteeing that in the event the items supplied are found to be non-compliance with the CEB specification, he will take full responsibility of replacing the items with items which conform to the CEB specification. The cost of the Shipping Guarantee (SG) including applicable interest shall be borne by the

Clause 13.1 (c)

Clause 13.1 (d)

Clause 13.1 (e)

Clause 13.1 (f)

Clause 13.1 (g)

- Not applicable

Clause 13.2 - Not applicable

Clause 15.1 Applicable to all bidders

Clause 15.1 (b)

- Local agents commission will be paid on satisfactory completion of the contract and issue of the certificate of completion by the DGM in charge of the procurement.

Third Para "The amount payable as clearing charges..." shall not be applicable.

The Value Added Tax (VAT) payable on Local Agent's Commission, Social Security Contribution Levey (if applicable) and Clearing, Handling & Delivery Charges (if applicable) and will be paid by the Ceylon Electricity Board at prevailing rates, if claimed by the Local Agent or Clearing Agent with the VAT Registration Number.

Clause 15.2 - Not applicable

Clause 16 (b) - The address shall be revised as

"Additional General Manger (Generation),

Ceylon Electricity Board, Generation Head Quarters New Kelani Bridge Road, Colombo, Sri Lanka"

The other details remain unchanged.

Clause 17 - Inspection not required prior to dispatch.

Clause 18 - Freight shall be by air freight.

Clause 20

Foreign Suppliers (a) bidders

-Amended as follows and applicable to all

Should the supplier anticipate any delay at any time during the execution of the order that the supplier will be unable to deliver the items within the time specified in the Letter of Award, the supplier shall at once give notice accordingly in writing to the General Manager, CEB Colombo explaining the cause for the delay with the copies to DGM in charge of the **procurement unit** as stated in the bid data sheet and **CE(Indent)**. In the case of delay, the General Manager or the officer authorized by him, shall have the option of either granting an extension or terminating the award ruling the case as default of contract. If the extension is granted, the supplier shall effect shipment within the intended period but will in addition to any other liabilities incurred under this contract, be subject to a deduction from the contract sum and/or the amount covered by the Performance Security, for liquidated damages (and not as a penalty) of point one per cent (0. 1%) of the C&F value of each item shipped late for each and every complete day that may lapse between the contracted date of shipment and actual date of shipment subject to a maximum of 10% of the total C&F contract value unless the liquidated damages is waived or reduced by the General Manager, CEB in view of any special circumstances.

Clause 31

- Samples not required.
- Clause 35
- Amended as follows

35. VALUE ADDED TAX AND SOCIAL SECURITY CONTRIBUTION LEVY(If applicable)

(a) VALUE ADDED TAX

If the Bidders are registered for the purpose of VAT, they should indicate the amount of VAT claimed separately in the bid documents, along with the VAT registration number. Declaration of VAT registration number is a mandatory requirement for determination of Bidders and any Bidder who does not declare his/her VAT registration number will be liable for rejection of the Bid. If any Bidder is not registered for VAT he/she should obtain a letter from the Commissioner of Inland Revenue Department, certifying that the company has not been registered for VAT should be attached to the bid.

(b) SOCIAL SECURITY CONTRIBUTION LEVY

If the SSCL is included in the bid price, it will be taken for bid evaluation as part of total cost. If the SSCL is charged, that should be separately declared in the price schedule and if not charged the bidder shall clearly indicate as "SSCL is not applicable" in the price schedule.

(c) WITHHOLDING TAX

As applicable, withholding tax (WHT) will be deducted by CEB at the rates specified by the Department of Inland Revenue Sri Lanka.

SPECIFICATION FOR THE VIBRATION MONITORING SYSTEM AND SENSORS

1.0 SCOPE

This specification covers the general requirements of design, manufacture, testing & delivery of vibration monitoring system/measurement sensors with all required accessories, to be used with the generator vibration monitoring of Samanalawewa Power Station, Ceylon Electricity Board, for the purpose of continuous online monitoring of shaft and bracket vibrations of two separate hydro generators (Vertical Shaft Francis Turbine) of 60 MW (70.6 MVA) each.

2.0 ENVIRONMENT

(a) Maximum Operating temperature : 100°C (b) Maximum Storage temperature : 50°C

(c) Maximum relative humidity : 90% (non-submerged)

2.1 GENERATOR DATA

1. Rated Power :- 70.6 MVA

2. Rated Voltage :- 10.5 kV Line-to-Line

3. Rated Speed :- 500 rpm

4. Direction of Rotation :- Counter Clockwise from NDE

5. Electrical Over Speed :- 700 rpm (140 %)
 6. Mechanical Over Speed :- 775 rpm (155 %)
 7. Runaway Speed :- 850 rpm (170 %)

8. No of Poles :- 12 Poles

9. No of Guide Vanes :- 20 10. No of Runner Blades :- 17 11. No of Thrust Pads :- 10

12. Turbine :- Francis (Vertical Shaft)
13. Turbine Shaft material :- JIS G3201 SF55A - Steel

3.0 BASIC INFORMATION

All the sensors and related accessories shall be of robust design which is suitable for rough power plant environment.

3.1 Absolute (Bracket) Vibration Sensors

The absolute vibration sensors shall be piezoelectric accelerometers with integration to measure the root-mean-square (RMS) vibration velocity Vrms in mm/s. They shall be suitable for monitoring of absolute vibration in hydro generators of speed range from 50 rpm to 850 rpm (low frequency application) in below locations:

- Upper guide bearing brackets Radial (Two numbers)
- Upper bracket Axial (One number)
- Stator frame Radial (Two numbers)
- o Lower upper guide bearing brackets Radial (Two numbers)
- o Turbine guide bearing brackets Radial (Two numbers)
- Turbine head cover Axial (One number)

The total of 20 nos. (10 nos. for each machine) of absolute vibration (accelerometers) sensors and signal conditioner, including extension cables up to generator outside enclosure and DC voltage source shall be supplied. The AC voltage source available is 220-240/50Hz.

The measurement instrumentation shall be fitted with electronic compensation to obtain a flat response over the specified frequency range.

The mounting arrangement shall not be required with the sensors. Sensor mounting arrangements will be prepared separately according to the sensor mounting location by power station staff.

Complete installation and commissioning will be done by power station staff.

Technical Data

(a) Type of sensor : Accelerometers

(b) Frequency Range (±3dB) : 0.5 Hz to 5 kHz or better

(c) Resonant Frequency (d) Settling time :≤3s

(e) Dynamic Range : ± 10 g peak for acceleration Sensitivity : 500mV/g ± 10 %

(f) Degree of protection : IP68

(g) Sensor mounting arrangement : Not required

(h) Mounting Stud size : M8

(i) Sensor cable length : 25 meter length, armored type (up to generator outside enclosure)

- (i) Signal Conditioner (Transducer)
 - a. DIN Rail mountable
 - b. Two Dynamic Vibration Signal buffered outputs; one at BNC and the other at terminal block for analysis and monitoring
 - c. Input configurable to accelerometer with in-built DC power for IEPE sensors or alternative DC Power source
 - d. Output signal configurable 4-20 mA proportional to rms velocity (mm/s)
 - e. Signal conditioner & Power Supply installed inside an enclosure, to be mounted outside the generator housing.
 - f. Configuration hardware/software included

Note: - 4-20mA output will be connected to the existing SCADA via analogue inputs.

3.2 Relative (Shaft) Vibration Sensors

The non-contacting transducers of eddy current shall be provided to measure the shaft peak-to-peak displacement Sp–p in μm in hydro generators of speed range from 50 rpm to 850 rpm (low frequency application). The sensor will be used for measuring both the static (DC) and dynamic (AC) signals to determine the mean shaft position and the dynamic displacement which is occurring around this mean position. Measuring locations are as below.

Upper Guide Bearing – Radial (Two numbers)

- Lower Guide Bearing Radial (Two numbers)
- Turbine Guide Bearing Radial (Two numbers)

The total of 12 nos. (06 nos. for each machine) of relative vibration inductive probes, probe drives, including extension cables up to generator outside enclosure, and DC voltage source arrangements shall be supplied. The AC voltage source available is 220-240/50Hz.

The mounting arrangement shall not be required with the sensors. Sensor mounting arrangements will be prepared separately according to the sensor mounting location by power station staff.

Complete installation and commissioning will be done by power station staff.

Technical Data

(a) Type of sensor : Proximity – Inductive Sensors (b) Linear range : 0.25mm to 2.25 mm or better

(c) Probe tip size : Diameter 8mm

(d) Frequency Range (±3dB) : 0 to 10kHz or better

(e) Sensitivity : $7.87 \text{ mV/}\mu\text{m}$ (f) Degree of protection : IP68

(g) Sensor mounting arrangement : Not required

(h) Sensor fixed cable length : 9 meter length, armored type

(up to probe driver located within 9m from

the sensor, figure 1)

(i) Extension cable length : (beyond probe driver) Shielded cable, up to generator outside enclosure as illustrated in

generator outside enclosure as mustrate

the below sketch (Figure 01)

(j) Probe driver

a. DIN Rail mountable

- b. Two Dynamic Vibration Signal buffered outputs; one at BNC and the other at terminal block for analysis and monitoring; the DC gap and the AC displacement. (if buffered outputs are not available on Vibration monitoring unit)
- c. To be installed inside a suitable enclosure, closer to sensor as shown in Figure 1. (Note: LGB sensor probe drivers are to be installed inside generator housing, where maximum cold air temperature is about 75°C)

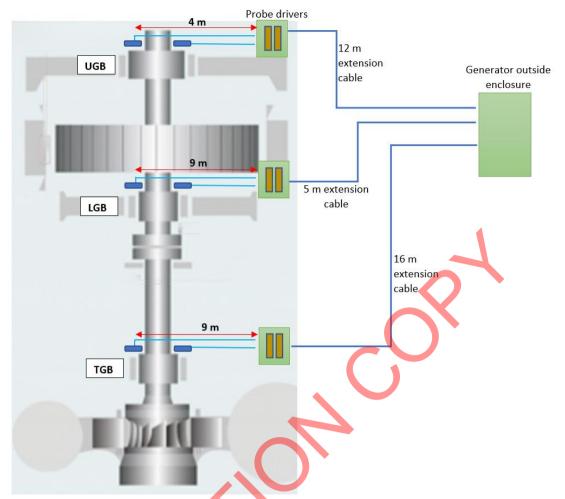


Figure 01: Relative Vibration Sensor locations and cable arrangement

3.2.1 Vibration Monitoring Unit

Vibration monitoring unit should process the relative vibration sensor outputs to generate alarm/tripping relay outputs and 4-20 mA processed analog output to connect for the SCADA. Additionally, buffered BNC output should be provided for vibration analysis when needed using portable analyzers. (if buffered BNC output for dynamic vibration signal is available on sensor probe driver itself, buffered BNC output on the vibration monitoring unit is not mandatory)

Technical Data

(a) Input : Dynamic relative vibration signals

(b) No of Channels : Minimum 6 per unit

(c) Vibration buffered output : BNC

(d) Measurement signal output : 4-20 mA analog outputs proportional to AC

displacement pk-pk, (connecting to existing

SCADA via analogue inputs)

(e) Relay outputs : Two relay outputs as alarm and tripping

(Adjustable levels for each sensor)

Six relative vibration sensors in each generator need to connect for vibration monitoring units. Based on the supplier's available product, it can be offered 2 channel, 4 channel or 6 channel vibration monitoring devices for connect six sensors. Both generators are having twelve relative

vibration sensors to connect for two separate vibration monitoring units installed outside the generator housing.

4.0 ACCESSORIES TO BE SUPPLIED

- Signal conditioner of accelerometer, power supply, the necessary extension cables up to outside enclosure and any configuring software tools shall be provided. Signal conditioner and necessary power supplies shall be fitted in single enclosure unit (Separate enclosures for each generator unit). This enclosure will be vertically mounted on generator wall.
- Probe Driver units of relative vibration sensors, appropriate enclosures for probe drivers and extension cables up to outside enclosure shall be provided. Necessary power supplies and monitoring unit shall be fitted in single enclosure unit (Separate enclosures for each generator unit). This enclosure will be vertically mounted on generator wall.
- If software tool is available to compatible with offed vibration monitoring unit, please provide the price of software tool in schedule of price. Software tool requirement is optional, and purchasing will be decided later.

5.0 OPERATION AND MAINTENANCE

The installation, operation and maintenance manual/data sheets of all the sensors, power supplies and driver units shall be provided with the offer and shall contain following information to enable the client to maintain, service, adjust and operate the sensor system. The language shall be English.

- a. Measuring principles and ranges, sensitivities and accuracies of all sensors
- b. Installation instructions.
- c. Operating instructions of all related units.
- d. Setting and adjustments if required.
- e. Maintenance instructions.
- f. Any other information required related to the supply scope.

6.0 APPLICABLE STANDARDS

ISO 20816-5-2018- Mechanical vibration- Measurement and evaluation of machine vibration

EMC Directive 2004/108/EC / IEC 61326-1- EMC certification

Safety IEC 61010-1

In addition, the sensor system shall meet all the relevant safety specifications as per applicable national/international standards.

7.0 CALIBRATION

Calibration certificates from a reputed certification agency for the whole set of sensors shall be produced. The particular certificate shall be valid for minimum of 1 year. Details related to calibration (Need for calibration, frequency of calibration, etc.) shall be available in technical brochures.

8.0 WARRANTY

A comprehensive warranty shall be provided to cover all the sensors, power supplies and driver units for not less than two years from the date of receipt of the items.

9.0 QUALITY ASSURANCE

The manufacturer shall posses ISO 9001:2015 Quality Assurance Certification for the plant where manufacture of the sensors, power supplies and driver units. The Bidder shall furnish a copy of the ISO Certificate certified as true copy of the original by the manufacturer, along with the offer. If the manufacturer is having ISO 14001 Environmental Management Certification, a copy of certificate shall also be furnished.

10.0 MANUFACTURING EXPERIENCE

Manufacturer shall have a **minimum of 10 years experience** of the manufacture of vibration sensors and related accessories and also shall have supplied such sensors to utilities in Asia, Europe and USA. The manufacturer **shall submit proof documents** such as audited supply records, the name of the purchasers, quantity sold, and the year of sale.

11.0 PACKING

All sensors and accessories shall be separately packed and shall be held in a firm position. Measures shall be taken to avoid damage against jerks during transportation and severe weather conditions. The manufacturer's name/Identification, Country of Origin shall be clearly marked.

12.0 **DELIVERY PERIOD**

Total quantity of the items shall be shipped within 12 weeks from the date of Letter of Credit.

13.0 INFORMATION TO BE SUPPLIED WITH THE OFFER

- a. Technical Literature in English Language on product features/operation shall be supplied and they shall be descriptive & self-explanatory.
- b. Completed Schedule of Guaranteed Technical Particulars Annexure A
- c. A copy of the Manufacturer's ISO 9001:2015 Certificate conforming to Clause 9.0
- d. Proofing documents for clause 10.0 -Manufacturing Experience

GUARANTEED SCHEDULE OF TECHNICAL PARTICULARS FOR THE SENSORS FOR VIBRATION MONITORING SYSTEM (To be filled by the bidder for the offered Instrument)

Manufacturer	
Model	
Country of origin	

No.	Description	CEB specification	Manufacture's specification
1	Environment		
	Maximum operating temperature	100°C	V
	Maximum Storage temperature	50°C	
	Maximum relative humidity	90%	
	-		
2	Absolute Vibration Sensors		
	Type of sensor	Accelerometers / Velocity sensors	
	Frequency Range (±3dB)	0.5 Hz to 5 kHz or better	
	Resonant Frequency	>10 kHz	
	Settling time	≤3s	
	Dynamic Range	±10g peak	
	Sensitivity	500mV/g ±10%	
	Degree of Protection	IP 68	
	Sensor cable length	25 meter minimum length,	
		armored type	
	Mounting stud size	M8	
	Signal conditioner	**	
	DIN rail mountable	Yes	
	Two buffered outputs	On BNC/terminal block	
	Input configurable	To accelerometer	
	• In-built DC power for IEPE	Specify availability or alternative arrangement	
	Output configurable	To 4-20 mA proportional to rms velocity (mm/s)	
	Installed inside enclosure	Yes	
	Configuration	Hardware/Software included	
3	Relative Vibration Sensors		
	Type of sensor	Proximity – Inductive	
	Linear range	0.25mm to 2.25 mm or better	

	Duch a tim sime	Diameter One	
	Probe tip size	Diameter 8mm	
	Frequency Range (±3dB)	0 to 10kHz or better	
	Sensitivity	7.87 mV/μm	
	Degree of protection	IP68	
	Sensor fixed cable length	9 meter length, armored type	
	Extension cable	up to generator outside enclosure	
	■ Type	Shieled cable	
	 Total calculated Length 	Please mention (considering	
		number of cores and power supply	
		of probe driver – refer Figure 01 in	4
		Technical specification)	
	Probe Driver		
	 DIN Rail mountable 	Yes	
	 Two buffered outputs 	On BNC/terminal block	X
	 Appropriate enclosures 	Vac	
	(for 2 probe drivers)	Yes	
3.1	Vibration Monitoring Unit		
	Input	Dynamic relative vibration signals	
	No of Channels	Minimum 6	
	Vibration buffered output	BNC (not mandatory if available	
	_	on probe drivers)	
	Measurement signal output	4-20 mA analog output	
		proportional to AC displacement	
		pk-pk,	
	Relay outputs	Two outputs for alarm and tripping	
		(Adjustable levels for each sensor)	
4	Accessories		
	Enclosure dimensions	Please mention	
	Power supply unit/s:		
	■ Input	220-240V AC /50Hz	
	■ Output		
5	Calibration		
	Calibration Certificates	Required	
	Validity	Min. one year	
	•	•	
6	Applicable standards		
	Safety	IEC 61010-1	
	CE Conformity	EMC Directive 2004/108/EC /	
		IEC 61326-1	
	ISO Certification	ISO 9001:2015	
	Mechanical Vibration	ISO 20816-5-2018	
	Mechanical Vibration	150 20810-5-2018	

7	Warranty		
	Comprehensive Warranty	Not less than 2 years	
8	Delivery	Within 12 weeks from the date of	
		Letter of Credit	

Seal and Signature of the	 Date
Responsible officer for Manufacture	

Appendix VI-A

CEYLON ELECTRICITY BOARD



Schedule of Prices

BId Ref. No: SC/DGM/BID/SWPS/2022/07, SUPPLY AND DELIVERY OFSENSORS FOR THE VIBRATION MONITORING SYSTEM FOR SAMANALAWEWA POWER STATION

Item No	Description of Item	Part / Model No of the offered item as stated in the catalogue	Quantity	Bid Currency	Unit FCA Price, in bid currency In Figures	In Figures	Total FCA Price in bid currency	Total Air Fr	eight to Colombo in bid currency	Local Agent's Commission (excluding VAT) As a % of Total FCA In Figures	Total (It	tem wise)
	Relative vibration sensor, 9 meter Sensor fixed cable, Probe drivers		12		-						-	
1.1	Enclosure for 2 probe drivers		6									
1.2	Extension cable from Probe drivers (Optional)		Calculated length in GTP m									
1.3	Vibration Monitoring unit (minimum 6 channels)		2 sets									
	Absolute vibration sensor, extension cable, 4-20mA output signal conditioner, hardware/software for config		20				, () ,					
3	Enclosure Unit and power supply arrangemet		2 sets									
4	Vibration Monitoring Software tool (Optional)		1									
Freight I	eight Insurance (as a percentage of total FCA)											

VAT Registration No of the Local agent:	Tot	al amount of VAT claime	od (Rs):	Discount (If any) as a percentage of total FCA value
Port of Dispatch				
Approximate weight of the package (kg.)				
Approximate dimension of the package (H(mm) x XW(mm) X D(mm))				

.g			, , , , , , , , , , , , , , , , , , ,	
SSCL is applicable/not applicable.	Total amount of SSCT	claimed (Rs):		
I have furnished a Bid Security No	for Rs. from	As Bid Security. I/We agree to al	oide by the Conditions stipulated in the Bid No	
Signature of Bidder	Signature of Witness 1	Signature of Witness 2		
Name and Address of Bidder	Name & Address of Witness 1	Name & Address of Witness 2	Name & Address of Local Agent	Name and Address of Manufacturer
Date	Date	Date	Date	
Telephone	Telephone	Telephone	Telephone	
_ •			•	
Facsimile	Facsimile	Facsimile	Facsimile	
E-Mail	E-Mail	E-Mail	E-Mail	

CEYLON ELECTRICITY BOARD CONTRACT NO:

THIS AGREEMENT made and entered into at Colombo on this
WHEREAS the purchaser invited bids for "SUPPLY AND DELIVERY OF SENSORS FOR THE VIBRATION MONITORING SYSTEM FOR SAMANALAWEWA POWER STATION" and has accepted a Bid by the supplier for the supply of those goods in the sum of
NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:-
 In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of 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 Form of Bid and the schedule of prices submitted by the bidder, 'dated b) The schedule of guaranteed particulars submitted with the bid. c) The Technical Specifications attached to bidding document. d) The General Conditions (ICB) of the bidding Document. e) The Special Conditions of the bidding document f) The purchaser's notification of Award letter dated
3. 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 Goods 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 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 their respective hands, Common Seals to this Agreement to be executed in accordance with the laws of Democratic Socialist Republic of Sri Lanka on the day and year first above written.
For and on behalf of the purchaser, signed sealed and delivered by the
General Manager (Ceylon Electricity Board)
Witnesses,
1
For and on behalf of the supplier, signed , sealed and delivered by the ,
Authorised Representative of the Supplier.
Witnesses,
1 2