CEYLON PETROLEUM STORAGE TERMINALS LIMITED

NATIONAL COMPETITIVE BIDDING

BIDDING DOCUMENT

FOR

REPAIRS TO TANK NO 21 AT KOLONNAWA INSTALLATION

KPR/36/2023

Employer:

Chairman,
Ceylon Petroleum Storage Terminals Limited,
Oil Installation, Kolonnawa.

Engineer:

Engineering Manager,
Engineering Function,
Ceylon Petroleum Storage Terminals Limited,
Oil Installation, Kolonnawa.

Issued to :……..

Issued by :…….

Date :…….

July - 2023

CONTENTS

Volume 1

Volume 2

VOLUME - 01

SECTION - 1

INSTRUCTIONS TO BIDDERS

Instructions to Bidders applicable to this contract are that given in Section-I of the Standard Bidding Document for Procurement of Works. ICTAD Publication No.ICTAD/SBD/01, Second Edition ,January 2007, published by Construction Industry Development Authority (CIDA), "Savsiripaya", 123, Wijerama Mawatha, Colombo 07.

This publication will not be issued with the Bidding Document and the Bidder is advised to purchase it from CIDA.

Instructions to Bidders shall be read in conjunction with the Bidding Data provided under section-5 of the Bidding Document (Volume 2)

Instructions to Bidders will not be a part of the contract and will case to have effect once the Contract is signed.

SECTION – 2

STANDARD FORMS (CONTRACT)

- ***Form of letter of acceptance***
- ***Form of agreement***
- ***Form of performance security***
- ***Form of advance payment security***
- ***Form of retention money guarantee***

FORM OF LETTER OF ACCEPTANCE

[LETTER HEADING PAPER OF THE PROCURING ENTITY]

---------- *[date]*

To: ----------

[name and address of the Contractor]

This is to notify you that your bid dated ---------- *[insert date]* for the construction and remedying defects of the ---------- *[name of the Contract and identification number]* for the Contract price of ----------[*name of currency]* ----------[*amount in figures and words]* as corrected in accordance with Instructions to Bidders and / or modified by a Memorandum of Understanding, is hereby accepted.

The adjudicator shall be ---------- ---------- ---------- *[name and address of the Adjudicator, if agreed]* / shall be appointed by the Construction Industry Development Authority (CIDA).

You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract documents.

The Start Date shall be: ---------- *(fill the date as per Conditions of Contract).*

The amount of Performance Security is *:* ---------- *(fill the date as per Conditions of Contract).*

The Performance Security shall be submitted on or before ---------- *(fill the date as per Conditions of Contract).*

Authorized Signature : ----------

Name and title of Signatory : ----------

Name of Agency : ----------

STANDARD FORM: AGREEMENT

This AGREEMENT, made the ……*[day]* day of ----------*[month]* 20-------- *[year]* between ----------*[name and address of Employer]* (hereinafter called "the Employer") of the one part, and ---------- *[name and address of Contractor]* (hereinafter called "the Contractor") of the other part.

WHEREAS the Employer desires that the Contractor execute ---------- *[name and identification number of Contract]* (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein 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 thereto have caused this Agreement to be executed the day and year aforementioned in accordance with laws of Sri Lanka.

…….	……..
Authorized signature of Contractor	Authorized signature of Employer
COMMON SEAL	COMMON SEAL

In the presence of:
Witnesses:

1.	Name and NIC No.	:	……
			……
	Signature	:	……
	Address	:	……
			……
2.	Name and NIC No.	:	……
			……
	Signature	:	……
	Address	:	……
			……

FORM OF PERFORMANCE SECURITY (UNCONDITIONAL)

……
(Issuing Agency's Name and Address of Issuing Branch or Office)

Beneficiary: ……
……
[Name and Address of employer]

Date: …….

PERFORMANCE GUARANTEE NO. : ……

We have been informed that ……
…… *(Name of Contractor)* (hereinafter called "the Contractor") has entered into Contract No. …….. (Reference No. of the Contract) dated …… With you, for the ……... [*name of the contract and brief description of works*](hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we ……
…….. *(name of agency)* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ……. *(amount in figures)*
……
…….. *(amount in words)* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the ……. day of …… 20……. *(insert date, 28 days beyond the intended Completion Date)* and any demand for payment under it must be received by us at this office on or before that date.

……
Signature(s)

FORM OF ADVANCE PAYMENT SECURITY

……
……
(Name and Address of Agency, and Address of Issuing Branch or Office)

BENEFICIARY: CEYLON PETROLEUM STORAGE TERMINALS LIMITED

Date: …….

ADVANCE PAYMENT GUARANTEE NO. : ……..

We have been informed that ……..…
……..……. *(Name of Contractor)* (hereinafter called "the Contractor") has entered into Contract No. …….. (Reference No. of the Contract) dated ……
With you, for the …..…… [*name of contract & brief description*] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum……*(amount in figures)* ……..…… *(amount in words)* to be made against an advance payment guarantee.

At the request of the Contractor, we ……..……
…… *(name of issuing agency)* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of …….. *(amount in figures)* …… *(amount in words)* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation in repayment of the advance payment under the Contract.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor.

This guarantee shall expire on ……. …… *(insert date, 28 days beyond the expected expiration Date of the contract)*

Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

…….
Signature(s)

FORM OF RETENTION MONEY GUARANTEE

……..
(Issuing Agency's Name and Address of Issuing Branch or Office)

BENEFICIARY: CEYLON PETROLEUM STORAGE TERMINALS LIMITED

Date: …….

RETENTION MONEY GUARANTEE NO.: ……

We have been informed that ……
……..… *(Name of Contractor)* (hereinafter called "the Contractor") has entered into Contract No. …… (Reference No. of the Contract) dated ……. With you, for the ……[*name of the contract and brief description ofworks*](hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, when the works have being taken over and the first half of the Retention Money has been certified for payment, payment of the second half of the Retention Money may be madeagainst a Retention Money guarantee.

At the request of the Contractor, we ……..…
…….*(name of agency)* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of…….*(amount in figures)*
……..……..……
…….. *(amount in words)* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is inbreach of its obligation under the Contract because the Contractor has not attended tothe defects in accordance with the Contract.

This guarantee shall expire, at the latest……..……. day of …… 20…….. *(insert 28 days after the end of the Defects Liability Period)* Consequently, any demand for payment under this guarantee must be received by us at this office on orbefore that date.

……
……Signature(s)

SECTION – 3

CONDITIONS OF CONTRACT

Condition of Contract that will be applicable for this Contract is that given in Section III of the Standard Bidding Document for Procurement of Works "ICTAD PUBLICATION NO. – ICTAD/SBD/01" Second Edition January 2007 published by Construction Industry Development Authority (CIDA), "Savsiripaya", 123, Wijerama Mawatha, Colombo 07.

This publication will not be issued with the Bidding Document and the Bidder is advised to purchase it from CIDA.

Conditions of Contract shall be read in conjunction with Contract data provided under Section-5 of the Bidding Document (Volume 2).

VOLUME - 02

INVITATION FOR BIDS

SECTION 04 : FORM OF BID AND QUALIFICATION INFORMATION

SECTION 05 : BIDDING DATA AND CONTRACT DATA

SECTION 06 : SPECIFICATIONS

SECTION 07 : BILL OF QUANTITIES AND DAY WORK SCHEDULES

SECTION 08 : DRAWINGS

SECTION 09 : STANDARD FORMS (BID)

Invitation for Bids (IFB)

CEYLON PETROLEUM STORAGE TERMINALS LIMITED

REPAIRS TO TANK NO. 21

AT KOLONNAWA INSTALLATION

1. The Chairman, Department Procurement Committee, on behalf of the **Chairman, Ceylon Petroleum Storage Terminals Limited, Oil Installation, Kolonnawa** now invites sealed bids from eligible and qualified bidders for **Repairs to Tank No. 21 at Kolonnawa Installation** as described below.
   i. Repairs to the existing tank bottom including weld filling of deep pits, patching up, repairing of defected weld seams, etc.
   ii. Sand/ Grit blast cleaning and painting of the tank exterior, tank bottom, 2m height of bottom most shell course including all accessories.
   iii. Construction of RCC valve chamber and repairs in the existing drain, ring beam and apron.
   iv. The Construction period is 180 calendar days.

2. Bidding will be conducted through **National Competitive Bidding Procedure.**

3. To be eligible for contract award, the successful bidder shall not have been blacklisted and shall meet the following requirements.

   ICTAD (CIDA) registration is required as follows:

Specialty	Grade
Heavy Steel Fabrication	EM2 or EM1

4. Qualification requirements to qualify for contract award include

   i. Experience Required

   Experience as a contractor in construction of at least one new vertical steel petroleum storage tank of capacity not less than 10,000 m^3 conforms to API 650 or at least two repairs (similar nature and complexity) to tank/s of capacity not less than 10,000 m^3 including repairs in tank bottom and entire painting conforms to API 653 during last ten years (to comply with this requirement, works cited should be at least 70 percent complete).

   ii. Average of the annual volume of construction work performed in the last five years shall be at least **Rs. 150,000,000.00 (Rupees One Hundred and Fifty Million).**

   If any bidder's annual volume of construction work performed in year 2019/2020 is far below the average due the pandemic situation, year 2016/2017 can be considered for evaluation upon request of the bidder.

   iii. The minimum amount of liquid assets and /or credit facilities net of other contractual commitments and exclusive of any advance payments which may be made under the contract shall be not less than **Rs. 25,000,000.00 (Rupees Twenty-five Million).**

5. Interested parties may refer the bidding documents ***(only for viewing purpose)*** and obtain necessary information through the website www.cpstl.lk and inspect the bidding documents at the address given below from 0900hrs to1400 hrs of working days .

6. A complete set of Bidding Documents in English language may be purchased by interested bidders on the submission of a written application to **The Manager (Procurement), Procurement Function, Ceylon Petroleum Storage Terminals Limited,1st floor, New Administration Building, Oil Installation, Kolonnawa** from **14.09.2023 until 04.10.2023** from 0900 hrs to 1400 hrs of working days on production of receipt supporting payment of non-refundable Tender fee of **Rs 12,500.00**

7. Bids shall be submitted on the bidding document obtainable from Procurement Function and duly filled bidding documents may be sent by post/courier under registered cover or sealed cover **to reach** the Chairman, Department Procurement Committee, C/o Manager Procurement, Ceylon Petroleum Storage Terminals Limited, Procurement Function, 01st Floor, New Building, Oil Installation, Kolonnawa, Wellampitiya or could be deposited in the tender box kept at the main entrance of CPSTL, on or before **1400 hrs. on 05.10.2023.**

   Bids will be closed at **1400 hrs. on 05.10.2023** and will be opened immediately thereafter at the office of Manager Procurement, in the presence of the authorized only one representative of the bidder who chose to attend

   In case the bidders are unable to submit the original bids as above, they could submit the scanned copy of the duly filled bidding documents in PDF format via email to tenders@cpstl.lk **to reach** on or before **1400 hrs. on 05.10.2023, subject** to following conditions.

   i. Submission of the bid via email is at own discretion of the bidder.

   ii. The title and the closing date of the tender shall be indicated as the subject of the email.

   iii. Size of an email (with attachment) shall be limited to the maximum of 20 MB. In case the size of an attachment exceeds 20 MB, the bidder is requested to split the attachments and send as separate emails (i.e. 01 of 03, 02 of 03 etc.,).

   iv. Do not CC/BCC to any other official/personal email IDs of CPSTL staff. Bids sent to any other email IDs is strictly not entertained.

   v. However, the original bid shall be sent to CPSTL prior to finalize the technical evaluation.

8. Bids shall be valid up to 04.01.2024

9. All bids shall be accompanied by a Bid Security of **Rs. 500,000.00** (Rupees Five Hundred Thousand). Bid Security shall be valid up to 01.02.2024

10. Any of the following party who wishes to submit a bid, shall register himself at the Department of Registrar of Companies www.drc.gov.lk (e-ROC) as per the Public Contracts Act, No. 03 of 1987 for every public contract value exceeding Sri Lankan Rupees **Five million** (**LKR 5,000,000**).

    i. An agent, sub-agent, representative or nominee must be registered **prior to the closing of the Bid/Tender**.
    ii. If the tender applicant and the tenderer is the same party he must be registered prior to the **award of the tender**.

    However, this registration will be verified by CPSTL at the preliminary evaluation of Bids. In case of failure to meet this legal requirement, the Bid shall be rejected.

    Contact details of the Registrar: Department of Registrar of Companies, "Samagam Medura", No. 400, D R Wijewardena Mawatha, Colombo 10 / Tel.: +94-11-2689208 / +94-11-2689209 / Email: registrar@drc.gov.lk (Contact details may vary from actuals & CPSTL does not take any responsibility in this regard)

The address(es) referred to above is (are):

The Chairman,
Department Procurement Committee (Minor)
C/O Manager (Procurement),
Ceylon Petroleum Storage Terminals Limited
Procurement Function,
1st floor, New Administration Building,
Oil Installation,
Kolonnawa.

SECTION – 4

- ***FORM OF BID***
- ***QUALIFICATION INFORMATION***

FORM OF BID

Name of Contract: **REPAIRS TO TANK NO. 21 AT KOLONNAWA INSTALLATION**

To:

The Chairman,
Department Procurement Committee (Minor)
Ceylon Petroleum Storage Terminals Limited,

Gentleman,

1. Having examined the Standard Bidding Document – Procurement of Works (ICTAD/SBD/01 – Second Edition – January 2007), Specifications, Drawings and Bill of Quantities and addenda for the execution of the above – named Works, we/I the undersigned, offer to execute and complete such Works and remedy any defects therein in conformity with the aforesaid Conditions of Contract, Specification, Drawings, Bill of Quantities and addenda for the sum of Sri Lankan Rupees…… ……(LKR…… ……...) or such other sums as may be ascertained in accordance with the said Conditions.

2. We/I acknowledge that the schedule forms part of our Bid.

3. We/I undertake, if our Bid is accepted, to commence the Works as stipulated in the Contract Data, and to complete the whole of the Works comprised in the contract within the time stated in the Contract Data.

4. We/I agree to abide by this bid for the period stated in the Sub-Clause 15 of Instructions to Bidders or any extended period and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

5. Unless and until a formal agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

6. We accept/ we do not accept the Adjudicator.

7. We/I understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this …… day of …….. 2023 in the capacity of …… ……... ……... duly authorized to sign tenders for and on behalf of ….. …… ……...…… …… ……

(IN BLOCK CAPITALS)

Signature :……

Name :……

Designation :……

Address :……

……

Witness :……

QUALIFICATION INFORMATION

(To be completed and submitted by the bidder, with the Bid)

ICTAD Registration		
Registration number	*(attach copies of relevant pages from the registration book)*	
Grade : EM2 or above	..……	
Specialty : Heavy Steel Fabrication	..……	
Expiry Date	..……	
Blacklisted Contractors		
Have you been declared as a defaulted contractor by NPA or any other Agency? (Yes/No)		
(If yes provide details)		
VAT Registration Number	..……	
Construction Program	*(attach as annex in the form of bar chart)*	
Legal status	*(attach relevant status copies, as annex)*	
Value of Construction works performed in last 5 years (average value shall be at least 150 million)	*(attach copies of Certificate of Completion etc. and other documents such as profit-loss and income expenditure statement)*	
Year 2018/2019	LKR ……..	
Year 2019/2020	LKR ……..	
Year 2020/2021	LKR ……..	
Year 2021/2022	LKR ……..	
Year 2022/2023	LKR ……..	
The minimum amount of liquid assets and/or credit facilities net of other contractual commitments and exclusive of any advance payments which may be made under the contract shall be not less than LKR 25,000,000.00	LKR ……..	
Value of similar works completed in last 10 years (indicate only the two largest projects)	1. Value…….. Year……..	
	2. Value…….. Year……..	
Major items of construction equipment proposed	1. Type ……. Capacity ……..	
	2. Type ……. Capacity ……..	
	3. Type ……. Capacity ……..	
	4. Type ……. Capacity ……..	
	5. Type ……. Capacity ……..	
Qualification and experience of key staff – Site & Head Office (Permanent, Contract basis & Consultants)	**Technical**	**Availability with the bidder**
	1. Site Engineer (Mech)	(Yes/No)
	2. Technical Officer (NDT Mech. or equivalent)	(Yes/No)
	3. Welding Supervisor	(Yes/No)
	4. Coating Inspector (NACE Level 2 or equivalent)	(Yes/No)
	(attach copy of CVs as annex)	
Any deviation from the scope of work, specifications drawings, bill of quantities and addenda	(Yes/No) *(If yes provide the details as annex)*	

SECTION - 5

BIDDING DATA & CONTRACT DATA

G. Bidding Data

Instructions to Bidders
Clause Reference

(1.1) The Employer is

Name : The Chairman

Address: Ceylon Petroleum Storage Terminals Limited,
Oil Installation,
Kolonnawa

The work consists of

i. Repairs to the existing tank bottom including weld filling of deep pits, patching up, repairing of defected weld seams, etc.
ii. Sand/ Grit blast cleaning and painting of the tank exterior, tank bottom, 2m height of bottom most shell course including all accessories.
iii. Construction of RCC valve chamber and repairs to the existing drain, ring beam and apron.
iv. The Construction period is 180 calendar days.

(1.2) Intended Completion Date is **180 Calendar Days** from the Start Date.

(1.3) The office for collection of bid forms is

Procurement Manager,
Procurement Function,
Ceylon Petroleum Storage Terminals Limited,
Oil Installation, Kolonnawa.

The non-refundable fee is Rupees **12,500.00**

The Bid forms will be issued from 14.09.2023 up to 04.10.2023 during normal working hours (from 0900 hrs to 1400hrs)

(2.1) The source of funds is **CPSTL**

(4.2) The registration required

Specialty	Grade
Heavy Steel Fabrication	EM2 or EM 1

(4.3) Any Deviation from the scope of work, specifications, drawings, bill of quantities and addenda in the bidding document shall be clearly mentioned in the Bid. Otherwise, the Employer shall proceed with evaluation assuming that the Bidder is adhering to all requirements in the Bidding Document.
The following information shall be provided in Section 4:

* ICTAD Registration;
Registration number

Grade

Specialty

Expiry Date

(Copy of the updated Contractors Record Book to be attached)

* VAT Registration number
* Construction Programme
* Legal Status (Sole proprietor, Partnership, Company etc.)
* Total monetary value of construction work performed for each of the last five years.
* Experience in works of a similar nature for each of the last ten years.
* Major items of construction equipment proposed to carry out the Contract.
* Qualifications and experience of key site management and technical personnel proposed for the Contract;
* List of Country of origin and manufacture of materials supplied by contractor.
* Confirmation letter dated within a month prior to Bid Closing date from a commercial bank operating in Sri Lanka with the authority of a license issued by the Monitory Board (Central Bank of Sri Lanka) on ability to facilitate the credit facility as specified in the Clause 4.4 (iv) in the section 5 for the "Repairs to Tank No. 21 at Kolonnawa Installation"

(4.4)

i. Experience as a contractor in construction of at least one new vertical steel petroleum storage tank of capacity not less than 10,000 m^3 conforms to API 650 or at least two repairs (similar nature and complexity) to tank/s of capacity not less than 10,000 m^3 including repairs in tank bottom and entire painting conforms to API 653 during last ten years (to comply with this requirement, works cited should be at least 70 percent complete).

ii. Average of the annual volume of construction work performed in the last five years shall be at least **Rs. 150,000,000.00 (Rupees One Hundred Fifty Million).**

If any bidder's annual volume of construction work performed in year 2019/2020 is far below the average due the pandemic situation, year 2016/2017 can be considered for evaluation upon request of the bidder.

iii. Following technical and managerial staff:

One Site Engineer with BSc. (Eng.) with minimum two years' experience, one Technical Officer with NDT (mechanical) or equivalent with minimum 05 years' experience shall be assigned to the project full time basis, a welding supervisor shall be assigned when welding is attended and a Coating Inspector with NASE Level 2 or equivalent shall be assigned to the project during the painting. This is the minimum requirement and the successful bidder shall assign all other necessary staff to enable compliance with all other contractual stipulations.

iv. The minimum amount of liquid assets and /or credit facilities net of other contractual commitments and exclusive of any advance payments which may be made under the contract shall be not less

than **Rs. 25,000,000.00 (Rupees Twenty-Five Million).**

(7.1) Site Visit

Prior to submitting a bid, bidders shall familiarize themselves and shall be deemed to have done so. The bidders shall inform Engineering Manager, Engineering Function, Oil Installation, CPSTL, Kolonnawa (Tel. +94-11-2572214, Fax No. 0094-11-2531328) at least 02 days in advance with their names, NIC Numbers/Passport Numbers so that the CPSTL will arrange required permits for the site visit.

The bidders are advised to limit the number of persons, for the visit, due to the security reasons, at the Kolonnawa Installation. Site visit will be permitted during 0830 – 1600 hrs except Sundays and mercantile holidays. The cost of such visits shall be borne by the bidder.

(9.1) Employer's address for the purpose of clarification is;

Name : The Manager (Procurement),
Address : Procurement Function
Ceylon Petroleum Storage Terminals Limited
Oil Installation
Kolonnawa

Telephone: 0112572156
Fax: 0112572155
Email : procure@cpstl.lk

(11.1) The language of the bidding document shall be English.

(13.3) VAT component shall not be included in the rates. The amount written in the Form of Bid shall be without VAT. However, VAT component shall be shown separately at the end of the BOQ.

(13.4) The Contract is subjected to price adjustment in accordance with Clause 47 of the Conditions of Contract.

(15.1) The Bid shall be valid up to **04.01.2024**

(16.1) Bid shall include a Bid Security using the form included in Section 9.

(16.2) Bid Security shall be:

- for an amount **Rs. 500,000. 00 (Rupees Five Hundred Thousand)**
- Valid until 01.02.2024

- Securities and Guarantees shall be on demand guarantees issued by a commercial bank operating in Sri Lanka with the authority of a license issued by the Monitory Board (Central Bank of Sri Lanka).

(17.0) Pre-Bid meeting shall be together with the site visit
- venue: Office of Engineering Managers. / date: **21.09.2023**. /
time: **0930 am**

(19.2) a The Employer's address for the purpose of Bid submission is

The Chairman,
Department Procurement Committee,
Procurement Function.

(19.2) b	Ceylon Petroleum Storage Terminals Limited, Oil Installation, Kolonnawa Contract name: **Repairs to Tank No. 21 at Kolonnawa Installation** Contract No : KPR/36/2023 The deadline for submission of Bids shall be **1400_hrs on 05.10.2023**
(29.1)	Not applicable
(34.0)	The amount of Performance Security is 5% of the Initial Contract Price.
(36.0)	The Adjudicator proposed by Employer shall be **the Institute for Construction Training and Development. (ICTAD)** Fees and types of reimbursable expenses to be paid to the Adjudicator shall be on a case to case basis and shall be shared equally by the Contractor and the Employer.

Contract Data

(Please note that the Clause nos. given hereunder are that of Conditions of Contract)

(1.1) The Employer is
Name : The Chairman,
Address: Ceylon Petroleum Storage Terminals Limited
Oil Installation,
Kolonnawa

Employers Representative
Name : Manager (Procurement),

Address: Ceylon Petroleum Storage Terminals Limited
Oil Installation
Kolonnawa

(1.1) The Engineer is
Name: Engineering Manager

Address: Engineering Function
Ceylon Petroleum Storage Terminals Limited
Oil Installation
Kolonnawa

The work consists of,

i. Repairs to the existing tank bottom including weld filling of deep pits, patching up, repairing of defected weld seams, etc.

ii. Sand/ Grit blast cleaning and painting of the tank exterior, tank bottom, 2m height of bottom most shell course including all accessories.

iii. Construction of RCC valve chamber and repairs in the existing drain, ring beam and apron.

iv. The Construction period is 180 calendar days

The Site is located at Zone 09, Oil Installation, CPSTL, Kolonnawa

(1.1) The Start Date shall be 14 Days from the Letter of Acceptance.

(8.1) Schedule of other contractors**:** None

(9.1) Schedule of Key Personnel:

Minimum persons with qualifications and experience to be defined,

	Technical Designation	**Academic Qualification**	**Experience**
i.	Site Engineer (Mechanical)	BSc (Eng)	2 years
ii.	Technical Officer (Mechanical)	NDT or equivalent	5 Years
iii.	Welding Supervisor	AWS certification or equivalent	3 Years
iv	Coating Inspector	NASE Level 2 or equivalent	3 Years

13.1 The minimum insurance covers shall be

(a) The minimum cover for insurance of the Works and of plant and Materials is **110% of initial Contract Price**.

The maximum deductible for insurance of the Works and of Plant and Materials is **5% of initial contract price**

(b) Contractor's Responsibility.

(c) The minimum cover for insurance of other property (other than the Site) is Rs. **20,000,000.00.**

(d) The minimum cover for personal injury of death, for third party and employees of the Employer and other persons engaged by the Employer in the Works is **Rs. 1,000,000.00** per event.

13.2 (a) A copy of insurance policy for the workmen and other employees of the Contractor as per the Workmen compensation Act shall be forwarded to CPSTL prior to commencement of the work.

(17.1) The Intended Completion Date for the whole of Works shall be **180 days** from the Date of Commencement of Works

(21.1) The Site Possession Date shall be **14 Days** from the Letter of Acceptance

(27.1) The Contractor shall submit a programme for the Works within **14 Days** of delivery of the Letter of Acceptance.

<u>Working Hours</u>

i. Normal working hours of CPSTL from Monday to Friday is from 0730 hrs. to 1630 hrs.

ii. In the work programme Saturday also can be considered as a working day and from Monday to Friday up to 1800 hrs also can be considered as a working hour by the contractor. But to work on Saturday and up to 1800 hrs the contractor is required

to obtain prior permission since the offices are normally closed on Saturdays.

iii. However, working on statutory holidays, Sundays and after 1800 hrs. on working days will not be permitted.

iv. Provided always that provision of above (iii) shall not be applicable in the cause of any work which it is customary to carry out, outside normal working hours by rotary or double shifts.

(27.3) The Programme will be updated **Monthly**

(27.4) The amount to be withheld for late submission of a Programme is Rupees (2% of the Initial Contract Price)

(35.1) The Defects Liability Period is **180** Days.

(39.2) Not Applicable

(46.1) All Payments shall be made in Sri Lanka Rupees. Other currencies are not allowed to quote.

(47.1) (a) The Contract Price is subjected to price adjustment

(b) Input Percentages

No.	CIDA No.	Name of Input	Percentage
1	L1	Skilled Labour	27.6%
2	L3	Unskilled Labour	19.6%
3	M8	Sand	15.5%
4	P1	Small Equipment	22.2%
5	P3	Fuel	5.1%
			90%

(c) Non-Adjustable Elements shall be 1.1, 1.2, 1.3, 1.4, 2.11, 2.25 & 2.31 and dis regarded items shall be 2.10, 2.13, 2.14, 2.16, 2.17, 2.18, 2.19, 2.21, 2.22, 3.1, 3.2, 3.3 & 3.5.

(48.1) The retention from each payment shall be **10%** percent of the certified work done.

The limit of retention shall be **5%** percent of the Initial Contract Price.

(49.1) The liquidated damages for the whole of the Works shall be **0.2% of Initial Contract Price per Day**

(50.1) The maximum amount of liquidated damages for the whole of the Works shall be **10%** of the Initial Contract Price

(52.1) The Performance Security shall be **5 %** of the Initial Contract Price.

(58.1) Schedule of operating and maintenance manuals.

(60.1) The percentage to apply to the value of the work not completed, representing the Employer's additional cost for completing the Works, is **25% of Initial Contract Price.**

63.7 The attendance fee payable to the Contractor on nominated sub-contract work shall not exceed 8%

SECTION 6

❖ ***SPECIFICATIONS***

6.1 Scope of Supply by CPSTL

6.1.1 Carbon steel plates for bottom patched up shall be supplied by CPSTL.

6.1.2 Carbon steel plates required for replacement of the existing draw off sump shall be supplied by CPSTL.

6.1.3 Carbon steel pipes & fittings for replace the existing drain off shall be supplied by CPSTL.

6.1.4 Material transportation from the main stores to the work site and outside facilities are under the 'Contractor's Scope of Work.

6.1.5 Construction Utilities

6.1.3.1 Electricity and drinking water that would be supplied to the contractor to undertake this work would be charged from the contractor as per meter estimate. The prospective contractor is required to indicate his requirements of power & water from the CPSTL in his offer for evaluation purposes.

6.1.3.3 The maximum available electrical power supply available to the contractor is 45kVA, 400V AC, 4 wire (TPN), 50Hz and will be subjected to following 05 conditions.

i. Electrical power supply will be provided by CPSTL on the request of the Contractor and charge according to the applicable tariff system, or the Contractor shall have to arrange his own power source.

ii. The Electrical Section of CPSTL will provide terminating point to feeding cables through a suitable circuit isolating and interrupting devices such as a circuit breaker or a switch fuse at convenient location, within 150 m from the tank shell. This switch gears will remain the property of CPSTL and contractor has no access to it.

iii. The maximum load that the CPSTL electrical section can feed will be 63A, 3 Phases.

iv. Power supply will be energized after inspection by the Electrical Engineer of CPSTL provided all requirements in clause 6.2.18 are satisfied.

v. CPSTL will reserve the right to disconnect the power supply to the contractor without prior notice, if any of the foresaid conditions are violated.

6.1.3.3 Water supply will be provided by CPSTL on the request of the contractor and charge according to the meter.

6.2 Contractor's Scope of Supply

Contractor shall supply construction equipment, materials, consumables, and other requisites complying to the specification as follows.

6.2.1 Supply of all construction equipment such as welding machines, metal cutting equipment, air compressors, cranes, soil compacting and cutting equipment, material transporting vehicles, rigging equipment, jacks, scaffolding materials, planks, corrugated metal sheets, materials for fire blankets, tools and other equipment where necessary.

6.2.2 Supply of all inspection equipment and materials such as X ray machines, pressure/ vacuum testing instruments, chemicals for non-destructive testing and gauges to perform necessary inspection and testing.

6.2.3 Supply of materials for repairs in manholes, vents, dip hatch, nozzles, water drencher system, foam top pourers, foam pipes, etc. as per the specifications given in this document.

6.2.4 Supply of gaskets, nuts & bolts for replacements and boxed up the tank as per the specification given in this document.

6.2.5 Supply of all consumables such as welding electrodes, gas for cutting, grinding discs, temporary erection material, dye penetrant, grit/sand for blast cleaning and all other consumables necessary for the proper execution of the job.

6.2.6 The paint and thinner required for tank interior, exterior with all accessories, stairway and its handrail, foam top pourer system (top pourers & foam pipes) and water drencher system shall be provided by the contractor.

6.2.7 Supply of materials for local repair works to be attended in main stairway and crown handrail.

6.2.8 Supply of 50x50 mm open GI mesh for crown handrail.

6.2.9 Supply of materials for repairs, replacements, and modifications to be attended in the existing pipe crossing structures.

6.2.10 Supply of materials for repairs in the existing drain, apron and ring beam.

6.2.11 Supply of materials for sealing of the tank bottom.

6.2.12 Supply of materials such as reinforcement, cement, sand, angle iron frame, cover plate, etc. for construction of RCC valve chamber.

6.2.13 All direct requirements of field equipment such as fuel, lubrication oil etc. the contractor intends to mobilize at site.

6.2.14 Supply of sand, cement, reinforcement, bitumen, and all necessary material for repairs in the existing drain, apron and ring beam ensuring that proper execution of the job.

6.2.15 Shall submit a bar chart for the total project clearly indicating the various phases of the contract, breakdown of manpower and equipment and organization chart allocated for this contract.

6.2.16 Quality assurance records shall be maintained by the contractor and these records shall be given to Engineer upon completion of each job.

6.2.17 Successful bidder should submit an insurance cover as per “Schedule” under Section -5 of this bidding document.

6.2.18 <u>Construction Utilities</u>

i. Contractor shall use his own feeder cables and temporary power distribution board sufficiently rated to power the equipment and machinery used at site, conforming to CEB regulations in consultation / supervision of Electrical Engineer of CPSTL

ii. Contractor’s power distribution board should consist of adequate over current and earth leakage protective devices for safety of men and machinery.

iii. Contractor shall install the feeder cables from the metering point up to the temporary power distribution board as per the instruction & approval of the CPSTL Electrical Engineer.

iv. It is a responsibility of the contractor to maintain his switch gear and cable network in good condition, so as to provide, complete safety to men and machinery.

v. All portable electrical appliances used inside the tank shall be at low voltage, 110V, 1 Phase and should be fed through a centre earthed transformer.

vi. The whole electrical installation of the contractor should conform to IEE wiring regulations (16th Edition) published by the Institution of Electrical Engineers (I.E.E), London.

6.3 Contractor's Scope of Work and Specifications

The scope of work of the contractor is defined in general and shall include the following, but not limited to the same. The bidder shall also carry out all the related work that are not listed in this document but required for completion of the entire work as specified in this Bidding Document.

6.3.1 All repair work shall conform to API 653 and API 650.

6.3.2 The Contractor shall adhere to all applicable fire and safety regulations within the CPSTL. It is Contractors sole responsibility to maintain records of all approvals and present whenever required.

6.3.3 The Bidder shall check the existing tank design including internal floating roof arrangement, structural rigidity, workspace availability for proposed repairs and ensure the suitability of the proposed methods. Suitability of the methods to be informed to CPSTL in writing. All applicable safety rules and regulations within the CPSTL and the industry should be followed.

6.3.4 The tank would be handed over to the contractor in a clean and gas free state.

6.3.5 All drawings, welding procedures, method statements, time schedules, as built drawings and other related documents shall be prepared and submitted by the contractor. The Engineer will not be allowed to continue the works without availability of approved documents.

6.3.6 Welding Procedure and Welder Qualification

6.3.6.1 Qualification of Welding Procedure

Prepare welding procedure specification (WPS) for all category of welding that are intended to be carried out in tank repair work and perform tests documented by Procedure Qualification Records (PQR) to support the specifications as required by section ix of the ASME code and any additional provisions of API 650 standards.

6.3.6.2 Qualification of Welders

Conduct tests for all welders assigned to manual and semi-automatic welding to demonstrate the welders' ability to make acceptable welds in accordance with section ix of ASME code and API 650 standards.

6.3.7 Repairs to Tank

6.3.7.1 Blasting of the bottom plates for SA 1 1/2 standard for inspection. The existing tank bottom is covered with thick scale of corrosion and it should be removed to identify the bottom defects & repairs.

6.3.7.2 Weld fill and testing of isolated deep pits in the tank bottom as per the directions of the Inspection Engineer (5-10 mm diameter and 4mm depth).

6.3.7.3 Fabricate, weld and testing of patch plates as per the mentioned dimensions. All patch works shall be carried out as per the directions of the Inspection Engineer and estimated quantities can be varied based on the actual observations. It is Contractors sole responsibility to complete the all repair works up to the level of satisfaction of the Engineer.

Approximate Dimensions (mm)	Qty
150 x 150 x 8	50
300 x 300 x 8	25
300 x 600 x 8	20
450 x 600 x 8	20

6.3.7.4 Weld filling and testing of defected weld seams in the tank bottom. The Contractor shall follow the instructions and directions of the Inspection Engineer to complete all repairs.

6.3.7.5 Cut & remove the existing water sump. Fabrication, installation, welding & testing of new water draw off sump (1400 mm dia.).

6.3.7.6 Cut & remove the corroded pipe segments, flanges & pipe supports of the internal draw off pipes as per the directions of the Inspection Engineer.

6.3.7.7 Blasting of the still well pipes (150mm dia.) and supports for SA 1 1/2 standard up to 2m from the tank bottom for inspection. The existing pipe is covered with thick scale of corrosion and it should be removed to identify the repairs.

6.3.7.8 Weld filling and testing of the defected weld seams along the still well pipes as per the directions of the Inspection Engineer.

6.3.7.9 Blasting of the bottom most shell courses up to 2m height for SA 1 1/2 standard for inspection. The existing bottom most shells are covered with thick scale of corrosion and it should be removed to identify the defects & repairs. The tank is equipped with IFR and rim seal of the IFR to be dismantled prior to blasting. Dismantled seal of the IFR to be stored in a safe location. The Contractor shall implement adequate safety precautions to avoid any potential damages to the existing IFR. The seal shall be re fix after attending minor repairs to the seal, if required (The Contractor shall supply the all materials where necessary). The Contractor shall submit a method statement and obtain the approval from the Engineer prior to commence.

6.3.7.10 Weld fill and testing of the isolated deep pits and decayed weld seams in 2m from the bottom most shell as per the directions of the Inspection Engineer.

6.3.7.11 Dismantle, repair and rerouting of cables of the existing level gauge as directed by the Engineer.

6.3.7.12 Supply, fabricate, weld and testing of the corroded flanges of 4" diameter in the existing fire water pipeline.

6.3.7.13 Supply, fabricate, weld and testing of the corroded flanges of 8" diameter in the existing fire water pipeline.

6.3.7.14 Supply & replace the gaskets, studs and bolts of the existing shell manholes. Existing studs and bolts to be cleaned and handed over to the CPSTL.

6.3.7.15 Removal of the existing pipe segments of the drain offs. Fabricate, weld, testing and install a new drain offs as per the directions of the Engineer. The Contractor shall supply & replace the corroded studs & bolts along with gaskets.

6.3.7.16 Dismantle, Inspect, Supply, Repair, Testing, Commissioning and Painting of top pourer system (3 no of top pourers). The exiting top pourers are subjected to corrosion. Top pourers to be repaired by supplying all required materials as per the directions of the Inspection Engineer.

6.3.7.17 Supply and replace nuts & bolts of existing rim air vents.

6.3.7.18 Supply, fabricate & fixing of 50x50 mm open GI mesh on crown handrail near the dip hatch area.

6.3.7.19 Remove and fabrication of the existing pipe crossing structure (Type 01 – Refer Drawing No.- 1882). The Contractor shall supply materials, fabricate, welding and painting of a new pipe crossing structure same to the exiting one. The leg bases shall be concreted and exiting grating can be used after obtain confirmation from the Inspection Engineer.

6.3.7.20 Supply, repair/ replace & painting of the existing pipe crossing structures (Type 02. & Type 03 – Refer Drawing No.- 1882) as directed by the Engineer. Leg bases of the existing structures shall be concreated.

6.3.7.21 Supply materials and complete minor repair works to be attended in existing tank nozzles, shell manholes and shell attachments as instructed by the Engineer.

6.3.7.22 Tank shell interior, tank bottom, newly fabricated draw off sump (Including tank internal piping) shall be grit/sand blast cleaned and painted as per the specifications given in 6.3.9.1. Stripe coatings to be applied along the all weld seams.

6.3.7.23 Tank shell exterior including all accessories (Foam Top Pourers, Foam Pipes, Fire Water Pipes, Pipe Supports etc) shall be grit/sand blast cleaned and painted as per the specifications given in 6.3.9.2. The Contractor shall dismantle the foam and fire water pipes along the tank shell & roof. Re fix them after repairs and painting. Painting of pipes are not limited to the pipe which are along the tank and it is required to paint the pipes along the apron and tank farm.

6.3.7.24 The roof exterior and all roof accessories (Centre Air Vent, Rim Air Vents, Manholes, Fire Water Pipes, etc) shall be grit/sand blast cleaned and painted as per the specifications given in 6.3.9.2.

6.3.7.25 Grit/Sand blast cleaning & painting of spiral stairway & crown handrail as per the specifications given in 6.3.9.3.

6.3.7.26 Grit/Sand blast cleaning & painting of pipeline crossings, walkway platform & valve operating platform with all attachments as per the specifications given in 6.3.9.3.

6.3.7.27 Minor repairs to the existing concrete apron, circular drain, and existing drainage system in the tank farm. The work shall include cleaning of the entire drainage system, tank farm by removal of accumulated soil, weeds, debris and other contaminants in tank farm area.

6.3.7.28 Construction of new RCC valve chamber (internal size of 1000x1000x1500 mm) for interceptor as per drawing. Rate shall include for excavation, screed concreting, 100 mm thick base & wall concrete with C25, reinforcement with 10mm bars @ 150mm broth side, formwork, and cover plate with 25x25x5 mm angle iron frame. Connections between the valve chamber and the interceptor to be provided as directions of the CPSTL Civil Engineer.

6.3.7.29 Fill the premix layer between the tank projection plate and tank apron using river sand mixed with hot bitumen (80%-100% penetration grade) and percentage of bitumen used should be 5% by weight of sand. The mix to be filled hot and compacted in the areas of damaged as instructed by the Engineer.

6.3.7.30 Sealing of the Tank Bottom Against Corrosion.

Grit/ Sand blast cleaning of minimum height of 250 mm of the bottom most shell course of the shell exterior and apply breathable microporous membrane to seal the tank bottom. Proposed sealing system shall be covered the 250 mm height of bottom most shell, projection plate and 150 mm width of the apron. Thickness of the coating system shall be complying with the applicable standards and manufacturers recommendations. The membrane system shall be inspected as per the directions of the Inspection Engineer. The Contractor shall provide a warrantee of minimum 5 years for the proposed system and any defects encountered during the warranty period should be rectified at free of charge. The proposed materials, method statement, inspection test plan should be submitted to the approval of the Engineer prior to commence. The CPSTL has right to accept or reject any of the materials or the workmanship during the construction when encounter any noncompliance.

6.3.7.31 Tank shall be marked as "TANK NO 21, CAPACITY 21,324 m^3" as per the drawing.

6.3.7.32 Tank shall be calibrated.

6.3.7.33 Tank shall be boxed up.

6.3.7.34 The Contractor must be obtained the prior approval for all the materials to be supplied to ensure the material specifications are complying with the section 6.3.16 in the bidding document via material approval form. Any unapproved material find during the period of construction will be rejected.

6.3.8 Testing and Inspection

6.3.8.1 All inspection and testing of the tank bottom welds shall be arranged by the contractor as per the requirements of API 650 and API 653.

6.3.9 **Painting**

6.3.9.1 a) **Painting of Underside of the New Drain Off Sump**

The underside of newly fabricated draw off sump shall be painted after grit/sand blast cleaning specified under clause 6.3.9.4. Application of paint and obtaining of approval for painting shall be carried out as described in clause 6.3.9.5.

Paint preparation & application shall comply with manufactures data sheet.

Description	hickness	Coat
SIGMA COVER 280 (PDS 7417) or SIGMA COVER 522 (PDS 7420) or equivalent	75 microns DFT	Primer
SIGMA COVER 300 Brown (PDS 7422) or equivalent	150 microns DFT	ermediate
SIGMA COVER 300 Black (PDS 7422) or equivalent	150 microns DFT	Finish
Required overall paint thickness	375 microns DFT	
Sigma solvent – Thinner 91-92 or equivalent or as specified in manufactures data sheet.		

b) Painting of Tank Interior

The entire bottom of the tank interior draw off pipes with supports, the bottom most shell course up to 2-meter height from the bottom to be painted after grit/sand blast cleaning specified under clause 6.3.9.4. Application of paint and obtaining of approval for painting shall be carried out as described in clause 6.3.9.5.

Paint preparation & application shall comply with manufactures data sheet.

Description	Thickness	Coat
SIGMA COVER 280 Yellow Green (PDS 7417) or equivalent	75 microns DFT	Primer
SIGMAGUARD 720 (EHB) GREEN or LIGHT GREY (PDS 7433) or equivalent	150 microns DFT	Intermediate
SIGMAGUARD 720 (EHB) GREEN or LIGHT GREY (PDS 7433) or equivalent	150 microns DFT	Finish
Required overall paint thickness	375 microns DFT	
Sigma solvent – Thinner 91-92 or equivalent or as specified in manufactures data sheet.		

6.3.9.2 **a) Painting of Tank Exterior**

The roof external surfaces with all attachments (Internal Ladder Access Manhole with Box, Dip hatch, Roof manholes, Center vent, Rim air vents with mounting brackets, etc.) and tank shell exterior shall be painted after grit/sand blast cleaning specified under clause 6.3.9.4 as per following painting system. Application of paint and obtaining of approval for painting shall be carried out as described in clause 6.3.9.5.

Paint preparation & application shall comply with manufactures data sheet.

Description	Thickness	Coat
SIGMA COVER 280 – Yellow Green (PDS -7417) or equivalent	60 microns DFT	Primer
SIGMACOVER 456 Grey 5163 Light (PDS 7466) or equivalent	75 microns DFT	Intermediate
SIGMA DUR White 7000 (PDS 6824) or equivalent	75 microns DFT	Finish
Required overall paint thickness	210 microns DFT	
Sigma solvent – Thinner 91-92 or equivalent or as specified in manufactures data sheet.		

Note:

1 m band on tank exterior of bottom most shell course (above the sealed membrane if applied) shall be painted with additional 100 microns intermediate coat before finish coat to accomplish total overall thickness of 310 microns.

Tanks shall be marked with tank identification number and CPSTL logo as directed by the Engineer (Refer the Drawing No. 1879).

b) Painting of the Foam Top Pourer System

Water drenching system shall be painted after grit/sand blast cleaning or hot dipped galvanized specified under the clause 6.3.9.4 as per following painting system. Application of paint and obtaining of approval for painting shall be carried out as described in clause 6.3.9.5.

Paint preparation & application shall comply with manufactures data sheet.

Description	Thickness	Coat
SIGMA COVER 280 – Yellow Green (PDS -7417) or equivalent	60 microns DFT	Primer
SIGMA COVER 456 GREY (PDS -7466) or equivalent	100 microns DFT	Intermediate
SIGMA DUR 550 Yellow RAL 1003 or equivalent	50 microns DFT	Finish
Required overall paint thickness	210 microns DFT	
Sigma solvent – Thinner 21-06 or equivalent or as specified in manufactures data sheet.		

c) Painting of the Water Drencher System

Water drenching system shall be painted after grit/sand blast cleaning or hot dipped galvanized specified under the clause 6.3.9.4 as per following painting system. Application of paint and obtaining of approval for painting shall be carried out as described in clause 6.3.9.5.

Paint preparation & application shall comply with manufactures data sheet.

Description	Thickness	Coat
SIGMA COVER 280 – Yellow Green (PDS -7417) or equivalent	60 microns DFT	Primer
SIGMA COVER 456 GREY (PDS -7466) or equivalent	100 microns DFT	Intermediate
SIGMA DUR 550 Red RAL 3000 or equivalent	50 microns DFT	Finish
Required overall paint thickness	210 microns DFT	
Sigma solvent – Thinner 21-06 or equivalent or as specified in manufactures data sheet.		

6.3.9.3 **Painting of Stairway, Pipe Crossing Structures & Valve Operating Flat Foams**

The Stairway and its handrail, crown handrail and steel structures for access over pipelines shall be painted according to their standard color codes (structure – black, handrail – yellow) as follows after grit/sand blast cleaning specified under clause 6.3.9.4. Application of paint and obtaining of approval for painting shall be carried out as described in clause 6.3.9.5. The paint is to be recommended to apply by brush or Airless Spray.

Description	Thickness	
SIGMA COVER 280 – Yellow Green (PDS -7417) or equivalent	60 microns DFT	Primer
SIGMA COVER 456 GREY (PDS -7466) or equivalent	100 microns DFT	Intermediate
SIGMA DUR 550 Black or SIGMA DUR 550 Yellow or equivalent	50 microns DFT	Finish
Required overall paint thickness	210 microns DFT	
Sigma solvent – Thinner 21-06 or equivalent or as specified in manufactures data sheet.		

6.3.9.4 Surface Preparation

All the surfaces which are to be grit blast cleaned shall conform to Swedish Standard SA 2½. All the surfaces which are to be power brush cleaned shall conform to Swedish Standard St 3.

6.3.9.5 Details of application and approval

6.3..9.5.1 All painting work shall be done as per the manufactures' "datasheet". The whole area specified above to be painted with primer, intermediate and finish paint. The primer paint, intermediate and finish coats are recommended to apply by Airless spray.

6.3..9.5.2 Required total DFT indicated in specifications to be applied and the first coat of Paint shall be applied as soon as possible after surface preparation is approved by Engineer. The preparation of paint before application is to be done as per the instructions stated by the paint manufacturer.

6.3..9.5.3 Time interval between two coatings shall comply with paint manufactures instructions.

6.3..9.5.4 The Engineer reserves the authority to accept or reject.

a. Prepared surface before painting depending on his observations.

b. Application of paint depending on the preparation of paint and the weather.

Painting carried out under doubtful weather condition is the responsibility of contractor. If any painting is found to be unacceptable the particular surfaces shall be made paint free and repainted at contractor's expense.

6.3.10 Erection of Scaffolding

Scaffolding should be erected to the approval of the safety department of CPSTL as follows:

6.3.10.1 Should be of steel pipes and couplings, toe plates, platforms etc.

6.3.10.2 Thickness of 2" timber planks to be used for the platform and to be properly fastened at both ends.

6.3.10.3 Ladders should be provided from the ground to the platform.

6.3.10.4 After erecting the scaffolding, the contractor should obtain a written approval from the safety department of CPSTL before commencement of the work.

6.3.10.5 Approval for the screening for grit blasting to be obtained from Fire & Safety Department of CPSTL after erection of scaffolding and prior to the grit/ sand blasting.

6.3.10.6 A temporary screening for grit/ sand blasting shall be erected to cover each sides of the tank using scaffolding and suitable materials for the purpose. It should be in a height of at least 1.5 meter beyond the tank roof starting from the ground. It should be erected in such a way as to give positive fire isolation. Further pipe rack running by the tank and all valves should be covered by a fire blanket.

6.3.11 Erection of Temporary Fire Barrier and Fire Blanket

A temporary fire barrier/ blanket shall be erected to cover nearby tanks as required using corrugated metal sheets/tar fouling. It should be in a height of at least 1.5 m beyond the tank roof top position. Starting level of fire barrier/blanket shall be tank apron. However, it shall be approved by CPSTL. It should be erected in such a way as to give positive fire isolation/prevent dust

elimination during the blasting. Further pipe racks running by the tank and all valves should be covered by a fire blanket.

6.3.12 Calibration of the Tank

After successful completion of repair work and painting, the tank shall be calibrated. The calibration and tabulations should conform to API 2550, ASTM 1220. The tank calibration should be carried out using one of the following methods by a third-party company acceptable to CPSTL.

- MPMS Ch. 2.2B – Calibration of Upright Cylindrical Tanks using the Optical Reference Line Method (ORLM)
- MPMS Ch. 2.2C – Calibration of Upright Cylindrical Tanks using the Optical Triangulation Method (OTM)
- MPMS Ch. 2.2D – Calibration of Upright Cylindrical Tanks using the internal Electro Optical Distance Ranging Method (EODRM)

MPMS (Manual of Petroleum Measurement Standards)

The name and address of the 3rd party company should be given in the bid for evaluation purposes.

The contractor shall submit three sets of certified calibration tables and soft copy in the form of spread sheets to the Engineer on or before successful completion of the work.

6.3.13 Box up the Tank

After completion of all works specified the tank shall be boxed up and handed over for operational purposes. Materials for tank box up to be supplied by the Contractor.

6.3.14 Site Cleaning

6.3.14.1 Work site, tank interior, tank exterior and tank farm shall be cleaned and maintained properly until it is handed over to CPSTL.

6.3.14.2 Tank inside, tank exterior and tank farm (including wastes which were available in the site) shall be cleaned after completion of the works and all removed material shall be dumped at a location inside the premises as directed by the engineer.

6.3.14.3 Existing excess materials such as blasting sand, construction debris, excavated soils, etc shall be removed from the site as directed by the Engineer.

6.3.14.4 Vegetation inside the entire tank farm shall be cut and dump at a location inside premises before handing over the tank.

6.3.15 Tank Details

Tank Capacity	: 21, 324 m^3
Tank Diameter	: 41.04 m
Tank Height	: 17.06 m
Type of the Tank	: Fixed / Cone roof, welded, Steel, Vertical Storage Tank at Kolonnawa Installation, CPSTL
Status	: Without product

Product : Gasoline

6.3.16 Specifications of Materials

All materials supplied by the contractor should have origin and manufacture in European, Japanese, USA or South African

6.3.16.1 Carbon Steel Line Pipes

i. Length 5.8m, seamless and Bevel Ends (BE)
ii. Material shall conform to API Standard 5L-Gr B or ASTM A 106 B.
iii. Dimensions shall conform to ANSI B 36.10 SCH 40
iv. Identification: - Heat/Batch number, SCH number, API or ASTM number, seamless and material description shall be marked on the pipes.
v. Both ends of pipe should have protective sleeves.
vi. Valid mill test certificate should be supplied with Heat/Batch numbers or any other reference number marked on pipes as well as in the certificates to check once the items are delivered to CPSTL Kolonnawa with reference to the items against the Mill Certificate.

6.3.16.2 Carbon Steel fittings (Elbows, Reducers)

i. Bevel ends (BE)
ii. Material shall conform to ASTM A 234 Gr. WPB.
iii. Dimensions shall conform to ANSI B 16.9, SCH40
iv. Identification: - SCH number, ASTM number and material description shall be marked on the elbows and reducers.
v. Valid mill test certificate should be supplied with Identification number or any other reference number marked on elbow as well as in the certificates to check once the items are delivered to Ceylon Petroleum Storage Terminals Limited Kolonnawa with reference to the items against the Mill Certificate.

6.3.16.3 Carbon Steel Flanges

i. Class 150, Slip on, Raised Face (RF)
ii. Material shall conform to ASTM A 105 Normalized.
iii. Dimensions shall conform to ANSI B 16.5.
iv. Identification: - ASTM number, ANSI Number, Class and material description shall be marked on the flange.
v. Flange should be marked with the ASTM specification grade identification symbol and ASTM specification number.
vi. Valid mill test certificate should be supplied with identification numbers or any other reference number marked on flanges as well as in the Certificate to check once the items are delivered to CPSTL Kolonnawa with reference to the items against the Mill Certificate.

6.3.16.4 Gasket Materials

i. Maximum Working Pressure - 225 psi
ii. Nominal Working Temperature - 45^{o}
ii. Thickness - 3 mm
iii. To use as packing for flanges of pipelines and tank manholes for petroleum refined products such as Gasoline, Gas oil, Fuel Oil and Aviation Turbine.
iv. Gaskets should conform to BS 7531 or equivalent.
v. Each sheet of jointing shall be indelibly marked with the number of British Standard and manufacturer's identification mark

6.3.16.5 Angle Iron

i. Material: ASTM A 36

ii. Size: As specified in the drawing and as existing in the tank
iii. Valid mill test certificate shall be supplied

6.3.16.6 Nuts and Bolts

i. Material of bolts to be conformed to ASTM A 193 Gr.B 07 or BS 1506-621 Gr.A and materials of nuts shall conformed to ASTM A 194 Gr. 2H.
ii. Threads should be in accordance with ANSI B 1.1 Class 2A for bolts and class 2B for nuts.
iii. Identification marks shall be available on items to conform above standards.

6.3.16.7 GI Pipes

Grade : Heavy Duty

Size : As existing in the tank

6.3.16.8 Flat Iron

Material: ASTM A 36
ii. Size: As existing in the tank
iii. Valid mill test certificate shall be supplied

6.3.16.9 C Channel

Material: ASTM A 36
ii. Size: 205x100x9 mm and as existing in the tank
iii. Valid mill test certificate shall be supplied

SECTION - 7

BILL OF QUANTITIES

BILL OF QUANTITIES
CEYLON PETROLEUM STORAGE TERMINALS LIMITED
JOB: REPAIRS TO TANK NO 21 AT KOLONNAWA INSTALLATION

BOQ No: E/20/2023

Item	Description	Unit	Quantity	Rate (Rs.)	Amount (Rs.)
	Note: **Contractors are strictly advised to visit the site & follow the given details, sketch drawings, specifications before bidding & before commencing the works. If any discrepancies should be forwarded to the Engineering Manager of CPSTL Kolonnawa before commencement of such works. Scope of the work is not limited to the content in the BOQ items and refer all specifications in section 6, drawings, standards, rules and regulations, etc.** **Construction work to be carried out without damaging existing drains, pipes and other CPSTL properties. if any damages occur, contractor should repair by own cost according to the Engineer's or his representative's instructions.**				
1	**PRELIMINARIES**				
1.1	Mobilization and demobilization	Item	1.00		
1.2	Site cleaning and maintaining the tank farm area. Rate shall be included for removal of all debris, abandoned pipes, angle iron sections, removal of vegetations, etc.	Item	1.00		
1.3	Supply, fixing, maintaining & dismantling of external scaffolding.	Item	1.00		
1.4	Supply, fixing, maintaining & dismantling of protection cover/fire barrier around the crown handrail for roof & shell panting.	Item	1.00		
	Total amount carried to summary				

Item	Description	Unit	Quantity	Rate (Rs.)	Amount (Rs.)
2	**MECHANICAL WORK**				
2.1	Blasting of the bottom plates for SA 1 1/2 standards for inspection.	m^2	1,330.00		
2.2	Isolated deep pits to be weld filled as per specification in the tank bottom (5-10 mm diameter and 4mm depth)	nr.	500		
2.3	150 x 150 x 8 mm (approximate size) patch plates to be welded to the cluster pits areas of tank bottom (CS plates supply by CPSTL).	nr.	50		
2.4	300 x 300 x 8 mm (approximate size) patch plates to be welded to the cluster pits areas of tank bottom (CS plate supply by CPSTL).	nr.	25		
2.5	300 x 600 x 8 mm (approximate size) patch plates to be welded to the cluster pits areas of tank bottom (CS plate supply by CPSTL).	nr.	20		
2.6	450 x 600 x 8 mm (approximate size) patch plates to be welded to the cluster pits areas of tank bottom (CS plate supply by CPSTL).	nr.	20		
2.7	Defected weld seams of the tank bottom to be weld filled as directed by the Engineer	m	125		
2.8	Fabrication, installation, welding & testing of water sump (1400 mm dia.) and replace the corroded pipes of tank internal drainage. Rates shall include for cut & remove the existing damaged sump, pipes & associated works.	Item	1		
2.9	Blasting of the still well pipes (150mm dia.) & supports for SA 1 1/2 standards for inspection.	m	2		
2.10	Defected weld seams of dip well pipe to be repair as directed	m	0.50		

Item	Description	Unit	Quantity	Rate (Rs.)	Amount (Rs.)
2.11	Blasting of the bottom most shell courses up to 2m height for SA 1 1/2 standards for inspection.	m^2	270		
2.12	Isolated deep pits in the tank shell to be weld filled (5-10 mm diameter and 5mm depth)	nr.	75		
2.13	Linearly corroded areas in the tank shell to be weld filled (6mm width 150mm long and 5mm depth).	nr.	30		
2.14	Re-routing of cables of automatic level gauge as per Engineer's instruction.	Item	1		
2.15	Supply and Replace 4" dia. flanges at fire water pipeline (If required)	nr.	6		
2.16	Supply and Replace 8" dia. flanges at fire water pipeline (If required).	nr.	4		
2.17	Supply & Replace studs, bolts, and gaskets of the existing shell manholes	nr.	3		
2.18	Modifications to the existing of drain off as per Engineers instructions	Item	1		
2.19	Dismantle, Inspect, Repair, Testing & Commissioning and Painting of top pourer system	Item	1		
2.20	Supply and replace nuts & bolts of existing rim vents	Item	1		
2.21	Supply & fixing of 50x50 mm open GI mesh on crown handrail	m^2	2.4		
2.22	Removing and refabricating of the existing pipe crossing structure (Type 01). Rate shall include for supplying, cutting, welding, painting of angle irons of the structure & concreting of leg bases as per drawing. (existing gratings can be re used)	Item	1		

Item	Description	Unit	Quantity	Rate (Rs.)	Amount (Rs.)
2.23	Repairing works in the existing pipe crossing structure (Type 02. & Type 03). Rate shall include for supplying, cutting, welding, painting of defected structural components & concreting of leg bases. <u>Painting Work</u>	Item	1		
2.24	Supply of paints for painting of tank bottom, shell interior, roof exterior with accessories, shell exterior and spiral stairways with its handrails.	Item	1		
2.25	Grit/ Sand blasting & painting of tank bottom, dip well pipe, internal pipes and 2m height of bottom most shell (Stripe Coating to be applied along weld seams)	m^2	1610		
2.26	Grit/Sand blasting and Painting of roof exterior and accessories (Manholes, Center Vent, Rim Air Vents, Fire Water Pipes) including tank labelling.	m^2	1335		
2.27	Grit/Sand blasting and Painting of shell exterior with accessories (Pies of foam system and fire water) including tank labelling.	m^2	2410		
2.28	Grit/Sand blasting and Painting of stairway with handrail, structure and crown handrail with attachments	m^2	135		
2.29	Grit/Sand blasting and Painting of pipeline crossings, walkway platform, valve operating platform with attachments.	m^2	30		
2.30	Calibration of the tank including supply of 3 copies of calibration reports and soft copy in the form of Excel spread sheet.	Item	1		
	Total amount carried to summary				

Item	Description	Unit	Quantity	Rate (Rs.)	Amount (Rs.)
3	**CIVIL WORK**				
3.1	Cleaning of existing drain around the tank apron.	Item	1.00		
3.2	Filling the tank apron expansion joint by using Asphalt concrete. Rate shall include for removing and cleaning of the existing expansion joints.	m	535		
3.3	Sealing of the tank bottom along the periphery of projection plate as per the specifications.	m	129.93		
3.4	Construction of RCC valve chamber (internal size of 1000x1000x1500 mm) for interceptor as per drawing. Rate shall include for excavation, screed concreting, 100 mm thick base & wall concrete with C25, reinforcement with 10mm bars @ 150mm broth side, formwork, and cover plate with 25x25x5 mm angle iron frame.	Item	1		
3.5	Minor repairs in existing drain, ring beam and apron.		1		
	Total amount carried to summary				

SUMMARY OF BOQ No: E/20/2023

	DESCRIPTION	AMOUNT (Rs)
1.	PRELIMINARIES	…….
2.	MECHANICAL WORK	…….
3.	CIVIL WORK	…….
	SUB TOTAL I	
	DISCOUNT IF ANY	( )
	SUB TOTAL II	
	SSCL (2.5%)	…….
	TOTAL CARRIED TO "FORM OF BID"	
	VAT. (15%)	…….
	TOTAL AMOUNT WITH VAT.	

VAT Registration No. : - …….

Total amount in words: - …….....

……..……..……..……..……

Name of Bidder :- …...……..

……..……..

Address:-

…….

….……...……...……

..……

…….. ……

Signature of Bidder Date

SECTION – 8

DRAWINGS

1. Assembly Drawing of Tank No. 21(45-1202-A2-21001)
2. Detail Drawing (Dwg. No. 1882)
3. Detail of Existing Draw off Sump
4. Details of the RCC Valve Pit (Dwg. No. 1882 - 1)
5. Details of Tank Marking (Dwg. No. 1879)

SECTION – 9

STANDARD FORMS (BID)

FORM OF BID SECURITY

[this Guarantee form shall be filled in accordance with the instructions indicated in brackets]
---------- *[insert issuing agency's name, and address of issuing branch or office]*

Beneficiary: *……[insert(by PE) name and address of employer]*

Date: ---------- *[insert (by issuing agency) date]*

BID GUARANTEE No.: ---------- *[insert (by issuing agency) number]*
We have been informed that ---------- *[insert (by issuing agency) name of the Bidder]* (hereinafter called "the Bidder") has submitted to you its bid dated ----------*[insert (by issuing agency) date]* (hereinafter called "the Bid") for the ……. of *[insert name of Contract]* under Invitation for Bids No. ---------- *[insert IFB number]* ("the IFB").

Furthermore, we understand that, according to your conditions, Bids must be supported by a Bid Guarantee.
At the request of the Bidder, we ---------- *[insert name of issuing agency]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ---------- *[insert amount in figures]* ---------- *[insert amount in words]* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

(a) has withdrawn its Bid during the period of bid validity specified; or

(b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or

(c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Form, if required, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This Guarantee shall expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the Contract signed by the Bidder and of the Performance Security issued to you by the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of the successful bidder furnishing the performance security, otherwise it will remain in force up to ---------- *(insert date)*
Consequently, any demand for payment under this Guarantee must be received by us at the office on or before that date.

_____
[signature(s) of authorized representative(s)]

CHECK LIST FOR BIDDERS

Bidders are advised to fill the following table.

ITEM	ITB Clause	YES (tick)	REFERENCE
Form of Bid			
Addressed to the Employer?	18		
Completed?	18		
Signed?	18		
Bid Securing Declaration Form (if required)			
Properly filled and signed	16		
Bid Security (if required)			
Address to the Employer?	16		
Format as required?	16		
Issuing Agency as specified?	16		
Amount as requested?	16		
Validity 28 days beyond the validity of Bid?	16		
Qualification Information			
All relevant information completed?	4		
Signed?	4		
Addendum			
Contents of the addendum (if any) taken into account?	10		
Bid package			
All the documents given in ITB Clause 12 enclosed in the original and copy?	12		
ITB Clause 19 followed before sealing the Bid package?	19		