



CEYLON PETROLEUM CORPORATION
(Established by Parliamentary Act Number 28 Of 1961)

BID DOCUMENT

FOR

REPAIRING OF TANK NO 37

TENDER NO- PL/54/2017

CHAIRMAN - DPC

CEYLON PETROLEUM CORPORATION

P.O.BOX: 11

REFINERY DIVISION

SAPUGASKANDA

SRILANKA.

GENERAL INFORMATION

CLIENT : CEYLON PETROLEUM CORPORATION

**MAILING ADDRESS : REFINERY DIVISION
P.O BOX: 11
SAPUGASKANDA
KELANIYA
SRI LANKA**

TELEPHONE : 0094-11-5668564 / 0094-011-2401359

FAX : 0094-11-2401359 / 0094-11-2400431

Email : ref.planning@ceypetco.gov.lk

**CONTACT PERSON : Mr. G.D.S. KUMARASIRI
DEPUTY ENGINEERING MANAGER
(PLANNING)**

<u>Contents</u>	<u>Page</u>
1. Instructions to Bidders	4
1.1 Introduction	4
1.2 Basis of Contract	4
1.3 Basis of Bid	4
1.4 Invitation to Bid Document	5
1.5 Bid Security Guarantee	6
1.6 Bidding Instructions	6
1.7 General Information to be Included in the Bid	6
1.8 Acknowledgement	7
1.9 Amendments/Clarifications	7
1.10 Closing of Tenders	8
1.11 Opening of Bids	9
1.12 Period of Validity of Bid	9
1.13 Manpower and Resource Schedule	9
1.14 Rights of Tender Board	9
1.15 Local Agents	10
1.16 Climatic Data	10
1.17 Business Registration & Public Contract Registration	10
2. Conditions of Contract	10
2.1 Performance Guarantee	10
2.2 Schedule of Payment	11
2.3 Tax Liabilities	11
2.4 Part Payment/ Retention Money	11
2.5 Liquidated Damages	12
2.6 Defaulting Contractors	12
2.7 Project Schedule	12
2.8 Termination of Contract	12
2.9 Guarantees	12
2.10 Force Majeure	12
2.11 Safety Regulations & Regulations for the Prevention of Fire	13
2.12 Security Clearances	15
2.13 Arbitration	15
3. Scope of Supply, Scope of Work and other Technical Specifications	15
3.1 Scope of Supply by CPC	15
3.2 Scope of Supply by Contractor	16
3.3 Contractors Scope of Work	16
3.4 Technical Specifications/ Codes/ Standards	19
3.5 inspections and testing	22
3.6 Construction Drawing List	22
3.7 Standard Specification for Scaffolding	22
4. Contract Forms	26
• Schedule 'A' – Tender and Schedule of Prices	26
• Schedule 'B' – Format of Bid Security Guarantee	28
• Schedule 'C' – Format of Advance Payment Guarantee	29
• Schedule 'D' – Format of Performance Guarantee	30
• Schedule 'E' – Form of Agreement	31
• Schedule 'F' – Compliance / Deviation Sheet	32

1. INSTRUCTIONS TO BIDDERS

1.1 INTRODUCTION

Department Procurement Committee (Minor) [herein after called DPC(Minor)] on behalf of Ceylon Petroleum Corporation, Refinery Division (CPC), hereby invites bids from Local & International firms (herein after called bidders) having experience in the construction & maintenance repairs of Petroleum oil storage steel tanks as per the API Standards 650/653, for Repairing of Tank no 37 as per the API Standard 650/653 latest edition & this Invitation to Bid (ITB) document, along with complete sets of construction drawings and with inspection monitoring by CPC. This Fixed Roof Type Crude oil Storage Tank No. 37 of Diameter 18.28 m and height 14.63m is situated at the Oil Refinery premises situated at Sapugaskanda, Kelaniya, Sri Lanka.

- 1.1.1 Bid documents will be issued to bidders who produce documentary evidence from clients of carrying out tank construction work in the past 5 years as main contractor and registration with Institute for Construction Training & Development (ICTAD) Sri Lanka at **Grade EM3** (ICTAD construction revision June 2015 or above. Also the bidder must produce documentary proof that a consultant or an engineer who is conversant with API standard 650/653 could be assigned for this construction work.
- 1.1.2 In case of a joint collaboration of a local registered company with a foreign party either, The local company should fulfill requirements under clause 1.1.1 or

Foreign company shall have documentary evidence as proof of having prior experience in the past five years as main contractor carrying out at least one large steel tank construction work according to API standard 650/653 Latest editions of a value not less than US\$ 500,000/=
- 1.1.3 All bidders must produce documentary proof that a Consultant or an Engineer who is conversant with API code 650/653 could be assigned for this construction work and a Graduate Mechanical Engineer with experiences in steel fabrication shall be available full time at site.
- 1.1.4 The tank site is located at CPC Refinery at Sapugaskanda, Kelaniya, Sri Lanka, and 17 Km by road from Colombo, Sri Lanka.

1.2 BASIS OF CONTRACT

- 1.2.1 The contract will be carried out on a lump sum fixed price basis and measure and pay basis. The total value for completion of the entire job as per the scope of work in this Bidding document, according to API 650/653, of the fixed Roof Type fuel Oil Storage Tank of diameter 18.28 m and height 14.63m, should include VAT, NBT, Withholding Tax and all local taxes, employee provident fund and insurance of construction labor, supervision, any local agency fees, commissioning costs, transportation costs, cost of construction equipment, & consumables etc... CPC will be supplying all steel plates and other material needed for the construction as described under "Scope of Supply by CPC" in clause No. 3.1.
- 1.2.2 The binding contract will have to be entered into with CPC & the contractor.
- 1.2.3 The contractor shall not subcontract any part of the works or purchases without the prior consent of CPC. The contractor shall be responsible for the acts, defaults and neglects of any subcontractor, his agents or employees as fully as if they were the acts, defaults or negligence of the contractor, his agents or employees.

1.3 BASIS OF BID

- 1.3.1 Bidders are to submit completely filled details given in the attached schedule "A" Tender and Schedule of Prices, giving rates for Measure and Pay price for the entire job (according to API 650/653), as per the scope of work in this Bid document of the fixed Roof Type fuel Oil Storage tank of diameter 18.28m.
- 1.3.2 VAT, NBT, Withholding Tax and all local taxes and provident fund, insurance of construction labour, supervision, any local agency fees, commissions, transportation costs, cost of construction equipment, etc.
- 1.3.3 The bidders who are registered for the purpose of VAT should indicate the amount of VAT claimed separately in the bid documents along with VAT registration number. If the bidder not registered for VAT, only the net value of the tenders shall be indicated. Any local or foreign taxes applicable for foreign contractors should be borne by the contractor by himself. (Except local VAT).
- 1.3.4 A clear breakdown of price rates as requested in Schedule "A" "Tender and Schedule of Prices" shall also be submitted.
- 1.3.5 Additional services provided by the bidder that have not been covered by this invitation to bid shall be clearly stated for CPC's consideration.
- 1.3.6 Exceptions to CPC's Invitation to Bid shall also be clearly stated by the bidder. If no exceptions are stated, CPC will assume bidder conforms to the most stringent conditions in this Invitation to Bid.
- 1.3.7 All alterations & corrections to erasers in bid offer have to be initiated by the bidder.

1.4 INVITATION TO BID DOCUMENT

- 1.4.1 **The Invitation to Bid Document shall be obtained from**
 Deputy Refinery Manager (Maintenance & Projects)
 Planning Department
 Refinery Division
 P.O.BOX: 11
 Ceylon Petroleum Corporation
 Sapugaskanda
 Sri Lanka

A non-refundable Bid deposit of Rs. 3,500/= (Including VAT & NBT) will be charged at the time of collection of tender documents. Final date and time of issuing of tender documents will be **on 08th November 2017 at 15.00 hrs.**

- 1.4.2 **Pre- bid meeting**
 Pre- Bid meeting will be held on the **02nd November 2017 09.30 hours** at the Main Conference room of CPC Refinery. Attendance to this meeting by a technically competent authorized, representative of the bidder (with a letter of authorization) is essential. All costs incurred in attending to this pre- bid meeting will have to be borne by the contractor. CPC reserves the right to change the pre- bid meeting date due to any unforeseen reason and if changed, will be notified to the bidders who have collected the Tender Documents. For this purpose the Bidders shall inform the contact person and his telephone number when collecting the Bidding document.

1.5 BID SECURITY GUARANTEE

- 1.5.1 Each bid shall be accompanied by a Bid Security Guarantee undertaking that the offer will be valid up to **77 days** and that the offer will not be withdrawn during that period. Such Bid Guarantee shall be in the form of a guarantee issued by a reputed commercial Bank operating in Sri Lanka and acceptable to the CPC or an internationally recognized bank issued through a reputed commercial bank operating in Sri Lanka and should be irrevocable & unconditionally en-cashable upon the first written request from CPC equivalent in value of Sri Lanka Rupees **123,650.00**
- 1.5.2 The Bid Security Guarantee shall be valid up to 91 days from the date of opening of tender and shall be in accordance with the specimen in Schedule "B", "Form of Bid Security Guarantee".
- 1.5.3 Failure to submit the Bid Security Guarantee at the time or before the closing of the tender and in accordance with the above said requirements will result in the tender offer being rejected. Bid Guarantee from unsuccessful bidders will be returned to them after an award is made in accordance with the above said requirements.
- 1.5.4 The Bid Security Guarantee of the successful bidder will be returned after receipt of Performance Guarantee.

1.6 BIDDING INSTRUCTIONS

Bidder shall bid for the complete project in accordance with this Invitation to Bid. Bids are to be furnished in: -

- 1.6.1 Section 1 -Complete technical proposal indicating the method to be adopted for Repairing of Tank no 37, details of construction procedures and sequences, WPS (Welding Procedure Specification) for all joints indicating type of electrodes to be used and their makes, source(s) of supply and repair/fabrication schedule etc. The contractor should elaborate how he intends getting the plates into the tank for reconstruction of the tank shell& roof.
- 1.6.2 Activity Bar Chart of the total work clearly indicating the various phases of contract, breakdown of manpower and also the equipment and organization chart allocated for this contract.
- 1.6.3 Section 11-Complete commercial proposal giving a breakdown of the prices as indicated in Schedule 'A' "Tender and Schedule of Prices".
- 1.6.4 Section 111-Literature\Write-ups to supplement the technical proposal given in 1.6.1 Section 1 above, indicating work experience in repair or construction work on petroleum oil storage tanks as per relevant codes and standards.
- 1.6.5 The bid, and all correspondence and documents related to the Bid exchanged by the bidder and the CPC shall be written in English language. Supporting documents and printed literature furnished by the bidder may be in another language provided; they are accompanied by an accurate translation of the relevant passages in English language, in which case, for purposes of interpretation of the Bid, the English translation shall prevail.

1.7 GENERAL INFORMATION TO BE INCLUDED IN THE BID

- 1.7.1 Bidder should state in his bid offer address including fax (if any) to which clarifications, notices and correspondence related to bid offer is to be sent. Any change of address should be notified to CPC and any such change shall be valid only when such notification has been acknowledged by CPC.
- 1.7.2 A copy of Business Registration of the bidder, Background of the bidder, place of business, number of years of experience in the field of construction/ repairs of storage tanks as per

API 650/653, financial report of the company for the last 3 years and names and addresses of (present & former) clients other than CPC.

- 1.7.3 Indication of similar jobs in hand and including their values.
- 1.7.4 Intended location of shop fabrications, shop testing (if any).
- 1.7.5 Any proposed arrangements with others, either affiliates or associated companies, the extent of the work the bidder will handle with own personnel and equipment, if not, extent of work to be sub-contracted, litigation (if any) should also be notified.
- 1.7.6 Names and addresses of local agents (if any).
- 1.7.7 Signed & stamped Compliance/ Deviation sheet of contract in accordance with Schedule 'F'
- 1.7.8 Plan or method of carrying out work.
- 1.7.9 Electrical power needed for construction.
- 1.7.10 Water needed for construction.
- 1.7.11 Welder/procedure qualification testing facilities and place.
- 1.7.12 List of construction equipment to be used at the site by the contractor (List out equipment to be imported, if any, and hired locally/ lease locally).

1.8 ACKNOWLEDGMENTS

Bidders shall answer by fax for any written query raised by DPC (Minor) on the proposals at the stage of evaluation of bids.

Literature

1.9 AMENDMENTS/CLARIFICATIONS

- 1.9.1 DPC (Minor) reserves the right to issue amendments to the Invitation to Bid by issuing addenda as and when deemed necessary up to fourteen (14) days prior to the deadline for submission of bids mentioned in clause 1.10.6
- 1.9.2 Any addendum thus issued shall be part of the bidding document and shall be communicated in writing or by facsimile to all purchasers of the bidding document. Prospective bidders shall promptly acknowledge receipt of each addendum by facsimile to CPC
- 1.9.3 To give prospective bidders reasonable time in which to take an addendum in to account in preparing their Bids, CPC might extend (if necessary) the deadline for submission of Bids, in accordance with clause 1.10.9
- 1.9.4 A prospective bidder requiring any clarification of the bidding documents or any objection to restrictive specification may notify the CPC in writing or facsimile at the address indicated below. CPC will respond to any such request for clarification that receives earlier than 14 days prior to the deadline for submission of Bids. Copies of the CPC's response will be forwarded to all purchasers of the bidding documents, including description of the inquiry but without identifying its source

Deputy Refinery Manager (Maintenance & projects)

Refinery Division

P.O.BOX: 11

Ceylon Petroleum Corporation

Sapugaskanda

Sri Lanka.

Fax No.0094-11-2400436

- 1.9.5 Where prospective bidder has not sought any such clarification, such bidder shall be deemed to have accepted the Invitation to Bid document in full.
- 1.9.6 Bidders must acquaint themselves fully with the conditions of the site and Bid document. No plea of lack of information will be entertained at any time or stage of the proposal and implementation of the project.

1.10 CLOSING DATE OF TENDER

- 1.10.1 Bids are to be furnished in accordance with all relevant information given in this Bidding document.
- 1.10.2 One original and a copy of the bid proposals are to be submitted and bidder shall seal the original and the copy of the Bid in separate envelopes, duly marking envelopes as "Original" and "Copy". Envelopes shall then be sealed in an outer envelope.
- 1.10.3 The inner and outer envelopes shall,
1. Be addressed to the CPC at the address provided in this bidding document
 2. Bear the name and identification number of the tender as defined in this bidding document
 3. Provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data
- 1.10.4 If the outer envelope is not sealed and marked as above, CPC will assume no responsibility for the misplacement or premature opening of the Bid. If the outer envelope discloses the bidder's identity, CPC will not guarantee the anonymity of the Bid submission, but this shall not constitute grounds for rejection of the Bid.
- 1.10.5 The figures given in the original will be binding and any deviations in the copies in the course should not be taken into account and the price given in will be considered as the covering price for the entire job.
- 1.10.6 Bids are to be submitted before 14.30 hours of Sri Lanka time on 09th November 2017
Chairman
Department Procurement Committee (Minor)
Refinery Division
P.O.BOX: 11
Ceylon Petroleum Corporation
Sapugaskanda
Sri Lanka.
- 1.10.7 Bid proposals shall be deposited in the relevant tender box at the Refinery Project Department. Bids sent under any other mode will be rejected.
- 1.10.8 Bids received prior to the bid closing time will be kept secure and un-opened until the time and date of opening given in Para 1.10.6
- 1.10.9 Any Bid received by CPC after the deadline stated in clause 1.10.6, will be rejected unopened
- 1.10.10 Reference "**Repairing of Tank No 37**" shall be written on all bid proposal covers and all sealed envelopes.
- 1.10.11 CPC reserves the right to change the date and the deadline for submission of Bids, due to any unforeseen reason and if changed, will be notified to the bidders who have collected the Bidding Document

- 1.10.12 For this purpose, the Bidders shall inform the contact person and his telephone number when collecting the tender document
- 1.10.13 CPC may, in exceptional circumstances and at its discretion, extend the deadline for submission of Bids by issuing an addendum in accordance with clause 1.9.3, in which case all rights and obligations of CPC and the bidders previously subject to the original deadline will thereafter be subjected to the deadline as extended
- 1.10.14 The bidder may modify or withdraw its Bid after Bid submission, provided that written notice of the modification or withdrawal is received by the CPC prior to the deadline for submission of Bids
- 1.10.15 The bidder's modification or withdrawal notice shall be prepared, sealed, marked and delivered in accordance with the provisions of clauses 1.10.2 to 1.10.6, with the outer and inner envelopes additionally marked "Modification" or "Withdrawal", as appropriate

1.11 OPENING OF BIDS

- 1.11.1 Bids will be opened at **14.30** hours on **09th November 2017** at,
Main Conference Room
Refinery Division
Ceylon Petroleum Corporation
Sapugaskanda
Kelaniya
Sri Lanka.
- 1.11.2 Bidders may attend the opening of bids if they so desire, Bidders' representative must carry an authoritative letter and identity from the main contractor. Aggregate Bid, prices will be read out in public at the opening of bids.

1.12 PERIOD OF VALIDITY OF BID

- 1.12.1 Bid offers should be valid for acceptance up to **25th January 2017** (77 days from the date of opening of bids). No price variation is allowed until the completion of the contract and the project/work acceptance letter is issued by CPC, except variation due to legislation and statutory changes of the Government policies/ regulations.
- 1.12.2 However quoted rates agreed at the time of awarding the contract shall remain fixed until the completion of the contract.

1.13 MANPOWER AND RESOURCE SCHEDULES:

- 1.13.1 Bidder is requested to provide a complete schedule of manpower at various grades deployed at site during execution of the project. A graduate Mechanical Engineer having experience in steel fabrication shall be available full time at site.
- 1.13.2 Bidders are requested to submit a complete list of construction equipment which will be at site of erection
- 1.13.3 Contractor shall submit a bar chart along with the offer for the total work clearly indicating the various phases of contract, breakdown of manpower, equipment and also an organization chart allocated for this contract.

1.14 RIGHTS OF TENDER BOARD

- 1.14.1 DPC (Minor) reserves the right to accept or reject bids without adducing any reason. DPC (Minor) will accept the lowest substantially responsive bidder. DPC (Minor) is not responsible for any expenses or losses whatsoever which may be incurred by a bidder in the preparation and submission of the bid or Bid Security Guarantee.

1.15 LOCAL AGENTS:

- 1.15.1 Bids received from an agent signed on behalf of principal will not be considered unless the agent holds a **valid legally executed Power of Attorney** from the principal empowering the agent to tender and to enter into a valid contract on behalf of the principal to fulfill all terms and conditions of the tender. The instrument of original of the Power of legally executed Attorney must be attached to the tender.
- 1.15.2 The bidder/principal should disclose the name and address of agent if any, and the agency commission payable to him.

1.16 CLIMATIC DATA

Maximum Ambient Temperature	-	350C
Minimum Ambient Temperature	-	25 0C
Average Ambient Temperature	-	30 0C
Minimum Humidity	-	80%
Maximum Humidity	-	98%
Maximum Recorded Rainfall in 24 hours	-	29 cm
Maximum Recorded Wind Velocity	-	133 Kmph

1.17 BUSINESS REGISTRATION & PUBLIC CONTRACT REGISTRATION

- A. Local Agents in Sri Lanka, submitting the Bid should register with the Registrar of Companies and shall produce a copy of the valid Certificate (legally attested copy) of Registration issued by the Register of Companies together with the offer & a copy of the respective company registration of principal bidders also shall be forwarded along with the bid.
- B. Any person who act as an agent or sub-agent, representative or nominee for or on behalf of any bidder / principal supplier, shall register himself and such public contract as per public Contracts Act, No 3 of 1987 for every public contract exceeding five million rupees (SLR) & a copy of the valid Certificate of registration issued by the Registrar of Public Contracts shall be forwarded for collection of bidding documents. All bidders should submit the registration certificate along with the bid.
- C. Where any person is an agent, sub-agent, representative or nominee for or on behalf of a bidder / principal supplier he shall first produce a certificate of his appointment as agent, sub-agent, representative or nominee to the Registrar before he registers himself under the public contract.[Contact details of the Registrar: Department of Registrar of Companies, "SamagamMedura" No.400, D R WijewardenaMawatha, Colombo 10 / Tel: +94-11-2689208/ +94-11-2689209/ Email: Registrar@drc.gov.lk. (Contact details may vary from actuals & CPC does not take any responsibility in this regard.)]

2. CONDITIONS OF CONTRACT

2.1 PERFORMANCE GUARANTEE

- 2.1.1** On the tender being accepted, CPC shall notify such acceptance by letter of award (either by Letter of Intent) to the successful bidder whose bid has been accepted. Such notification shall require the successful bidder to furnish at his own cost and expenses, a Performance guarantee issued by a reputed commercial Bank operating in Sri Lanka acceptable to CPC in a sum of not less than 10% of the full contract price of the successful bidder at or before the time and date specified in such notification. The Performance Guarantee shall be strictly in the form given in schedule 'D' "Form of Performance Guarantee" of this Bid document.
- 2.1.2** If the successful Bidder fails to furnish a performance guarantee as provided therein, the Bid Security Guarantee of such bidder will be forfeited at the sole discretion of the DPC (Minor) and such contractor will be placed in the list of defaulting contractors.
- 2.1.3** DPC (Minor) shall forthwith be entitled in its absolute discretion to select and offer other suitable party as it may think fit (whether another bidder or not) at the risk and expenses of the defaulting contractor and make arrangements required for the performance of the successful bidder whose tender has been accepted and shall be further entitled to recover from the defaulting contractors all loans, costs damages and expenses CPC may sustain in consequences of default by the said default contractor.

2.2 SCHEDULE OF PAYMENT

- 2.2.1** Advance payment to a maximum of 10% of the total contract value will only be paid on submission of a bank guarantee from a reputed commercial bank operating in Sri Lanka acceptable to CPC strictly as per the format in schedule "C" of this Bidding document. The Bank Guarantee shall be valid until the advance payment is fully recovered, subject to a minimum period of 3 months.
- 2.2.2** In case of advance payment, the full amount of advance payment will be deducted in two (02) installments (at a rate of 50% of the advance payment in each installment) from first two part payments. Contractor shall give a cash utilization break down with respect to this advance payment
- 2.2.3** Progress/part payments will be made on the basis of 75% of the value of work completed. The balance 25% will be retained until the successful completion and handing over of the tank to CPC and released subject to retention condition in clause 2.4.2. Part payment will be made to contractor within one month of finalizing their submission of part payment bill by the contractor.

2.3 TAX LIABILITIES

- 2.3.1** Contractor shall be liable to pay all the taxes levied by the Sri Lankan Governmental Authorities such as the Inland Revenue Dept. and Local Government Authorities on, its income and profits derived from execution and shall also be liable for all income taxes of its sub-contractor's personnel and the local agents.
- 2.3.2** Contractor shall accept liability to pay all taxes, turnover tax, NBT (Nation Building Tax), Value added tax, other taxes like import duty levies, fees, stamp duties, and the like, including but not limited to any sales or withholding taxes levied by whatsoever authorities in respect of the construction equipment, material supplied and any other aspects on this project.

2.4 PART PAYMENT/RETENTION MONEY

- 2.4.1** All payments will be made in Sri Lankan Rupees, calculated on the exchange rate (US\$) prevailed on the date of bid opening.
- 2.4.2** As agreed and given in schedule of payment under section 2.2 of this Bidding document, CPC will honor any part payment bills. Retention money will be withheld from such part payments at the rate of 25% of that part payment bill. 5% of the actual contract value will be withheld from the final payment as retention money after successful completion and acceptance of work by CPC. This retention will be released 12 months after completion and handing over of the tank.

2.5 LIQUIDATED DAMAGES

- 2.5.1** The successful contractor will pay to CPC, as liquidated damages for failure to comply with contractor's obligation to complete the work in the time guaranteed, an amount for each calendar day after the said date, at the rate of 2 % of the contract price per week delayed, subject however that the maximum liability of the contractor on liquidated damages will not exceed 10% of the contracted price.

2.6 DEFAULTING CONTRACTORS

Bid offers will not be entertained from firms or persons who have been placed on the list of defaulting contractors of the Government of Democratic Socialist Republic of Sri Lanka or the CPC.

2.7 PROJECT SCHEDULE

- 2.7.1** Project schedule from the date of award of contract to handing over and commissioning of successfully completed job shall be **06** Months. The bidder should submit an overall project schedule showing the number of calendar days required to reach the date of completion and showing the time required for completion of various phases of work, and resource allocation such as welders, fitters, etc.

Note-starting date of the job will be considered as the date of signing of work order agreement.

2.8 TERMINATION OF CONTRACT

- 2.8.1** CPC reserves the right to terminate the contract under the following conditions, in which event; Performance Bond of the contract will be forfeited.
- (a) The Contractor stops work for 28 days when no stoppage of work is shown on the current program and the stoppage has not been authorized by CPC.
 - (b) The Contractor has delayed the completion of the work by the number of days for which the maximum amount of liquidated damages has been deducted, as defined in clause 2.5 of the Bid document without CPC's prior approval.

2.9 GUARANTEES:

- 2.9.1** Contractor shall guarantee that the construction, here under shall be free from defects and shall confirm to and shall perform so as to comply with specifications contained in the Bid document or other specifications as may be ordered or approved by CPC.
- 2.9.2** Within one (01) year of period from handing over the project, CPC will inform the contractor in writing, regarding any defect in material or workmanship pertaining to the contract. Upon receiving such notice, contractor shall rectify such defects at his own cost and expense.

2.9.3 Any cost of repair /replacement during the guarantee period of 12 months informed to the contractor and not repaired / replaced or undertaken by the contractor will be repaired/replaced by CPC and such cost will be deducted from the retention of 5%and the contractor will be considered to be defaulted & same will be notified to the contractor

2.10 FORCE MAJEURE:

2.10.1 Contractor or CPC shall not be responsible for any delay or failure hereunder resulting from causes beyond their control including but not being only restricted, to acts of god, fires, explosions, flood, earthquakes, wind storms, national strikes, national riots national walk-outs, national boycotts, wars, laws, regulations or acts of any government or from other cause beyond contractor's control and which by the exercise of due diligence company is unable to prevent.

2.11 SAFETY REGULATIONS & REGULATIONS FOR THE PREVENTION OFFIRE

(To be observed by the contractor, his sub-contractors and his and their workers, agents and invitees)

All persons engaged in work at Ceylon Petroleum Corporation Refinery division shall be acquainted with the following regulations and their consent to abide by them shall be an essential condition of their permit to work at the Refinery.

1. The whole of the premises within the boundary fence is constituted a danger area with the exception of any area expressly exempted by the Refinery Manager (hereinafter called the Manager).
2. All employees, agents and invitees of the Contractor who may not be aware of the exact locality of any area expressly exempted from the danger area must assume that any part of the Refinery is a danger area and act accordingly.
3. Before work of any nature is commenced in any area by the Contractor, his employees, agents or invitees, the Contractor must obtain the Manager's authorized signatories necessary for excavation permits, safety certificates and clearance certificates and if the work involves sparks of flames, also a fire permit.
4. The Contractor, his employees, agents or invitees must observe all precautions stipulated in these documents. If the work cannot be completed in the period for which these documents are valid, the work shall be discontinued until the documents are renewed.
5. Persons under 18 years of age should not be employed by any contractor or by any subcontractor for carrying out any contract work in any part of the Refinery.
6. It is a condition of the permit to work at the Refinery that all persons engaged at the Refinery shall submit to be searched by the Refinery's Security Officials. This search may take place, either at the time of entry to the Refinery or at any other place and during any time while the employees are in the Refinery, at the discretion of the Senior Security Officer, Refinery.
7. Fire, naked flame, lighters, matches, petrol or any other flammable substance and any apparatus / equipment which can cause ignition should not be taken to the danger area by any contract personnel without a written authority signed by the manager's authorized representatives.
8. Such written permit shall be valid for the period stated therein and must be returned to the Head of Fire Fighting and Safety, Refinery.
9. No dry battery or accumulator type of electric hand-lamp or hand-torch, which is not of a flameproof safety type, approved by the Manager, may be taken to the danger area.

10. Smoking is strictly prohibited in any part of the Refinery.
11. No fires shall be lit and no matches shall be ignited in any part of the Refinery without a special fire permit being given and signed by the Manager's authorized signatory.
12. The contractor shall observe the speed limit of 30 KMPH for vehicles and 24 KMPH for motorcycles within the Refinery premises and all vehicles must be mechanically sound and have an efficient exhaust, silencer, horn, brake, filler cap and tire of good condition. All contract drivers must possess a valid driving license.
13. The vehicles used by the contractor should only be driven on the recognized main roads in the OTF and no vehicle should leave a main road and enter into an operational area without having a valid Fire and Safety Permit.
14. Mobile cranes and other lifting equipment used for the contract job must be load tested and test reports must be produced to the Fire & Safety Department.
15. If any contract work involves scaffolding, it should be erected as per Standard, Refinery Scaffolding Procedure. A copy of Standard Refinery Scaffolding Procedure should be requested when necessary.
16. All work should be stopped if the fire siren is sounded or in case of an Emergency.
17. (a) The Contractor shall ensure that his employees and equipment deployed by the contractor and those of any of his subcontractors shall not make use of any equipment, material or property of any kind whatsoever belonging to the Corporation unless the written permission of the corporation has been obtained beforehand.
(b) The Contractor shall ensure that so far as is compatible with the work being carried out, the area in which his workers and /or agents are working shall be kept free of all equipment, material or property of any other kind which may constitute an accident hazard. If it is necessary in the opinion of the Contractor for such equipment, material or property to be on site, it will be the Contractor's responsibility to ensure all necessary safety precautions are observed by his own employees and those of his sub-contractors.
18. All construction equipment and man power shall be covered by insurance by the bidder contractor
19. The contractor must supply all personal protective equipment necessary for the contract employees to carry out the contract work. All contract employees should follow Refinery Safety Regulations and ensure to wear personal protective equipment.
20. All accidents caused to the contractor's employees must be reported to the Fire and Safety Department immediately.
21. After completion of the contract work by the contractor the area involved with the contract work should be inspected by the Fire and Safety Department to ensure that the cleanliness and good housekeeping practices had been followed. The area involved with the contract work should be certified by the Fire and Safety Department before the final payment is made.
22. If the Contractor / Sub Contractor intend to use Electronic equipment / radioactive equipment the contractor shall inform the engineer in charge and give the complete details of such equipment and the purpose for which such equipment is used and obtain the permission from the Electrical Department before commencing the contract work.
23. Any employee, agent or invitee of a Contractor consciously or without consciousness, breaking the above Rules shall be liable to have his permit to work at the Refinery terminated immediately.

24. In addition to the above it will be contractor's responsibility to abide by the relevant clauses of Factories Ordinance of Sri Lanka in respect of all work carried out at the site and the safety of personnel engaged and equipment used at site. Contractor shall pay special attention to the following clauses of the Factories Ordinance of Sri Lanka. However, the responsibility of the contractor will not be limited to the clauses listed below but will cover all other conditions in the whole Factories Ordinance and its amendments.
1. Clause 27 - Hoists and lifts
 2. Clause 28 - Chains, Ropes & Lifting Tackle
 3. Clause 29 - Cranes and other Lifting Machines
 4. Clause 30 - Construction and Maintenance of floors, passages and stairs.
25. The mobile phones will not be allowed to bring Refinery premises without proper authorization or approval.
26. The contractor shall obtain an insurance policy covering all employees and equipment deployed by him at site in respect of occupational hazards.

2.12 SECURITY CLEARANCES

- 2.12.1 The Refinery premises is considered some security zone and all contractors' personnel shall abide by the security regulations, prevailing and those which might be enforced as and when necessary due to changing circumstances. Police clearance for personnel going to be engaged in this job will have to be obtained and produced to CPC security by the contractor.
- 2.12.2 All contractors' personnel and their vehicles will be required to obtain gate passes before entering into the Refinery.

2.13 ARBITRATION

- 2.13.1 All the disputes arising in connection with the present contract shall be finally settled under the rules of consulation and arbitration of the International Chamber of Commerce & Arbitration Act No.11 of 1995 of Sri Lanka by one or more arbitrators appointed in accordance with the said rules.
- 2.13.2 Performance of the contract shall continue during Arbitration proceedings. All proceedings and hearings by the Arbitrator shall be held in Sri Lanka.

3. SCOPE OF SUPPLY, SCOPE OF WORK AND OTHER TECHNICAL SPECIFICATIONS.

3.1 SCOPE OF SUPPLY BY CPC

3.1.1 Construction material

3.1.1.1 Supply of steel plates, pipes and all other structural material requirement for re-construction/repair of the tank bottom, tank shell, steam coil, fire water and foam supply lines, steel plate and pipe requirements of procedure qualification tests and welder qualification tests and other material requirement for reconstruction/repair work. Contractor has to collect all above material form Refinery materials Department.

3.1.1.2 CPC will provide 50 Ton screw jacks for lifting purpose if required.

3.1.2 Construction Utilities.

3.1.2.1 CPC will provide sufficient and reasonable quantities of construction utilities at site at no cost which include supply of construction electrical power, drinking water and water for hydro-testing and firewater. Maximum available electric power is 45 KVA

3.1.2.2 The electrical power supply available to the contractor is 400V AC, 4 wire(TPN), 50Hz.

3.1.2.3 The maximum load that the CPC electrical department can feed will be 75A, 3 phases.

3.1.2.4 The CPC Refinery Electrical department will terminate the feeding cable(s) to a suitable circuit isolating and interrupting devices such as a circuit breaker mounted at contractors' distribution board.

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

3.1.3 Site Fabrication Facilities

CPC will provide sufficient space in Refinery premises for establishment of a site shop for fabrication. The bidder shall indicate the extent of area needed for the site shop. The contractor shall under no circumstance use this site facility for any other purpose not involved with the job.

3.2 SCOPE OF SUPPLY BY CONTRACTOR

3.2.1 Construction Equipment & consumables

Supply of all consumables such as welding electrodes, gas for cutting, grinding & cutting discs, paint, thinner & all painting materials, abrasive materials for blasting, radiographic films, dye-Penetrant, and all other consumables necessary for the proper execution of the job.

3.2.2 Supply of all construction equipment such as Welding machines. Grinders, Air Compressors, Cranes & other rigging equipment, Vacuum testing equipment & painting equipment such as spray paint equipment and hand tools, brushes, rollers, blasting machines, Radiographic equipment, Illuminating lamps and other tools required for proper execution of the job.

Note: All equipment should be maintained in good working order and tested where applicable and conform to requirements of the Latest Factories Ordinance of Sri Lanka.

3.2.3 Supply of temporary erection material such as lugs, brackets scaffolding and planks, reinforcement, wedges, Jacks and other accessories such as ventilating air blowers etc.

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

3.2.5 Supply of all manpower needed including supervision to carry out the work described under "Contractor's scope of Work" in clause 3.3.

3.2.6 An Insurance cover for site equipment so that CPC will be released from any responsibility regarding accidents, losses etc.

3.2.7 An Insurance cover for all manpower at site as per the Workmen Compensation Act.

3.2.8 The contractor shall supply all required Non- Destructive Testing (NDT) equipment, consumables and NDT technicians to perform necessary NDT to fulfill requirement of API 650/653 and ASME section V.

3.2.9 The contractor shall get CPC inspection department prior approval for all NDT consumables before use.

3.2.10 The contractor shall employ level II qualified (from a recognized institution acceptable to CPC Refinery) personal for all NDT work, their CV and copies of certification along with originals shall be submitted to CPC refinery inspection department for review and approval before commencing work

3.2.11 The electrical power distribution board shall be provided with suitable protection devices such as Earth leakage circuit breakers, miniature circuit breakers, isolators. etc.

- 3.2.12 All cables used for power distribution above 48V shall be of armored type.
- 3.2.13 All portable electrical appliances used inside the tank shall be at low voltage, 110V and should be fed through a center earthed transformer.
- 3.2.14 Power distribution inside the tank should comply with IEE wiring regulations for construction sites.
- 3.2.15 for welding procedures & welder qualifications see clause No. 3.4.1

3.3 CONTRACTOR'S SCOPE OF WORK

3.3.1 All the under mentioned repair jobs/items shall be carried out on a lump sum fixed price basis except item no. 11, 12 & 13 which shall be carried out on measure and pay basis as per the agreed quoted rates (Schedule A) and should be completely fulfilled by the selected bidder for the completion of the total job.

3.3.2 The contractor shall transport all required material to Refinery as necessary and also materials removed for repair back to refinery scrap yard and stack them properly. Site cleaning and completion of tank repair in all respect and make ready for commissioning to the satisfaction of CPC Inspection department.

3.3.3 Erection of safety barrier

Erection of safety barrier around the tank where necessary to protect the surrounding tanks and environment from construction sparks and hot projective. Maintenance of safety barrier is the total responsibility of the contractor until the clearance is given by CPC safety department to remove it.

3.3.4 Dismantling of Roof & Shell Plates

3.3.4.1 Cut and remove entire roof plates with roof attachments, top most platform & accessories. Recover, offer for inspection and repair (if necessary) all special fittings such as gauge hatch, foam fittings, brackets, flanges and firewater fittings as instructed by CPC.

3.3.4.2 Dismantle and remove roof structure.

3.3.4.3 Cut and remove entire top two shell course without damaging to adjacent shell course.

3.3.4.4 Cut and remove tank steam coil as instructed by CPC.

3.3.5 Shell plate replacement

3.3.5.1 Sizing, rolling, fabrication and welding of entire top two shell course as per CPC Dwg. No 3292 and perform radiography, peaking & banding, plumpness and roundness tests as per API 650 (latest edition).

3.3.5.2 Fabrication and installation of spiral stairway and top platform in the top two shell course area as per CPC drawing No. 3245 and 3255.

3.3.5.3 Weld repair all corroded and perforated platforms, hand railings & external stairway steps.

3.3.5.4 Weld foam deflection plate brackets at top of top shell course and installation of deflection plates after blast cleaning and painting of top shell course.

3.3.5.5 Clean and provide access for the shell internal inspection.

3.3.6 Roof replacement

3.3.6.1 Fabricate and install roof structure as per CPC Dwg No 3293. All roof trusses and center hub to be blast cleaned and painted.

- 3.3.6.2 Sizing & laying of roof plates on the roof structure and welding in the best Sequence after reviewing by CPC to minimize deformation as per CPC Dwg. No. 3294 and vacuum testing and other testing of welds as per API Standard 650 (latest edition). The internal side of the roof plates to be blast cleaned and painted before installation on the tank.
- 3.3.6.3 Fabrication and installation of roof attachments & accessories such as roof manholes with covers, inspection door, flame arrester & breather valve, float well for level indicator, gauge hatch, radial hand rail, circumferential hand rail, cooling water drencher system & fire water deflection plates as per CPC Dwg. Nos. 3359, 3368, 3370, 3374, 1693, 3251, 1685, & 6922.
- 3.3.6.4 Fabrication and installation of cooling water ring connection as per CPC Dwg No 6922 and top Foam Pourer System as per CPC Dwg. No. 3364.
- 3.3.6.5 Remove, service repair and installation of special fittings such as level indicator gauge hatch cover, foam mixture etc.

3.3.7 Bottom repair

- 3.3.7.1 Clean the bottom plates up to a satisfaction level of CPC inspection department and offer for inspection and UT survey.
- 3.3.7.2 Bottom patch repair, if necessary as instruct by CPC Inspection department.
- 3.3.7.3 Blast clean and paint complete bottom plates & all sketch plates (product side) and complete bottom shell course (product side) as per painting specifications.
- 3.3.7.4 Complete replacement of steam coil as per CPC drawing no. 3297 and NDT testing according to API standard 570/ASME B31.1 (latest edition).

3.3.8 Access for Inspection

Provision of access to tank shell (internal and external UT survey, foam and fire water inspection and UT survey by erection of scaffolding as per Refinery scaffolding procedure given in 3.6 & provision of platforms at required levels & locations using load tested wooden planks or load tested plates for inspection by CPC Inspection Department. Scaffolding plates/planks should be securely clamped or tie up to their supports.

Take the tank foundation level measurement immediately after tank released for inspection and maintenance.

Open the tank all manholes & clean shell internal side for inspection. Any bulges/depressions beyond the API 650 limits to be acceptable limits in API 650.

3.3.9 Painting

- 3.3.9.1 Blast clean and paint (one paint coating) roof (internal side), roof trusses & top shell course (internal side 1.5 m high band) before laying plates on the tank roof & shell as per painting specification (B). After completion of all welding work, apply final paint coating after patch painting paint damaged area due to welding.
- 3.3.9.2 Scrape wire brush patch prime and overcoat complete shell external side as per painting specification (A) except top most two shell courses.
- 3.3.9.3 Blast clean and paint roof (external side) as per painting specification (B) after completion of all shell and roof welding repair works.

- 3.3.9.4 Blast clean & paint complete bottom & bottom most shell course internal side (product side) as per painting specification (C).
- 3.3.9.5 Scrape wire brush, patch prime and overcoat all hand railing platforms, stair ways, foam and firewater pipe lines as per painting specification (E). After completion of all welding & mechanical works.
- 3.3.9.6 Blast clean & paint complete top shell course external side as per painting specification (A) after completion of all welding & mechanical work.
Note -Blasting areas of the tank shall be sufficiently covered to prevent falling of blasting dust into tank vicinity and escape of dust to outside.

3.3.10 Final hydro testing

- 3.3.10.1 Hydrostatic testing of tank shall be done after successful completion of radiographic tests, roundness test, plumpness test and peaking & banding test. All preparation required for hydrostatic testing shall be done by the contractor. Water needed for hydrostatic testing will be provided by CPC. Any distortions observed during and after the hydro test should be rectified by the contractor by his own cost.
- 3.3.10.2 Hydro tests all foam and fire water pipe lines at 450 psig. Excavate the underground sections for inspection immediately after tank is released for inspection & maintenance.

3.3.11 Calibration

Calibration of completed tank shall be done using optical triangulation method or any other acceptable method and calculation and tabulation as per API 2550-ASTM 1220 by reputed third party company acceptable to CPC. Three certified copies of calibration charts with soft copy to be submitted to CPC.

3.3.12 Commissioning

Completion of tank in all respect ready for commissioning to the satisfaction of CPC Engineering, Inspection & Operation Departments, and cleaning of all debris from site and bring back the site to its original condition.

3.4 TECHNICAL SPECIFICATIONS/CODES/STANDARDS

3.4.1 WELDING PROCEDURES AND WELDER QUALIFICATION:

Filler material for all joints:

The following welding electrodes shall be used for each category of joint.

ROOF

All fillet welding joints on the roof – AWS E 6013

SHELL

All fillet welding Joints & Butt welding Joints - AWS E 7018.

PIPE BUTT JOINTS

Root run - AWS E 6010

Filling & capping - AWS E 7018

- 3.4.1.1 Welding procedure specifications (WPS) for all types of joints to be submitted to CPC for approval and Welding Procedure Qualification test shall be carried out and test reports from a reputed third party shall be submitted to CPC.
- 3.4.1.2 All welders to be qualified as per ASME Sec. IX in presence of CPC Inspection Engineer at CPC site and test samples with test certificates from a reputed third party to be submitted

for CPC's approval. Welding of any type in the tank will not be allowed without proper qualification of welders by CPC.

- 3.4.1.3 Pipe welders shall be qualified for all pipe joints as per ASME Sec. IX and bend test results by a third party to be submitted along with test pieces.

3.4.2 STANDARD OF MECHANICAL CONSTRUCTION:

- 3.4.2.1 This tank has been designed according to API standard 650 by CPC. All mechanical Repair work, tolerances and testing has to be as per API 650/653 (latest edition). Final acceptance will be by CPC based on the limitations of these standards.

- 3.4.2.2 After completion of repairs plumpness, roundness, peaking and bending of the tank shall be checked and reports to be submitted to CPC.

- 3.4.2.3 Contractor shall carry out all non-destructive testing such as Radiography, Dye penetrant testing and vacuum testing etc. Wherever required by the design code API Standard 650 (Latest Edition) using contractor's own equipment & manpower at its own cost in the presence of CPC's inspectors and submit reports for CPC's approval.

- 3.4.2.4 The contractor shall employ NDT level – II qualified personnel from recognized institution accepted to CPC.

3.4.3 PAINTING SPECIFICATION:

Painting Specification (A) - Top & Second shell course

	Paint	DFT (Microns)	Overcoating Interval	
			Min	Max
Primer	Zinc Phosphate or Equivalent	170		
Finish	Enamel paint (Bright aluminum color) Compatible to primer	70		
Thinner	Generic thinner			
Surface Preparation	Blast cleaning to SA 2 1/2			
Paint Application	Airless Spray			

Painting Specification B

Roof (internal and external sides), all roof trusses, top shell course 1.5 m high band from top (internal side)

	Paint	DFT Microns	Over coating Interval	
			Min	Max
Primer	Sigma Cover 522 or equivalent	50	2 - 6 Hrs.	60-90 Days
Intermediate	Sigma Guard 720 (Gray Colour) or equivalent	150	2 - 6 Hrs.	4 -7 Days
Finish	Sigma Guard 720 (Green Colour) or equivalent	150	2 - 6 Hrs.	4 -7 Days
Thinner	Sigma Thinner # 9192			
Surface Preparation	Blast Cleaning to SA 2½			
Paint Application	Airless Spray			

Painting Specification C

Complete bottom plate, sketch plates , complete bottom shell course product side

	Paint	DFT (Microns)	Overcoating Interval	
			Min	Max
Primer	International Interline 399	150	16 Hrs.	
Finish	International Interline 399	150	16 Hrs.	
Thinner	International GTA 220			
Surface Preparation	Blast cleaning to SA 2 1/2			
Paint Application	Airless Spray			

Painting Specification D**Tank shell expect top & second) side with accessories**

- Primer** - Red lead primer or suitable primer compatible with the existing paint.
- DFT/No. of coats** - 170 microns /04 or suitable equivalent- here only 2 coats are enough with the existing the final will give about 170 microns. Where the metal exposed area to be patch primed (2 coats)
- Application** - Brush/roller/Air spray/Airless spray.

Over coating interval- 14 hrs. (Minimum)/ 7 days (maximum)

Surface preparation - Scraping / Wire brushing

Painting Specification E**Hand railings , Platforms , Foam & Fire water piping**

	Paint	DFT (Microns)	Overcoating Interval	
			Min	Max
Primer	Zinc Phosphate or Equivalent	170		
Finish	Enamel paint (Bright aluminum color) Compatible to primer	70		
Thinner	Generic thinner			
Surface Preparation	Scraping & wire brushing			
Paint Application	Brush/roller brush/ spray			

Note:-

1. Paint manufacturers data sheet recommendation shall be strictly applied.
2. Paint damaged areas due to welding or due to other reasons shall be power brushed & applied with the same paint system.
3. Paint mixing shall be done only with paint pneumatically / electrically operated paint mixer.
4. Complete painting area shall be applied with only one brand name paints.(All primer intermediate & over coat shall be same brand)
5. Shell external each primer coat shall be applied with different colour primer. Primer shall be ordered at least in two different colors to Cleary distinguish number of primer coats applied.
6. All paint specification were given after carefully reviewing tank operation conditions & obtained from M/s. Petronas of Malaysia painting recommendation for tank if quotation to be obtained from all paint suppliers, Please give our service requirements, temperatures & applicable area to paint suppliers & obtain paint system for paint suppliers.

3.5 INSPECTIONS AND TESTING:

- i. All local fabrication and installation at site & material will be inspected by CPC inspector with concurrence of the contractor's own inspection.
- ii. In the event of any rejection arising out of quality of standard of fabrication /installation according to API Std. 650/653 (latest edition), such items shall be replaced by the contractor at no cost to CPC. In view of standard of fabrication that have to be maintained, CPC reserved the right to reject services of workers not measuring up to skills required.
- iii. CPC inspectors & Mechanical Engineers will carry out inspection at all stages of construction. Contractor shall directly coordinate inspection activities with CPC Inspection Department.
- iv. Contractor shall carry out all non-destructive testing such as Radiography, Dye penetrate testing vacuum testing etc as per ASME Section V. Wherever required by the design code API standard 650/653 (Latest Edition) using contractor's own equipment, consumables & qualified manpower at its own cost in the presence of CPC's inspectors and submit reports for CPC's review and approval

3.6 CONSTRUCTION DRAWINGS LIST

<u>DESCRIPTION</u>	<u>DWG. NO.</u>
❖ Tank shell course repair	3292
❖ Fabricate & install roof structure	3293
❖ Sizing & Laying of roof plates	3294
❖ Fabrication & Installation of cooling water ring	3295
❖ Top Foam pourer system	3364
❖ Roof manholes, inspection door, flame arrester & breather valve, Float well for level indicator, gauge hatch, radial hand rail, Circumferential handrail, cooling water drencher system & fire Deflection plates.	3359, 3368, 3370, 3374, 1693, 3251, 3245, 1685, 6922
❖ Tank Bottom	8350
❖ Steam coil	3297

3.7 STANDARD SPECIFICATION FOR SCAFFOLDING

Scaffolds

A scaffold is an elevated working platform for supporting both personnel and materials. It is temporary; its main use being in construction and/or maintenance work. Scaffolds should be designed to support at least four times the anticipated weight of workers and materials which will be used for. Scaffolding is the structure that supports the working platform.

Overhead Protection

Whenever, work is being done above the personnel working on a scaffold, overhead protection should be provided on the scaffold for those personnel. This protection should be not more than 9 ft. (e m) above the working platform and should be planks or other strong suitable material.

Means of Access

A safe convenient means must be provided to gain access to the working platform level. Means of Access may be a portable ladder, fixed ladder, ramp or runway or stairway. Suggested Scaffolding Regulations for Refinery use

Standards (or Upright)

The vertical supports which bare the weight of the structure and its load.

Ledgers

Horizontal tubes which connect standards longitudinally and which may act as supports for transoms.

Transoms

Tubes, which span ledgers transversely and may support as working platform.

Braces

Tubes fixed diagonally across the length and/or width of a scaffold through scaffold (i.e. Plan bracing) to increase its stability.

Ties

Tubes used to maintain stability in a scaffold by connecting it to the structure or the wedges on ground.

Right Angle Load Bearing Coupler

Scaffold fitting used to join major load bearing tubes at right angle

Swivel Coupler

Fitting used to join tubes at any angle.

Base Plate

A steel plate approximately 6"x6" with a spigot over which a scaffold tube can be placed at right angles to the plate.

Joint Pin

Coupler for joining scaffold tubes end to end by fitting externally.

Sole Plate

Wooden plank of suitable size to cover soft ground

Independent Tie Scaffolds

There are scaffolds having two rows of standards,

1. All scaffolds should be erected on level and firm ground. Where level ground is not available then the ground directly below the sole plates should be leveled.
2. Excavations manholes, openings, etc. must be covered with larger timber for sole plates. Where several standards are involved a competent engineer must ensure the bridging is adequate for the loads involved.
3. Bricks scrape pieces of timber, breezeblocks, etc. Must not be used as sole plates.
4. Metal base plates must be used to support standards on grounds other than hard concrete floor
5. Standards shall be erected vertically at not more than 6 ft. (2.134 m).
6. Joints in standards must be staggered, i.e. no adjacent joints in the same lift, and should be as near as possible to the ledgers. These joints should be made with joint pins (internal couplers). Swivel joint couplers should not be used for this purpose.
7. Ledgers must be fitted horizontally and secured with 90° load bearing couplers to the inside of the standards, and spaced not more than 6 ft.
8. Joints in ledgers should be avoided as much as possible, but may be made with sleeve couplers and must be staggered (i.e. no adjacent joints in the same bay) and should not be more than 2 ft. (610 mm) from any standard.
9. Transoms should be fixed at both ends to the ledgers with right angle or swivel couplers. The distance between two adjacent transoms shall be not more than 4 ft.
10. Additional transoms must be fitted to ensure that the ends of the boards or planks are supported properly.
11. Ties must be fitted at 20 ft. minimum intervals along the scaffold horizontally over 13 ft. vertically
12. All ties must be secured with right angle load bearing couplers.
13. At least 50% of all ties should be through ties and must be horizontal where possible and secured to standards or close to standards. Horizontal ties must be fastened both to the internal and external standards or ledgers.
14. Where it is not possible to make all ties through ties intermediate reveal ties may be fitted.
15. The minimum width of the scaffold platforms should be as follows:
 - a) 24" - 2 persons only (no material) boards/planks
 - b) 32" - 3 persons and the depositing of materials not more than 25 kg. Passage of persons. 4 boards/planks
 - c) 48" - 4 persons & material up to 50 kg. 6 boards/planks must be supported by minimum of six standards.
16. All scaffolding must be suitably braced
 - a) Diagonal bracing at right angles to the structure and at alternative pairs of standards are necessary for the full height of the scaffold.
 - b) Longitudinal or facade bracing to the full height of the structure in the end bays and intermediate locations of 100 ft. may be used.
 - c) Longitudinal bracing should be fastened to extended transoms by right angle couplers provided that such transoms are clamped to ledgers or standards with right angle couplers. Bracing, fastened to the standards may be secured by swivel couplers as near to the ledger as possible.
 - d) Joints in braces should be made by sleeve or parallel couplers.

17. Scaffold boards/planks must be free of large splits, knots, should be bend at both ends.
18. Every scaffold boards/planks longer than 6 ft. should have at least three supports, but needs more supports as in clause 10.
19. No board should overhang its last support by more than 12 inches.
20. Every scaffold board should have a minimum overhang of 6 inches over its last support.
21. The space between two adjacent boards must not exceed 1 inch.
22. Scaffold platforms must be completely boarded out.
23. Every scaffold platform from which a person can fall more than 6 ft. 6 inch. Must be fitted with guard rails the height of the guard rail from the platform must be between 3 ft. and 3 ft. 9 inch (1.142 m).
24. The space between the edge of the working platforms and of the equipment must be as small as possible and must never exceed 12 inches. If due to circumstances a gap of more than 12 inches is created, guardrails must be fitted as above.
25. As possibility of displacement exist, from high winds etc. Boards must be fastened down at both ends with suitable clamps.
26. Where platforms become slippery due to oil etc. the boards should either be fastened down at both ends with suitable clamps.
27. Clear access/agrees must be maintained at all times to all scaffolds and all ladders being used to give access must be sound construction.
28. The gap in the guardrail for the ladder access must be as small as possible.
29. Ladder runs must not, under any circumstances, be used to support gangways, runways, or platforms of any nature.
30. Single planks runs must not be used under any circumstances.
31. Ladder landings must be provided at every 30 ft.
32. No part of scaffold be used to support any other load or as a supporting point for a chain blocks ratchet etc.

Mobile or United Scaffolds

1. No mobile or united scaffold shall be erected to a height greater than 3 1/2 times its minimum base width.
2. The standards should be made vertical.
3. All other requirements for independent tied scaffolds should be satisfied other than ties.
4. Maximum height of mobile or united scaffold is 6 meters.

Inspection of Scaffolds and Accessories

1. Every scaffolding pipe, coupler & base plate must be inspected by Inspection Engineer once in every 1 month period.
2. The Inspection Engineer will reject the defective items such as damaged pipes, corroded couplers and base plates etc.
3. Every plank to be used for a platform should be load tested at 6 months intervals by Inspection Dept.
4. The planks should be supported at closest to its ends and tested with the rated load at the center.

The rated loads shall be:

300 Kg for planks 4 ft. long

200 kg for planks 6 ft. long

150 kg for planks 8 ft. long

100 kg for planks 12 ft. long

5. Every scaffolding clamp and pipe must be numbered.

4. CONTRACT FORMS

SCHEDULE 'A'

TENDER AND SCHEDULE OF PRICES

Ministry Procurement Committee (Minor),
Ceylon Petroleum Corporation,
Refinery Division,
Sapugaskanda,
Kelaniya.

Dear Sir,

TENDER FOR REPAIRING OF TANK NO. 37

TENDER NO-PL/117/2015

We hereby tender for the **Repairing of Tank no 37** in conformity with the conditions as stated in the Invitations to Bid.

Having perused the Invitation to Bid for the Repairing of Tank No. 37 at Refinery tank farm and the Schedule of Prices referred to therein, I / We hereby agree to comply with the conditions of the said Tender.

I / We undertake to conform to all the Terms & Conditions in the said Tender and the Schedule of Prices within the time specified.

I / We declare that I / We have perused the Performance Guarantee (Schedule 'D') and the Agreement (Schedule 'E') respectively and confirm our compliance with the said Performance Guarantee and Agreement in the event of award of Tender.

Unless and until a formal agreement is engrossed and executed this Form of Tender dated, together with your written acceptance thereof shall constitute a binding contract between us.

I / We am / are fully aware that the acceptance of any Tender will be at the sole discretion of the Ministry Tender Board, Ceylon Petroleum Corporation.

The Name and Address of Local Agent (if any) is given below.

Signature of Bidder :

Name :

Date :

Company Address.....

Company Stamp :

Name of Local Agent (if any).....

SCHEDULE OF PRICE Schedule 'A' Continued...(Page 2 of 3)

	Item			Total (Rs)
1	Cost of construction management, NDT testing and Contractor's Engineering overheads of the job as per the scope of works			
2	Erection of a safety barrier and scaffolding			
3	Dismantling of roof & top two shell courses			
4	Shell plate replacement including attachments			
5	Roof replacement including attachments			
6	Cleaning and preparation shell and bottom for inspection			
7	I. Removing existing steam coil and Welding, testing & installation of new steam coil			
8	Weld repairing of platforms, hand railings & stairway steps			
9	hydro testing tank , fire water and foam lines as per the scope of works and calibration ,			
10	Cost of materials and labor for blast cleaning and Painting of bottom, roof, shell , fire water and foam lines and other accessories as per the scope of works.			
1	Cost of construction management, NDT testing and Contractor's Engineering overheads of the job			
		Anticipated qty	Rate	
11	Pad repair -rate per 1 m linear length	20m		
12	Weld filling -rate per 1cm ² area	10000cm ²		
13	Liner welding -rate per 1m length	10m		
Grand Total (SLRs)				

****Cost for item No.11, 12& 13 will be calculated measure and pay basis.**

**** Note: ** *These quantities are estimated values to be used only for bid evaluation purposes; however payment will be made on actual work (quantities). CPC will not responsible for the change of quantities.***

SUB TOTAL -
LOCAL AGENCY COMMISSION -
(IF APPLICABLE)

NBT 2% -

SUB TOTAL -

VAT 15 % -

TOTAL

Total in words

VAT Reg. no..... NBT Reg. no.....

Foreign currency will be applicable for foreign contractors only.

Signature of Bidder :

Name :

Date :

Company Address :

Company Stamp :

SCHEDULE "B"

FORMAT OF BID SECURITY GUARANTEE

[This bank 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: Chairman, Ceylon Petroleum Corporation, No.609, Dr. Danisterde Silva Mawatha, Colombo 09, Sri Lanka.

Date : [Insert (by issuing agency) date]

Public Tender Reference : PL/54/2017

BID GUARANTEE NO :..... [Insert (by issuing agency) number]

We have been informed that [Insert (by issuing agency) name of the Bidder; if a joint venture, list complete legal names of partners] (hereinafter called "the Bidder") has submitted to you its bid dated[insert (by issuing agency) date] (hereinafter called "the Bid") for execution of **Repairing of Tank no 37** under Invitations for Bids No. [insert IFG 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 of 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 obligations(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") of the IFB; or
- (c) having been notified of the acceptance of its Bid by the Employer/Purchaser 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 (i) our receipt of a copy of your notification to the Bidder that the Bidder was unsuccessful, 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)]

SCHEDULE - "C"**FORMAT OF ADVANCE PAYMENT GUARANTEE**

An advance payment securities issued in the format given below is acceptable.

-----[Name and address of Agency, and Address of Issuing Branch or Office] -----

Beneficiary: Chairman, Ceylon Petroleum Corporation, No.609, Dr. Danister de Silva Mawatha, Colombo 09, Sri Lanka.

Date : -----

ADVANCE PAYMENT GUARANTEE NO: -----

We have been informed that -----[name of Contractor] (hereinafter called "the Contractor") has entered into Contract No.----- [referenceNumber of the contract] dated -----with you, for the **Repairing of Tank no 37.**

Furthermore, we understand that, acceding to the conditions of the Contract, an advance payment in the sum ----- [amount in figures] (-----) [amount in words] is to be made against an advance payment guarantee.

At the request of the Contractor, we ----- [Name of the Issuing agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of -----[amount of 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 under the Contract.

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

This guarantee shall expire, Insert *the 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)]

The Guarantor shall insert an amount representing the amount of the advance payment and Denominated either in the currency (ies) of the advance payment as specified in the Contract.

SCHEDULE 'D'**FORMAT OF PERFORMANCE GUARANTEE**

..... [Issuing Agency's Name and Address of issuing Branch or office].....

Beneficiary: Chairman, Ceylon Petroleum Corporation, No.609, Dr. Danister de Silva Mawatha, Colombo 09, Sri Lanka.

Public Tender Reference : PL / 54 / 2017

Date :

PERFORMANCE GUARANTEE NO :

We have been informed that[Name of Contractor] (Hereinafter called "the Contractor") has entered into Contract No. [Reference number of the contract] dated with you, for the **Repairing of Tank no 37**(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], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, 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 scheduled contract completion date] and any demand for payment under it must be received by us at this office on or before that date.

.....
[Signature(s)]

SCHEDULE - " E "
FORM OF AGREEMENT

THIS AGREEMENT made the[day]of[month] 20.....[year], between.....[name and address of Employer] (hereinafter called and referred to as “the Employer”), of the one part, and [Name and address of Contractor] (Hereinafter called and referred to as “the Contractor”), of the other part:

WHEREAS the Employer desires that the Contractor execute..... [Name and identification no of Contract](Hereinafter called and referred to as “the Works”) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and remedying of any defects therein.

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract hereinafter referred to.
2. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein conformity in all respects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the executed and completed the Works and remedy any defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof the parties hereto have caused this Agreement to be executed 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

SCHEDULE "F" COMPLIANCE / DEVIATIONS SHEET

Please mark "✓" if complied with tender requirement or mark "X" if there is any deviation & indicate the deviation in the cage provided.

	Specification / Condition	Complied	Deviations if any
1	Official receipt of non-refundable Tender deposit paid for each Principal Bidder is attached with the Bid Document- Attached		
2	Validity of the Offer - 77 days Provided		
3	Validity of Bid Bond -91 days Provided		
4	Agreed with Payment Terms & Other Requirements		
5	Conditions of contract as per Section 2 - Agreed		
6	Complete Technical Proposal as per section 3 - Provided (Technical Specifications, Scope of Supply & Scope of Work)		
7	Overall project schedule with time & resource allocation Provided		
8	Bar Chart of the total work schedule Provided		
9	Complete Commercial Proposal as per Annex "A" Duly Filled Stamped, Signed & Forwarded		
10	Literature / Catalogues & other technical data to supplement technical proposal Attached		
11	Documentary evidence that of previous tank fabrication experiences in accordance with API 650/653 Attached		
12	Documentary proof about Consultants/ Engineers who are conversant with API 650/653 Attached		
13	Name of the Principal and the Address (For Foreign Bidders)		
14	Name & Address of Local Agent (if any) & Agency Commission Given		
15	Instrument of valid legally executed power of attorney - Provided		
16	Letter of Authorization per Clause No. 1.4.2 – For Local Agents - Provided		
17	Name & Address of Local Bidder (if any local direct bidders)		
18	Proof of ICTAD registration at Grade EM 3 given		
19	Financial reports for last 3 years Provided		
20	Name & Address of any subcontractor (if any) - Indicated		
21	List of Construction Instruments Given		
22	If Relevant, VAT Registration No. Given		
23	Deviations from Specification, terms & conditions, if any, indicated		
24	Copy of Business Registration as per clause 1.7 and public contract registration as per clause 1.17		
25	Other Deviation, if any - Indicated		

.....
Company Stamp

.....
Signature of the Bidder